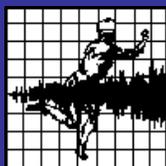


ISEK



XV04

"An Invitation to Innovation"



XVth Congress

of the

**International Society of
Electrophysiology and Kinesiology**

18-21 June, 2004

Boston University

Boston, MA



PROGRAM



Welcome

June 18, 2004

Boston, Massachusetts, USA

Dear Delegate:

We welcome you to Boston for this XVth Congress of the International Society of Electrophysiology and Kinesiology (ISEK). The XVth ISEK Congress was held here exactly one quarter century ago. Much has changed in technology, innovation, and knowledge throughout our interdisciplinary areas of study since then. The theme of this Congress, “An Invitation to Innovation” celebrates this change in a city known for innovation in science, medicine, and technology. It is a fitting place and an appropriate time to organize a meeting in which we can reflect and learn about how far we have come in the field of electrophysiology and kinesiology.

Innovation has inherent value, but its value can be appreciated more completely by considering the impact such innovations might have in the applied sciences, such as physical medicine and rehabilitation, physical therapy, sports, ergonomics, and countermeasures to aging and spaceflight. Advancement in these areas are present throughout this program.

ISEK2004 was prepared almost entirely by a volunteer team that has worked hard to make this an enjoyable and worthwhile event for all attendees. Our thanks go to the many people who dedicated countless hours of preparation for this event, in spite of the fact that they have many other responsibilities in their busy lives. This achievement was particularly difficult to accomplish because this biennial event is among the largest such Congresses ever held by ISEK, with well over 400 participants, representing 29 different countries from around the world.

As you will see from this Program, we have arranged the Congress into 4 parallel platform (oral) sessions organized so that either 4 or 6 papers are presented in a session. Each platform session is scheduled for 15-minute blocks (12-minute oral presentation followed by questions and answers). The posters are organized into morning/afternoon poster sessions that are unopposed during the 1-hour coffee break. There are approximately 35 posters per session. We have organized the keynote speakers as unopposed 1-hour platform sessions first thing in the morning, and first thing after lunch. Where possible, the keynotes are followed by a symposium on a related topic. Many of the scientific tracks were organized into continuous blocks to allow people with a strong focus to “spend the day” involved in their preferred area of study. Further details about poster and platform requirements are described in this program.

But enough of reading about what the Congress will offer; enjoy the opportunity to experience it for yourselves!

We are pleased that you have chosen to join us in Boston. Leave here with innovative ideas and a warmed heart. Return to ISEK2006 in Tuscany, Italy (June 28-July 1, 2006).

Best regards,

Serge H. Roy, ScD
Secretary General ISEK2004

Paolo Bonato, PhD
Chair, Scientific Committee ISEK2004

Countries Represented by the Delegation

Australia	12
Austria	5
Belgium	2
Brazil	22
Canada	70
Chile	1
China	4
Denmark	6
France	5
Germany	7
Ireland	3
Israel	5
Italy	15
Japan	66
Korea (South)	1
Kuwait	1
Mexico	1
Netherlands	15
Norway	4
Portugal	2
Romania	1
Slovenia	1
Spain	5
Sweden	4
Switzerland	2
Taiwan	7
Turkey	1
UK	15
US	126
TOTAL	406

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Organizing Committee

Local Organizing Committee

Congress Secretary General	Serge H. Roy
Chair, Scientific Committee	Paolo Bonato
Congress Website Coordinator	Jens Meyer
Administrative Coordinator	Jennifer Field
Requisition Coordinator	Laura Prusaitis
Administrative Assistant	Sara M Midwood
Administrative Assistant	Norma M Abdullah

Scientific Committee – Track Chairs

Ambulatory Recordings	Hermie Hermens and Rolf Westgaard
Augmented and Virtual Reality in Rehabilitation	Emily Keshner and Lars Oddsson
Electrode Arrays	Roberto Merletti and Günter Rau
EMG Modeling and Signal Processing	Metin Akay and Tohru Kiryu
Innovation in EMG	Catherine Disselhorst-Klug and Phil Parker
Mechanomyogram	Pascal Madeleine and Claudio Orizio
Motion Analysis	Ugo Della Croce and D. Casey Kerrigan
Motor Control	Gerald Gottlieb and Paul Hodges
Motor Unit	Zeynep Erim and Christine K. Thomas
Muscle Fatigue	Marco Knäflitz and Toshio Moritani
Neurophysiology	Yukio Mano and Zev Rymer
Occupational Medicine	Bertrand Arsénault and Shrawan Kumar
Physical Medicine and Rehabilitation	Gerold Ebenbichler and Walter Frontera
Posture	Jim Collins and David Winter
Rehabilitation Engineering	Charles Robinson and Jack Winters
Sports Medicine and Human Performance	Jan-Pieter Clarys and Steve Lewis
Temporomandibular Dysfunction	Fausto Berzin

Program - Advisory Board

ISEK President	Hermie Hermens	Council	Gabriella Balestra
Vice President	Catherine Disselhorst-Klug		Paul Hodges
Secretary	Richard V. Baratta		Roberto Merletti
Treasurer	Josef Kollmitzer		Toshio Moritani
			Steve Wolf

Contributors and Sponsors

Host Organization

International Society of Electrophysiology and Kinesiology (ISEK)

Boston University

Co-sponsor

NeuroMuscular Research Center (NMRC)

Supporting Organizations

Spaulding Rehabilitation Hospital

Department of Physical Medicine and Rehabilitation - Harvard Medical School

International Society of Biomechanics (ISB)

Sargent College of Health and Rehabilitation Sciences

American Physical Therapy Association (APTA)

International Society of Physical Medicine and Rehabilitation

Financial Supporters

The Whitaker Foundation

The National Institutes of Health

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Samuel Cheng	Rinaldo
Elizabeth Condliffe	Ben Patrilli
Jennifer Field	Laura Prusaitis
Mauro Goncalves	Jimmy Robertsson

Haider Mujtabi

Special Thanks for the Institutional Support provided by the :

- NeuroMuscular Research Center (MRC), Boston University) for Co-Sponsoring this Congress
- Department of Physical Medicine and Rehabilitation, Spaulding Rehabilitation Hospital, Harvard Medical School, for assisting with the organization of the Scientific Program.

Facilities & Miscellaneous Information

General

ISEK2004 is taking place on the Charles River Campus of Boston University, located in Boston's Back Bay with a commanding view of the Charles. Most Congress activities are scheduled for the George Sherman Union (GSU), centrally located at 775 Commonwealth Avenue. Registration, welcome reception, poster presentations, three of the four parallel sessions, exhibits, and lunch/coffee breaks will take place on the first two floors of this site, which normally serves as a Student Center and Grand Ballroom for University functions. An adjacent building at 765 Commonwealth Avenue that houses the BU School of Law will be used for the Keynote addresses in the Law Auditorium, Symposia, and 3 of the 5 Pre-Congress Workshops.

Transportation

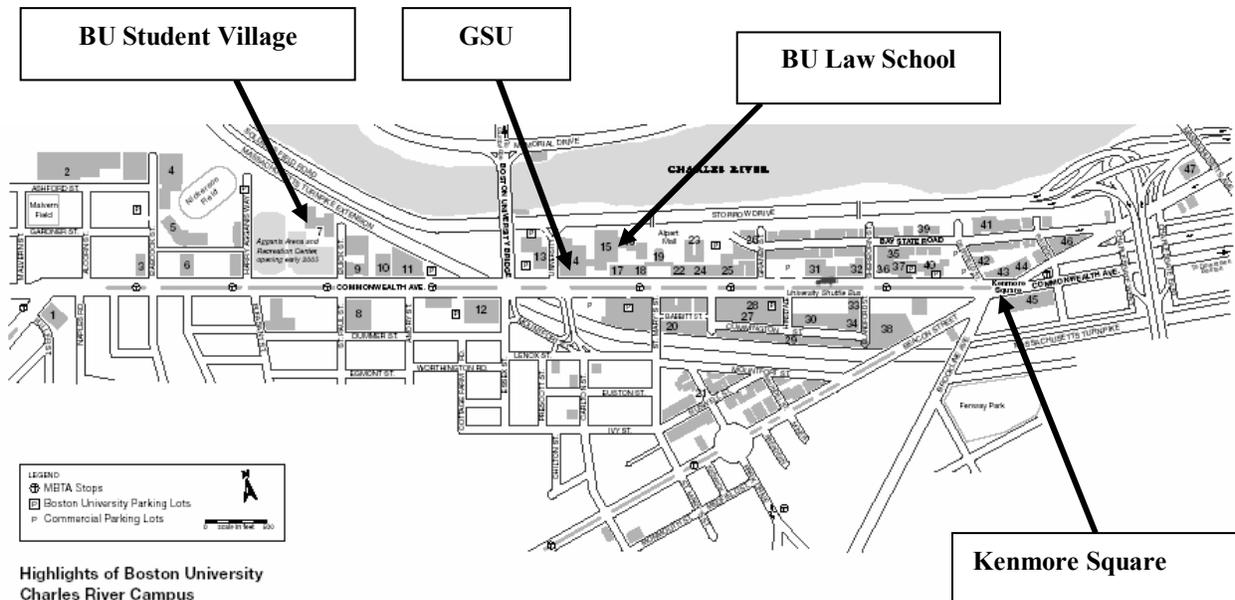
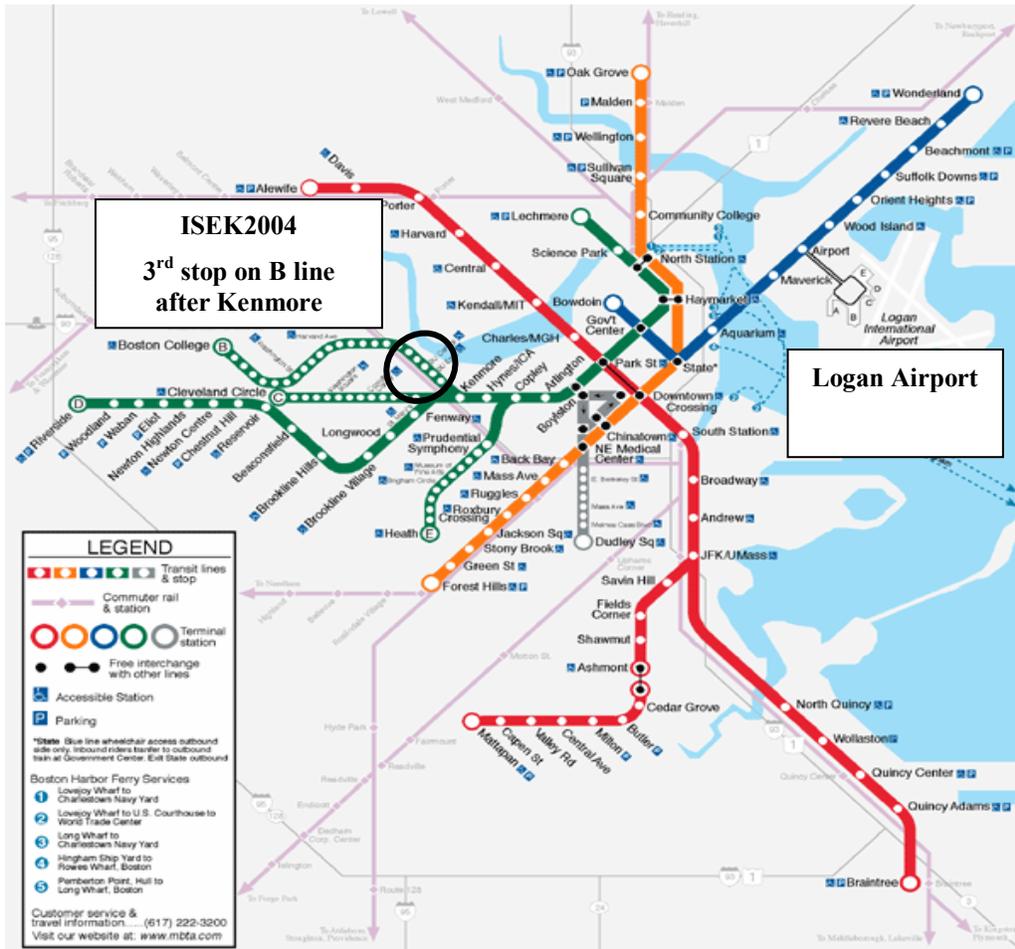
The Charles River Campus covers an approximately 2-mile stretch of buildings on either side of Commonwealth Avenue, one of the largest and most attractive avenues in Boston. The Congress location at the GSU is therefore readily accessible by a large variety of public and private transportation methods. The Subway (referred to in Boston as the MBTA or "T") is the most inexpensive and practical.

The GSU is directly accessible by the T on the "B" branch of the MBTA Green line. The B train makes 7 stops above ground along this stretch of campus. When proceeding outbound on the Green Line, get off at the third stop above ground for the GSU. Fare is by exact change (\$1.25; no bills, or by tokens available at any T station).

The GSU is approximately 25 minutes by taxicab from Logan airport and should cost approximately \$25. Metered on street parking is available as well as several private parking lots (fee required) for overnight parking.

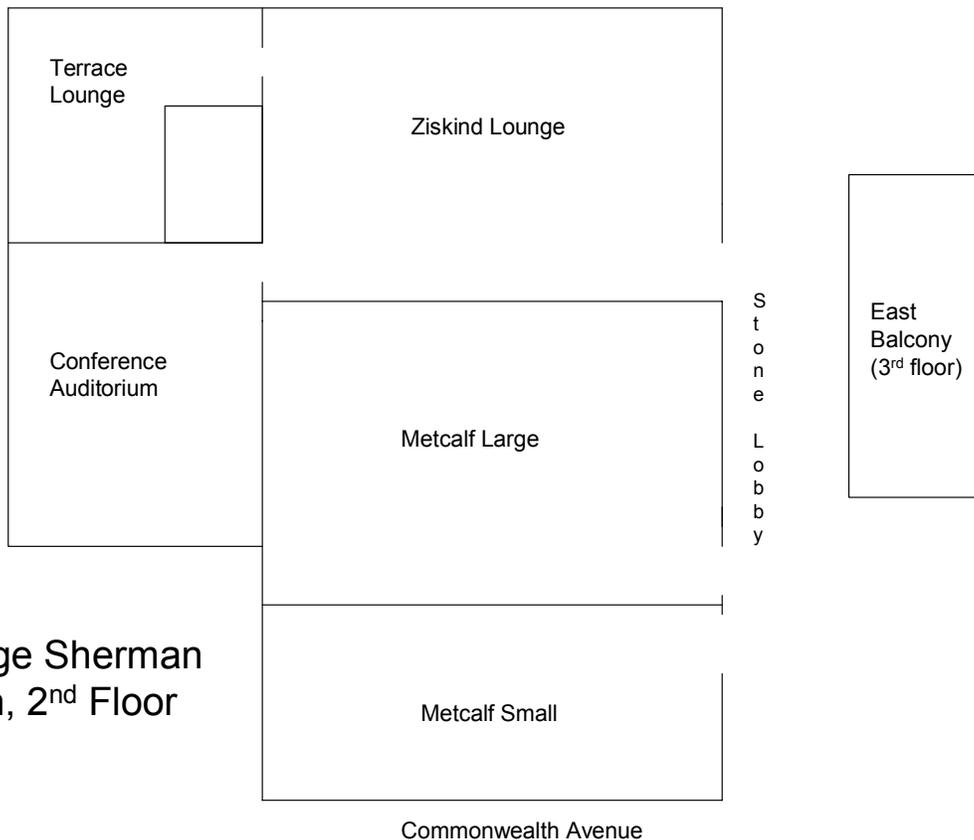
Delegates staying at BU Student Village requiring parking can obtain a temporary pass from the Front Desk. You will need to take that temporary pass to the GSU Parking Office (2nd Floor) on Monday morning, June 21 to pay for whatever nights you use. All other delegates can obtain weekend overnight passes (\$24) or daily passes (\$6) from the Congress registration desk (we have a limited number available). Passes can also be purchased from Lot F Parking facility (808 Commonwealth Avenue) before 9PM on Friday, June 18.

Area Maps



George Sherman Union

Charles River



A Floor Plan of the George Sherman Union (GSU) is provided to show the relative locations of three of the four Platform Presentation rooms (Metcalf Small, Conference Auditorium, and East Balcony). The fourth Platform Session is located in the Law Auditorium (not shown) which is located in the 1st Floor of the BU School of Law, across the courtyard from the GSU. Three of the Pre-Congress workshop/symposia are located at the Law School as well. There are signs to assist you in finding this location or refer to the BU Campus Map in the Program. It is only a 2-minute walk from the GSU to the BU Law School.

The Welcome reception, Awards Ceremony/ISEK Assembly, and all of the sit-down lunches will be held in the Metcalf Large room. Refer to the program schedule for times.

The Poster Presentations and commercial Exhibits will be located in the Ziskind Lounge. This lounge will also serve as the location for morning and afternoon Coffee Breaks.

The Speaker Ready Room is located in the Terrace Lounge shown in the diagram.

Meals

A daily sit-down luncheon will be provided in the Metcalf Large hall as part of the registration fee. Please arrive at the luncheons promptly. In order to provide lunch for this large a group within the 1-hour period, you will need to be seated at the scheduled times to assist the wait staff.

Coffee-breaks will be provided in morning and afternoons of the scientific program in the Ziskind Lounge. They will be scheduled for 1-hour periods to allow you to view poster presentations, or visit the exhibit booths which are located in this same lounge. A courtyard/deck overlooking the river will be open, weather permitting.

Smoking Policy

In accordance with the Workplace Smoking Restrictions Regulation issued by the City of Boston Public Health Commission, smoking is prohibited in all Boston University facilities and enclosed workplace areas. This includes all offices, work spaces, common work areas, auditoriums, classrooms, conference and meeting rooms, elevators, hallways, medical facilities, cafeterias, employee lounges, staircases, parking garages, restrooms and all other enclosed areas in the workplace. Exempted from this policy are private residences and certain student rooms (see next section). This policy applies to all employees, students, clients, consultants, vendors, contractors, guests, and visitors.

Smoking policies or complaints for registrants staying at the BU Student Village can be conducted at their Front Desk.

Accommodations

We have provided on-campus housing at the BU Student Village for those people choosing this option during their registration process online. The registration period has expired (as of June 11, 2004) and no additional rooms can be made available. The BU Student Village is located at 10 Buick Street (see Map). This modern high-rise structure has a commanding view of the river and skyline and is located just off of Commonwealth Avenue ¼ mile from the GSU. It is two T stops outbound from the GSU on the Green Line, or a 10-15 minute walk.

Various amenities and rules/regulations will be provided at the BU Student Village Front Desk which is open 24 hours a day. Check-in is after 3PM if you arrive Tuesday Wednesday or Thursday (6/15-6/17) or any time after 6/17.

Accessibility

The Charles River Campus is fully wheelchair accessible. If you have special needs or concerns, please let us know in advance at info@isek.bu.edu.

TTY payphones as well as Audible Crosswalk Signals are at the following intersections:

- Intersection of Commonwealth Avenue with Buick and St. Paul Streets
Crossing Commonwealth Avenue
- Intersection of Commonwealth Avenue with St. Mary's Street at the Marsh Plaza
Crossing Commonwealth Avenue

Accessible parking spaces are available in all of the University Sticker Parking Lots, both indoor and outdoor. To arrange for University parking, visit the [Office of Parking Services](#) at 775 Commonwealth Avenue, second floor, or call (617) 353-2160. HP/V on-street spaces are located in front of the following buildings:

- Martin Luther King, Jr. Center, 19 Deerfield Street
- George Sherman Union, 775 Commonwealth Avenue
- Psychology Department, 64 Cummington Street
- Case Physical Education Center, 285 Babcock Street
- Intersection of Raleigh and Beacon Streets

An Accessibility Map of the BU Campus can be located at: <http://www.bu.edu/disability/map/MasterMap.html>

Boston University is committed to providing equal and integrated access for individuals with disabilities to all the academic, social, cultural, and recreational programs offered.

Registration

The Congress Center and Main Registration Desk are located in the George Sherman Union (GSU) at 775 Commonwealth Avenue (located near the Boston University Central Campus "T" stop of the B Green subway line). The Pre-Congress workshop registration desk is located in the lobby of the BU School of Law at

All pre-registered workshop participants (with the exception of the Prosthetics & Orthotics workshop participants), must pick up their registration materials beginning at 11:00 am on Friday June 18 at the Law School Auditorium at 765 Commonwealth Avenue prior to attending their workshops. Those participants attending the Motor Unit,

Incontinence, or Ergonomics workshop/seminars will be directed to the room assignments in the Law School to begin their participation for the 1PM commencement. Those registered for the Dynamics of Movement workshop will be given directions to walk to Sargent College (10-minute walk) for their 1PM workshop.

If you are not attending a workshop but would like to pick up your registration materials for the Congress prior to the opening of the Main Registration desk, you may do so at the Law Auditorium from 11 am -2:30 pm . The Main Registration desk for the ISEK2004 Congress will on Friday, June 18, at 2:30pm at the George Sherman Union street entrance (GSU Link). The registration desk will also be open on Saturday, June 19, at this same location starting at 7:00am throughout the entire Congress program. Delegates participating in the Prosthetics & Orthotics workshop, please refer to the separate email sent to you containing details about the workshop schedule and location at Spaulding Hospital.

Instructions for Oral (Platform) and Poster Presentations

Platform Presentations

Platform presentations are assigned to 15-minute blocks, to include set-up, oral presentation and a brief 2-3 minute question and answer period. The presentations are organized by Scientific Track in sessions containing either 4 or 6 papers.

Each session will be supervised by two Session Chairs appointed by the Track Chairs. They will be responsible for introducing the speakers, keeping the oral presentations to the allotted time, and coordinating the question and answer periods following each oral presentation. Every session will have a Volunteer assigned to it to assist the Session Chairs and speakers if needed. This person can also be available to alert the AV technicians of equipment problems (there will be at least 2 AV Technicians assigned to the Congress. One in the Law School Auditorium and one in the GSU).

A single LCD projector for PowerPoint presentations is available in all session rooms.

35mm slide (film) projectors will not be available as there were no special advanced requests made to the Congress Organizers for such equipment as instructed in the Preliminary Program.

Platform presentations can be made from the CD you were asked to bring with you to the Congress. We provide a Laptop computer connected to the Projector in every session room. Alternatively, if you have your talk on your own Laptop, you may connect it to the projector and not use a CD. Remember to turn off your screen save or sleep mode. To do this, Click 'my computer, click 'control panels', click 'screen saver' tab, change 'screensaver' to 'none', hit 'apply'.

Remember to bring any of the source files you have inserted into your presentation. Those source files can be images (.jpg), clip art, QuickTime movies (.mov), sound effects (.wav or .aif), or another type of file that you may have imported. Remembering to insert these files will help to assure your audience doesn't see the dreaded "Big Red X".

If you plan on using your CD on our Laptop, please come to your scheduled session a few minutes early so we can load it on the Laptop ahead of time. It might also be helpful to check for compatibility of your laptop with our projector within the same time frame so there are no "surprises".

Poster Presentations

Posters are assigned to morning and afternoon sessions in the Ziskind Lounge on the 2nd Floor of the GSU.

There will be approximately 35 posters per session arranged according to Scientific Track.

Presenters are responsible for having their posters set up prior to their assigned session.

Your poster will be assigned to 1 of 40 poster board locations (20 Double-sided boards are arranged in the Ziskind Lounge). Your assignment can be found at the entrance to the Ziskind Lounge. Boards are 4 feet high X 8 Feet wide (122 cm high X 244 cm wide). Push Pins are provided and the boards are Velcro friendly.

For morning sessions the posters can be put up the night before (the area is open until 8:30PM) or after 7AM the day of your presentation. Make sure your poster is taken down before the beginning of the luncheon to allow the

afternoon poster presenters sufficient opportunity to set up their posters. Volunteers will be assigned to the Poster sessions to assist you.

For afternoon sessions, you can put up your poster before the end of the luncheon. Make sure your poster is taken down by the end of the scientific programs for that day. This will allow poster presenters scheduled for the next morning sufficient time to set up their posters. Volunteers will be assigned to the Poster sessions to assist you.

Presenters are expected to be available to present and discuss their posters during the unopposed 1-hour coffee break session arranged for this purpose.

If your abstract number does not appear prominently on your poster, we ask that you place an index card with that number in the upper left corner of your poster. Cards and Marker pens will be available for this purpose.

Message Center

A message board is located adjacent to the entrance of the Ziskind Lounge during the Congress period. No telephone or Fax receiving services have been made available.

Internet Access

There are a limited number of Ethernet ports at the GSU for your use. These locations will be posted at the Congress message center. Most of the ports can be found in Room 310-11, one of the third floor conference rooms in the GSU. This room will be unlocked throughout the Congress period for delegates to access. There is no local wireless capability for non-University personnel at the GSU. However, guests staying at the BU Student Village will be issued a card (and directions) to access the internet. All persons anticipating the use of the internet ports should bring a CAT5 cable for connecting to the ports.

Official Language

The official language of the Congress is English

Social Program

Opening Ceremony - Welcome Reception

Friday, June 18, 6:00 PM – 8:00 PM

Grand Ballroom – Metcalf Hall, George Sherman Union, 2nd Floor

Fee: Included in registration fee

All registrants are invited to a Welcome Reception in the GSU (Grand Ballroom, 2nd Floor). This event will celebrate the opening of ISEK2004 and provide an opportunity for old friends, and new, to meet and socialize. A cash bar and hors d'oeuvres will be available.

A wearable-sensor artistic performance by Teresa Marrin Nakra, Ph.D. will be provided to celebrate the Congress theme of “An Invitation to Innovation”. Dr. Nakra is a graduate of the M.I.T. Media Laboratory. She is a musician, inventor, conductor, and designer of new sensor technologies for music performance (<http://www.immersionmusic.org>). Her work will be accompanied by video images from renowned visual artist, Walter Wright. Mr. Wright is a video artist and member of the Boston area collective VideoSpace. He pioneered video performance in the early 1970's and is the inventor of innovative video performance systems.

We wish to thank DelSys, Inc. for their generous support to underwrite this performance.

Boston Bay Area “Blues Cruise”

Sunday, June 20, 6PM – 10PM

A “Blues Cruise” aboard the luxury cruise liner, Spirit of Boston www.spiritofboston.com, was arranged for this event. It will sail the Boston Harbor and Harbor Islands for a dinner/dance extravaganza! Delegates will enjoy the

music of “Boston’s Best Blues Band”, the Nicole Nelson Band. Nicole Nelson is recognized as one the finest young blues talents in the US <http://nicolenelsonband.com/>. and was voted “Best of Boston” several years in a row.

Delegates must have purchased a Boarding pass to this function at the time of their registration on line to participate. A very limited number of passes are still available for purchase at the registration desk for US\$65.00.

Please note:

- Buses leave from the front of Boston University GSU
- Boarding of the buses begins promptly at 6PM
- The first of 4 buses will leave at 6:15 PM.
- The last bus will leave at 6:30PM.
- The Spirit of Boston is docked at Commonwealth Pier, World Trade Center, Boston
- Boarding the ship will start at 6:30PM and the ship will depart promptly at 7PM.
- No refunds will be provided to delegates missing the departure/boarding deadlines which will be strictly enforced.

Awards Ceremony and ISEK Assembly

Monday, June 21, 1:00 PM – 2:30 PM

Grand Ballroom – Metcalf Hall, George Sherman Union, 2nd Floor

Fee: Included in registration fee

A luncheon is planned to announce the recipients of the John Basmajian Student Investigator Award and the DelSys Award for EMG Innovation. This ceremony will be followed by the ISEK Assembly, where the President of ISEK, current Council, and Sub-committees will discuss new developments in the Society, including the next venue for the ISEK Congress in 2006.

The newly-elected President, Vice-President and Council of ISEK will be introduced, and the floor will be open for questions and suggestions from the membership.

Publications

Congress Proceedings

An electronic version of the ISEK2004 Congress Proceedings will be made available to all registrants on the ISEK2004 website (<http://isek2004/>). A hard copy version of the Proceedings is provided at the time you pick up your registration materials from the registration Desk. This is made available at no additional charge and will contain a complete selection of abstracts from all participants. The Proceedings was assigned an ISBN Number as indicated on its cover.

Expanded Proceedings Publication

As a service to delegates, a hard bound publication containing extended articles from the Congress Proceedings from participants will be made available for a fee through Medimond S.r.l - Monduzzi Editore International Proceedings Division was made available to you for a fee. Our thanks to Monduzzi Editore for providing this service.

Decisions by the delegates to contribute to this publication were purely voluntary and provided no financial benefit to ISEK.

Scientific Program

Pre-Congress Symposia/Workshops

I. Dynamics of Normal and Disordered Human Movement

Barak, Y., Fetters, L., Holt, K.G., Saltzman, E., and Wagenaar, R.C.

Department of Rehabilitation Sciences
Sargent College of Health and Rehabilitation Sciences
Boston University
<http://www.bu.edu/sargent/>

Date: June 20, 2004

Time: 1:00-5:00pm

Location: Sargent College, Boston University, 635 Commonwealth Avenue, 2nd Floor

The impact of the ecological and dynamical approaches to perception and action in the study of human movement will be investigated. Some theoretical assumptions of these approaches will be addressed and illustrated by examples of its applications to human movement – e.g., development of human movement and movement disorders. Results from a number of studies will be presented indicating that the development of coordination patterns in reaching and functional adaptations in human walking are driven and constrained by the underlying task dynamics, the nature of the perception-action coupling and the dynamical resources available to the individual. The workshop is aimed at enhancing our theoretical understanding of the perception-action coupling in human movement. The relevance of ecological and dynamical approaches to diagnosis and treatment of developmental and movement disorders will be highlighted. Demonstrations in the research labs of the presenters will be used throughout the workshop to illustrate the arguments.

Attendees of this workshop will be provided with a unique perspective on movement and its disorders that will allow them to expand experimental, evaluation and treatment options. This workshop is designed for bioengineers, biomechanists, rehabilitation scientists, and clinicians interested in human movement and its disorders.

Moderator: Robert Wagenaar, Ph.D.

Speakers and Topics presented:

- Elliot Saltzman, PhD, “A task dynamics approach to human movement”
- Linda Fetters, PhD, “Perception-action coupling in infant limb movement”
- Ken Holt, PhD, “Modeling dynamic resources in human walking”
- Yaron Barak, PhD, “Gait risk factors for falls in older adults: A dynamic perspective”

II. Mechanism of Occupational Musculoskeletal Injuries

Shrawan Kumar Ph.D.

Professor, Physical Therapy, Ergonomics Research Laboratory
Department of Physical Therapy, University of Alberta
Edmonton AB T6G 2G4 Canada
<http://www.uofaweb.ualberta.ca/rehabmed/>

Date: June 18, 2004

Time: 1:00 - 4:00 PM

Location: BU School of Law

The evidence published in the literature linking the risk factors for the precipitation of musculoskeletal injuries at work allow us to deduce four theories for these afflictions. Central to all theories is the presupposition that all occupational musculoskeletal injuries are biomechanical in nature. Disruption of mechanical order of a biological system is dependent on the individual components and their mechanical properties. These common denominators will be causally affected by the individual's genetic endowment, morphological characteristics and psychological makeup, and the occupational biomechanical hazards. This phenomenon is explained by the Multivariate Interactive Theory. Cumulative Load Theory suggests a threshold range of load and repetition product beyond which injury precipitates, as all material substances have a finite life for their forms. Differential Fatigue Theory accounts for unbalanced and asymmetric occupational activities creating differential fatigue and thereby a kinetic and kinematic imbalance resulting in injury precipitation. Finally the Overexertion Theory claims that exertion exceeding the tolerance limit precipitation occupational musculoskeletal injury. It is also suggested that while these theories may explain the immediate mechanism of precipitation of injuries, they all operate simultaneously and interact to

modulate injuries to varying degrees in different cases. The foregoing theories emphasize the work relatedness of the occupational injuries. Thus the variables of force, effective exposure in time domain, and motion of exertions in space constitute the primary physical stressors. It is therefore possible to determine these variables quantitatively and establish their relative weighting. Through a mathematical model (Kumar, 1994), a quantitative assessment of risk of injury can be derived. By manipulating these variables within the context of work a meaningful control can be realized.

Attendees of this workshop will be provided with a unique perspective on causation of occupational musculoskeletal injuries, and methods of assessing risk. The later will assist in control of the problem. It is designed for anyone in causation and control of musculoskeletal injuries in the workplace.

Topics to be Presented

- Definition of Injury
- Prevalence of Work Injuries
- Mechanisms of Causation
- Control Strategy

III. EMG and Incontinence: Summary of European Community Program on Functional Asymmetry of Sphincter Innervation and Incontinence

P. Enck, University of Tuebingen, Tuebingen, GERMANY; R. Merletti, Politecnico di Torino, Torino, ITALY

Date: June 18, 2004

Time: 1:00 - 4:00 PM

Location: BU School of Law

The workshop will provide a tutorial overview of the advancements in the study of anal and urethral sphincters by means of noninvasive (without needles) multichannel electromyography (EMG). Following an introduction on the relevance of the problem of incontinence and on the basics of noninvasive EMG by means of electrode arrays, the workshop will present the results of the three year European Project On ASymmetry In Sphincters (OASIS) terminating at the end of 2004. The innovations consist in the use of electrode arrays placed along the circumference of cylindrical probes inserted in the anal or urethral canal and detecting motor unit action potentials propagating along the fibers of the sphincters. Features of individual motor units can be detected and quantified in this way during either voluntary contractions or electrical stimulation of the sacral roots. Locations of innervation zones and fiber lengths can be estimated allowing an analysis of sphincter anatomy and pathophysiology. The methodology provides a useful tool to prevent or quantify pelvic floor trauma after childbirth or episiotomy as well as a way to quantify sphincter asymmetry. Preliminary results will be reported. Teaching material will include a copy of the presentation and 2-3 recent papers on the topic. Equipment and sensors will be available.

IV. Advanced Technology for Decomposing the EMG Signal

C.J. De Luca, A. Adam, H. Nawab, NeuroMuscular Res. Ctr., Boston University; M. Manto, Hôpital Erasme, Brussels, BELGIUM; R. Roark, N.Y. Medical College, Valhalla, New York

Date: June 18, 2004

Time: 1:00 - 5:00 PM

Location: BU School of Law

For the past 25 years we have been developing techniques for decomposing the EMG signal into the constituent motor unit action potentials. The Precision Decomposition technique has been in use for two decades and has provided interesting insight into the behavior of motor unit control in healthy muscles. However, the old technology was tedious to use and required a considerable degree of experience to use properly. To overcome these difficulties and to expand its use in clinical practice, we are developing a new version, Decomposition II. We will describe novel portable hardware and novel software approaches for detecting and decomposing the EMG signal. The algorithms have been completely redesigned using an advanced Artificial Intelligence knowledge-based architecture. The new system can decompose complex EMG signals containing over one dozen motor unit trains in a few (5 -10) minutes with an accuracy that at times reaches 97%.

The Workshop will have a didactic component as well as a hands-on component. Participants will be able to experience the ease-of-use and utility of the system by collecting EMG signals and decomposing them in a few minutes. The following topics will be covered:

Evolution of the Precision decomposition technique. Overview of the new system hardware and software - Carlo J De Luca, Ph.D.

Overview of the Artificial Intelligence concepts used in the Decomposition algorithms - S. Hamid Nawab, Ph.D.

Applications for Research: Motor Unit control during Fatigue. - Alexander Adam, Ph.D.

Applications in Complex muscle systems: Laryngeal Studies - Rick M Roark, Ph.D.

Applications in Clinical Studies: Stroke Patients - Mario U Manto, M.D.

V. Prosthetics and Orthotics: Innovative Design Strategies and Clinical Solutions

P. Bonato and H. Herr, Department of Physical Medicine and Rehabilitation, Spaulding Rehabilitation Hospital and The Harvard-MIT Health Sciences and Technology Division

Date: June 18, 2004

Time: 9:00AM - 4:00 PM

Location: Motion Analysis Laboratory (Room8A)

Spaulding Rehabilitation Hospital

125 Nashua Street

Boston MA 02114

<http://spauldingrehab.org>

A hands-on workshop at the Motion Analysis Laboratory, Spaulding Rehabilitation Hospital

To present new developments and future trends in robotics, sensing, neuro-devices, and their applications to prosthetics and orthotics. The objective of this course is to familiarization with devices and sensors used in prosthetics and orthotics research. The following topics will be covered:

- Introduction to the workshop, Paolo Bonato, PhD, Harvard Medical School,
- Prosthetics and Orthotics at Spaulding Rehabilitation Hospital, Joel Stein, MD, Harvard Medical School;
- From mechanical to electronically controlled prosthetic devices, Bob Emerson, PA, Next Step, O&P Inc.
- Quantitative methods for assessing prosthetic devices, Steven Gard, PhD, Northwestern University
- Advances in orthotics: materials and function, Arthur Graham, Next Step, O&P Inc.
- Orthotics in CP kids, Lyn Deming, PT, Harvard Medical School, Spaulding Rehabilitation Hospital
- Demo in the Motion Analysis Lab: Use of a stereophotogrammetric system for P&O assessment; Programming prosthetic and orthotic devices
- Orthotics and Prosthetics in the Department of PM&R at Harvard, Walter Frontera, MD, PhD, Harvard Medical School
- Robotics in prosthetics and orthotics, Hugh Herr, PhD, MIT
- Biomechanical models and analyses for application in prosthetics and orthotics, Jen Lelas, MS, Harvard Medical School
- Markerless systems for the analysis of movement, Tommaso D'Alessio, PhD, Universita' di Roma Tre
- Sensor technology and wearable systems for enhancing mobility, Harry Asada, PhD, MIT;
- Managing commands and afferent information in advanced prosthetic devices, Ronald R. Riso, PhD, InnerSea Technology, Inc.

Keynotes

Basmajian Lecture

"Electrophysiology and Kinesiology For Health and Disease"

Toshio Moritani Ph.D., FACSM; Laboratory of Applied Physiology, Kyoto University, Kyoto, JAPAN

Other Keynote Lectures

"Issues In The Motor Control of the Trapezius Muscle: Possible Relevance for the Development Of Shoulder Pain"
Rolf Westgaard, Ph.D., Division of Organization and Work Science, Norwegian University of Science and Technology, Trondheim, NORWAY

"The EXtremity Constraint Induced Therapy Evaluation (EXCITE) Trial for Upper Extremity Stroke Rehabilitation: Potential Linkages to ISEK"

Steven L. Wolf, Ph.D., PT, FAPTA, Emory University School of Medicine, Atlanta, Georgia, USA

"Cervicomedullary Stimulation In Humans"

Janet Taylor, Ph.D., Prince of Wales Medical Research Institute, Randwick, NSW, AUSTRALIA

"Decision-Making Based on Surface EMG-Signals: Different Approaches to Information Extraction"

Catherine Disselhorst-Klug, Ph.D., Helmholtz Institute for Biomedical Engineering, Aachen, GERMANY

"The Ligament of the Knee"

John O'Connor, Ph.D., Research Director, Oxford Orthopaedic Engineering Centre, Department of Engineering Science, University of Oxford, Oxford, UK

Mini-Symposia on Innovation

I. Mechanisms of Movement and Sensation Using TMS



The aim is to provide an international forum for an integrative update on motor cortex control of movement assessed with TMS and rTMS.

Presenters include: A. Pascual-Leone (Boston), A. Valero-Cabre (Boston), M. Manto (Brussels), T. Hortobagyi (Grenville), J. Taylor (Sydney), L. Sawaki (Winston-Salem), J. Rothwell (London)

Funding for this Symposium was provided through a grant from the National Institutes of Health

(NIH)

II. Functional Tissue Engineering for Restoration of Ligamentous Knee Injuries



The aim is to present a multi-disciplinary perspective on the new frontier in biomaterial solutions to ligamentous injuries of the knee and their impact on function. The interface between biology, materials, mechanics, and restoration of function will be explored.

Presenters include: J. O'Connor (Oxford), L. Soslowski (Philadelphia), L. Snyder-Mackler (Delaware), M. Meany Murray (Boston)

Financial support for student participation and organization of this symposium was provided by the Whitaker Foundation.

III. NeuroMuscular Assessment in the Elderly Worker



The aim is to present and discuss the results of the European Shared Cost Project on Neuromuscular assessment in the Elderly Worker (NEW). The NEW project concerns the issue of prevention of musculo-skeletal disorders using clinical and functional tests in combination with measurements of surface EMG and MMG. Topics ranging from neurophysiology to signal processing and from electronic design to occupational health will be addressed

Presenters include: International members of the Shared Cost European Project, moderated and organized by Roberto Merletti Dip. di Elettronica, Politecnico di Torino, Torino, Claudio Orizio Dip. di Scienze Biomediche e Biotecnologie, Università di Brescia, Brescia.

Exhibitors

We wish to thank the following exhibitors for their participation and support to ISEK2004. We have provided a list of their contact information and their “25-word description” of their products and services.

Biofeedback Foundation of Europe

P.O. Box 75416
1070 AK Amsterdam

The Netherlands

Tel: +31 (0) 33 48 90 754

Fax: +31 (0) 33 48 00 520

<http://www.bfe.org/>

The Biofeedback Foundation of Europe (BFE) was founded to promote a greater awareness of biofeedback among European health professionals and, through training workshops, educate clinicians in the use of biofeedback techniques and technology.

Biopac Systems Inc.

42 Aero Camino
Goleta, CA 93117

Phone:(805) 685-0066

Fax:(805) 685-0067

<http://www.biopac.com/>

BIOPAC Systems, Inc. provides total solutions for life science studies by developing and supporting data recording and analysis systems, including amplifiers, transducers, electrodes and software.

Cambridge Electronic Design Ltd

Science Park,
Milton Road,
Cambridge CB4 0FE.

ENGLAND.

Steven Clifford

Tel. [44] (1223) 420186

Fax [44] (1223) 420488

<http://www.ced.co.uk>

Data acquisition, analysis and experimental control systems. Applications include spike analysis, EMG, sports science, intracellular and extracellular electrophysiology, evoked response, signal averaging, and spectral analysis.

Charnwood Dynamics Ltd

Unit 2, Victoria Mills,
Fowke Street, Rothley,
Leicestershire, LE7 7PJ,

United Kingdom

Tel. +44 (0)116 230 1060

Fax. +44 (0)116 230 1857

info@codamotion.co.uk

The Codamotion motion capture system from Charnwood Dynamics is a highly portable, active marker, Real-Time system used in clinical biomechanics and virtual reality applications.

Delsys, Inc.

650 Beacon St., 6th Floor
Boston, MA 02215

USA

Tel: 617 236 0599

Fax: 617 236 0549

delsys@delsys.com

DELSYS continues to define new horizons in Electromyography by providing Desktop and Wireless EMG Systems and Software for use in Biomechanics, Kinesiology, Rehabilitation and Ergonomics.

D.E.M. s.a.s.

Via Camillo Olivetti, 9
Leini, Torino-ITALY

www.demitalia.com

Maria Donatella Babbini

Noraxon U.S.A. Inc.

13430 N. Scottsdale Road, Suite 104
Scottsdale, Arizona 85254

Tel: (480) 443-3413

Fax: (480) 443-4327

Domestic Toll Free: (800) 364-8985 (US/
Canada only)

Erica H. Schramm

Email: erica.schramm@noraxon.com

Tekscan, Inc.

307 West First Street
South Boston, MA 02127-1309

800.248.3669

617.464.4500

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<http://www.tekscan.com>

Zebris GmbH

Hintere Grabenstr. 26-30
72070 Tuebingen, Germany

Phone+49 7071 27003

Fax+49 7071 27005

Wolfgang Brunner

<http://www.zebris.de/>

STEP 32 is a PC-based system that makes gait analysis easy, reliable, and user independent. It fully supports advanced research as well as clinical applications.

Noraxon offers advanced surface EMG and sensor technology for muscle function assessment and documentation. Products include: fixed-cable and wireless EMG devices, data acquisition and analysis software, biomechanical sensors, and accessories. Contact Noraxon at (800) 364-8985 for further information or visit us online at www.noraxon.com.

Tekscan's unique pressure sensing systems use thin, flexible, high-resolution sensors to identify potential ulceration areas, screen diabetic patients, observe gait abnormalities, substantiate diagnoses, and more!

Based on our real time motion capture devices (ultrasound-runtime measurement(in air)) we provide complete equipment and software for: gait analysis, spine analysis, (posture and functional) equilibrium analysis, analysis of hand and arm functions, characterization and analysis of the jaw movement (articulator set-up), analysis of the leg geometry (in combination with ultrasound imaging) electrode positioning (e.g. EEG)

Congress Program Overview

Friday, June 18, 2004

9:00 AM – 1:00 PM	ISEK Council Meeting Castle	Congress Registration 11AM-2PM Law Auditorium and GSU Link 2-8 PM	Workshop I Prosthetics				
1:00 PM – 2:00 PM	ISEK Council LUNCH		Spaulding Rehabilitation Hospital 9AM-5PM	Workshop 2	Workshop 3	Workshop 4	Workshop 5
2:00 PM – 5:00 PM	ISEK Council Meeting (cont'd) The Castle		Motor Unit	Ergonomics	Incontinence	Dynamics	
			Law School 1-5PM	Law School 1-5PM	Law School 1-5PM	Sargent 1-5PM	
Exhibitor set-up Ziskind Lounge 3-6PM			Poster Setup for Saturday Ziskind Lounge 3-8PM				
6:00 PM – 8:00 PM			----- ISEK Welcome Reception GSU Ballroom 6-8PM				

Saturday, June 19, 2004, Morning

8:00 AM – 9:00 AM		Basmajian Keynote Lecture Toshio Moritani – Electrophysiology and Kinesiology for Health and Disease (Abstract 487) Law Auditorium			
9:00 AM – 10:30 AM	Congress	Symposium Back Assessment Chairs: B Arsenaault and S Kumar Law Auditorium Abstract 22, 111, 182, 216, 325, 479	Platform Session Mechanomyogram Chairs: P Madeleine and C Orizio East Balcony Abstract 144, 178, 292, 296, 469, 99	Platform Session Motion Analysis Chairs: H Hermens and G Rau Conference Auditorium Abstract 136, 224, 377, 393, 394, 485	Platform Session Muscle Fatigue G Ebenbichler and M Knaflitz Metcalf Hall Abstract 143, 150, 152, 369, 404, 158
10:30 AM – 11:30 AM	Registration GSU Link 7AM-5PM	Coffee Break /Exhibitors/Poster Session #1 Ziskind Lounge Poster Sessions: Occupational Medicine Abstract 156, 165, 193, 205, 242, 285, 464, 481, 483, 493 Mechanomyogram Abstract 33, 44, 72, 126, 220, 263, 331, 383, 424, 505 Motion Analysis Abstract 18, 73, 123, 157, 184, 209, 211, 243, 314, 355, 432, 436			
11:30 AM – 1:00 PM		Platform Session Muscle Fatigue Chairs: D Farina and T Moritani Law Auditorium Abstract 12, 146, 217, 218, 395, 359	Platform Session Augmented and VR Chairs: E Keshner and L Oddsson East Balcony Abstract 53, 54, 279, 332, 357, 425	Platform Session Motion Analysis Chairs: G Balestra and U Della Croce Conference Auditorium Abstract 210, 340, 437, 500, 492, 104	Platform Session Occupational Medicine Chairs: C Kozey and C Larivière Metcalf Hall Abstract 8, 21, 49, 281, 358, 494

Program of the XVth Congress of the International society of Electrophysiology and Kinesiology

Saturday, June 19, 2004, Afternoon

1:00 PM – 2:00 PM	Congress Registration	Lunch GSU Ballroom			
2:00 PM – 3:00 PM		Keynote Lecture Rolf Westgaard – Issues in the Motor Control of the Trapezius Muscle (Abstract 57) Law Auditorium			
3:00 PM – 4:00 PM		Platform Session Motor Control Chairs: A Nene and P Van Roy Law Auditorium Abstract 125, 222, 246, 335	Platform Session Mechanomyogram Chairs: K Ebersole and G Sjogaard East Balcony Abstract 28, 181, 257, 289,	Platform Session Muscle Fatigue Chairs: R Baratta and T Kiryu Conference Auditorium Abstract 59, 121, 363, 466	Platform Session Occupational Medicine Chairs: M Bilodeau and A Luttmann Metcalf Hall Abstract 42, 52, 95, 212
4:00 PM – 5:00 PM		GSU Link 8-5PM	Coffee Break /Poster Session #2 Ziskind Lounge Poster Session : Augmented and Virtual Reality Abstract 38, 135, 259, 260 Sports Medicine Abstract 27, 76, 141, 234, 269, 286, 327, 338, 396, 398, 399, 400, 411, 440 Muscle Fatigue Abstract 63, 89, 112, 127, 189, 214, 227, 354, 326, 361 Electrode Arrays Abstract 48, 177, 337 Motion Analysis Abstract 426, 447, 458, 459		
5:00 PM – 6:30 PM		Platform Session Motor Control Chairs: J Buurke and P Hodges Law Auditorium Abstract 13, 117, 208, 392, 406, 435	Platform Session Electrode Arrays Chairs: R Merletti and G Rau East Balcony Abstract 30, 139, 223, 290, 352, 477	Platform Session Neurophysiology Chairs: Y Mano and Z Rymer Conference Auditorium Abstract 29, 219, 190, 270	Platform Session Motion Analysis Chairs: U Della Croce and D Scarborough Metcalf Hall Abstract 159, 236, 266, 297, 320, 321

Sunday, June 20, 2004, Morning

8:00 AM – 9:00 AM	Congress Registration GSU Link 8AM–5PM	<p>Keynote Lecture Janet Taylor – Cervicomedullary Stimulation in Humans (147) Law Auditorium</p>			
9:00 AM – 10:30 AM		<p>Symposium Chairs: M Manto and A Pascual-Leone TMS Law Auditorium Abstract 7, 36, 68, 83</p>	<p>Platform Session Sports Medicine Chairs: G Ebenbichler and I Melzer East Balcony Abstract 85, 88, 128, 129, 185, 438</p>	<p>Platform Session Ambulatory Recordings Chairs: H Hermens and R Westgaard Conference Auditorium Abstract 56, 410, 475, 478, 489</p>	<p>Platform Session Posture Chairs: J Fung and H Sveistrup Metcalf Hall Abstract 14, 197, 200, 0416, 448, 473</p>
10:30 AM – 11:30 AM		<p>Coffee Break and Poster Session #3 Ziskind Lounge Poster session: Ambulatory Recordings Abstract 15, 195, 299, 315, 488 Motor Control Abstract 40, 69, 74, 161, 168, 172, 175, 176, 179, 191, 304, 322, 328, 366, 401, 453, 495, 222, 246 Posture Abstract 55, 93, 94, 109, 120, 196, 277, 343, 391, 412, 462, 499, 380</p>			
11:30 AM – 1:00 PM		<p>Platform Session PM&R Chairs: P Bonato and G Ebenbichler Law Auditorium Abstract 252, 382, 409, 452, 496, 256</p>	<p>Platform Session Rehab. Engineering Chairs: C Robinson and F Molinari East Balcony Abstract 367, 237, 364, 501, 349, 160</p>	<p>Platform Session Motor Control Chairs: D Falla and M Pozzo Conference Auditorium Abstract 79, 180, 360, 433, 442, 417</p>	<p>Platform Session Neurophysiology Chairs: E Field-Fote and Z Rymer Metcalf Hall Abstract 66, 115, 258, 295, 422</p>

Program of the XVth Congress of the International society of Electrophysiology and Kinesiology

Sunday, June 20, 2004, Afternoon

1:00 PM – 2:00 PM	Congress Registration GSU Link 8-5PM	Lunch GSU Ballroom			
2:00 PM – 3:00 PM		Keynote Lecture John O'Connor – Ligament Function Law Auditorium			
3:00 PM – 4:30 PM		Symposium Tissue Engineering Chairs: J O'Connor and M Spector Law Auditorium Abstract 502, 506, 508, 504	Platform Session Motor Control Chairs: M Levin and N Vollestad East Balcony Abstract 100, 132, 274, 294, 311, 240	Platform Session PM&R Chairs: W Frontera and RC Wagenaar Conference Auditorium Abstract 17, 51, 61, 134, 389, 443	Platform Session Sports Medicine Chairs: J Buurke and S Lewis Metcalf Hall Abstract 71, 122, 186, 199, 202, 213
4:30 PM – 5:30 PM		Coffee Break and Poster Session #3 Ziskind Lounge Poster session: Rehabilitation Engineering Abstract 34, 35, 402, 431, 238 Neurophysiology Abstract 84, 81, 108, 145, 272, 309, 372, 381, 428, 284, 142 Physical Medicine & Rehabilitation Abstract 2, 4, 5, 10, 39, 45, 60, 78, 91, 110, 251, 267, 275, 287, 345, 387, 403, 408, 446, 451, 457			
Free Time					
6:00 PM	Board Buses for Boston Harbor Blues Cruise First Bus Leaves at 6:15PM Last Bus leaves at 6:30PM				
7:00 PM – 10:00 PM	Blues Cruise Spirit of Boston Cruise Ship Boarding ship begins at 6:15PM Ship departs Commonwealth Pier at 7:00PM Sharp				

Monday, June 21, 2004, Morning

8:00 AM – 9:00 AM	Congress Registration GSU Link 8-5PM	Keynote Lecture Catherine Disselhorst-Klug – Decision-Making Based on Surface EMG-Signals (Abstract 106) Law Auditorium			
9:00AM – 10:30 AM		Symposium NM Assessment Chairs: R Merletti and K Søgaard Law Auditorium Abstract 288, 170, 318, 300, 206, 174	Platform Session EMG Modeling/Signal Processing Chairs: Z Erim and M Yoshida East Balcony Abstract 163, 67, 467, 41, 103, 133	Platform Session PM&R Chairs: W Frontera and L Snyder-Mackler Conference Auditorium Abstract 265, 192, 230, 43, 282, 342, 408	Platform Session Innovation in EMG Chairs: C Disselhorst-Klug and P Parker Metcalf Hall Abstract 37, 162, 207, 313, 329, 418
10:30 AM – 11:30 AM		Coffee Break and Poster Session #5 Ziskind Lounge Poster session: NM Assessment symposium Abstract 283, 350, 351, 368 PM&R Abstract 90, 92, 113, 245, 344, 346, 348, 414, 430 Temporomandibular Dysfunction Abstract 1, 3, 116, 130, 131, 149, 155, 183, 231, 232 Innovation Abstract 64, 50, 119, 228, 312, 413, 486, 503 Motor Unit Abstract 124, 167, 194, 203, 239, 301, 419			
11:30 AM – 1:00 PM		Platform Session Motor Unit Chairs: Z Erim and K Turker Law Auditorium Abstract 415, 388, 153, 75, 390,405	Platform Session EMG Modeling/Signal Processing Chairs: P Bonato and T Kiryu East Balcony Abstract 137, 215, 164, 25, 264, 298	Platform Session Posture Chairs: L Nolan and E Hsiao-Wecksler Conference Auditorium Abstract 262, 356, 407, 427, 439, 465	Platform Session PM&R Chairs: A Nene and S Wolf Metcalf Hall Abstract 171, 323, 151,107, 490, 70

Program of the XVth Congress of the International society of Electrophysiology and Kinesiology

Monday, June 21, 2004, Afternoon

1:00 AM – 2:30 PM	Congress Registration GSU Link 8-5PM	Lunch, Award Ceremony, and ISEK Assembly			
2:30 PM – 3:30 PM		GSU Ballroom Keynote Lecture Steve Wolf – The EXtremity Constraint Induced Therapy Evaluation (EXCITE) Trial for Upper Extremity Stroke Rehabilitation: Potential Linkages to ISEK (Abstract 507) Law Auditorium			
3:30 PM – 4:30 PM		Coffee Break and Poster Session #6 Poster Session EMG Modeling Abstract 20, 32, 47, 80, 101, 187, 188, 226, 229, 253, 254, 273, 303, 308, 339, 370, 376, 468 Motor Unit Abstract 225, 353, 373, 378, 379, 305, 420 Temporomandibular Dysfunction Abstract 233, 255, 261, 278, 291, 374, 455, 456, 474, 498, 235, 244			
4:30 PM – 5:30 PM		Platform Session Motor Unit Chairs: C Thomas and D Stashuk Law Auditorium Abstract 371, 319, 317, 375	Platform Session EMG Modeling/SP Chairs: T Clancy and M Knaflitz East Balcony Abstract 302, 362, 429, 444	Platform Session Rehab Engineering Chairs: C Disselhorst-Klug and T D'Alessio Conference Auditorium Abstract 96, 138, 385, 365	Platform Session PM&R Chairs: D Selkowitz and S Roy Metcalf Hall Abstract 201, 19, 62, 293
5:30 PM – 6:30 PM		Platform Session Motor Unit Chairs: Z Erim and C Thomas Law Auditorium Abstract 271, 316, 330, 306	Platform Session Sports Medicine Chairs: A Nene and P Van Roy East Balcony Abstract 384, 386, 449, 450	Platform Session Posture Chairs: P Hodges and C Wall Conference Auditorium Abstract 65, 114, 476, 484	Platform Session EMG Modeling/SP Chairs: R Merletti and T Sadoyama Metcalf Hall Abstract 421, 434, 445, 333

Congress Program & Schedules

Friday, June 18, 2004

9:00 am – 5:00 pm

Workshop I – Prosthetics & Orthotics @ Spaulding Rehabilitation Hospital

1:00 pm – 5:00 pm

Workshop II – Advanced Technology for Decomposing the EMG Signal @ Law School

Workshop III – Mechanism of Occupational Musculoskeletal Injuries @ Law School

Workshop IV – EMG and Incontinence: Summary of European Community Program on Functional Asymmetry of Sphincter Innervation and Incontinence @ Law School

Workshop V – Dynamics of Normal and Disordered Human Movement @ Sargent College

3:00 pm – 8:00 pm

Poster Setup for Saturday @ Ziskind Lounge

6:00 pm – 8:00 pm

ISEK Welcome Reception @ GSU Ballroom

Saturday, June 19, Morning

7:00 am – 5:00 pm

Congress Registration @ GSU Link

8:00 am – 9:00 am

Keynote Basmajian Lecture @ Law School Auditorium

487 - Electrophysiology And Kinesiology For Health And Disease
T Moritani

9:00 am – 10:30 am

Motion Analysis @ Conference Auditorium

136 - Functional Activity Characteristics Of Individuals With And Without Shoulder Disorders
J Lin, W Hanten, S Olson, T Roddey, D Soto, H Lim, A Sherwood

224 - Effect Of Shoes And Muscle Stiffness And Damping Interactions On Simulated Upper Body Deformation
During Running
A Pourmoghaddam, M Rahimian, A Noorzad, F Abolhasani

377 - The Partition Of Spin Angular Momentum In Human Walking
M Popovic, A Englehart, H Herr

393 - Gait Deviations In Sound Limbs Of Transfemoral Amputees In Response To Alterations Of Sagittal Socket
Alignment
S Chung, T Han

394 - Effects Of Lower Extremity Exercise On Balance Recovery From A Forward Fall
G King, C Luchies, A Stylianou, L Richards, L Richards

485 - Accurate Estimation Of Body Segment Kinematics From Inertial Sensor Kinematics
C Baten, M Horsman, W De Vries, B Koopman, F Van Der Helm, P Veltink

Muscle Fatigue @ East Balcony

143 - Localized Muscular Fatigue: The Limiting Factor For Lifting
A Wrigley, W Albert, G Sleivert

150 - Efforts Can Stop As A Direct Consequence Of Postural Muscle Exhaustion
S Le Bozec, S Bouisset

152 - Fatigue-Related Changes In The Relative Activation Of The Muscles Forming The Quadriceps Femoris
With The Hip Flexed Versus Extended
M Iguchi, J Wilken, M Shaffer, B Floy, J James, M Bilodeau

369 - Analysis Of Muscle Fatigue In Pathological Subjects During Biking
F Molinari, G Balestra, M Knaflitz, F Aina, C Ariatti

404 - Comparison Between Fourier And Wavelet Transforms In Emg-Based Muscle Fatigue Analysis
M Andrade, J Carmo, A Rocha, W Veneziano, F Nascimento

158 - Semg As An Objective Tool To Assess The Responses Of Car Passengers To Lateral Accelerations
D Hewson, G Farah, C Petit-Boulanger, J Duchêne

Symposium - Back Assessment @ Law Auditorium

022 - Standing Platform For Chronic Lowback Pain Patients
S Kumar, Y Narayan

111 - Myoelectric Signal Characteristics Of Lumbar Muscle In Lbp Patients

H Fang, X Wang

182 - The Effect Of Postural Correction On Muscle Activation Amplitudes Recorded From The Cervicobrachial Region

L Mclean

216 - Are Abdominal Muscle Temporal Activation Patterns Related To Lumbar-Pelvic Motion Control?

C Hubley-Kozey

325 - Development Of A New Functional Test To Assess The Capacity Of Back Muscles : Assessment Of Face Validity

C Larivière, D Gravel, P Gardiner, A Arsenault, D Gagnon, P Loisel

479 - Field Calibration Of An Emg Assisted Model To Predict Spinal Forces, Without Use Of Mvc

W De Vries, J Visser, C Baten, J Van Dieen

Mechanomyogram @ Metcalf Hall

144 - Mechanomyogram To Assess Motor Unit Fusion Property During Sustained Isometric Contraction

T Kimura, T Hamada, T Watanabe, A Maeda, T Moritani

178 - The Influence Of Fatigue On The Efficiency Of Electrical-Mechanical Activity Of The Superficial Quadriceps Femoris Muscles

K Ebersole, K O'Connor, A Wier

292 - Fatigue Related Changes In The Mechanomyogram Are Not Due To Changes In Intramuscular Pressure Or Force Steadiness.

K Sogaard, A Blangsted, P Vedsted, C Orizio

296 - Phase Difference In Mechanomyogram Between Knee Extensor Synergists During Maximal Voluntary Contraction

M Kouzaki, M Shinohara

469 - Relations Between Force And Surface Mechanomyogram In Isometrically Contracted Calf Muscles

E Gallasch, D Rafolt

099 - The Mechanomyogram (Mmg) In Monitoring The Muscular Fatigue In The Isometric, Isotonic Contraction

M Tarata

10:30 am – 11:30 am

Coffee Break, Poster Session, Exhibitors @ Ziskind Lounge

018 - Comparison Of Muscle Activity During Gait In Subjects With And Without Stroke

J Corrêa, D Carvalho, A Fernandes, C Amorin, F Bérzin

033 - Mechanomyographic Time And Frequency Domain Responses Of The Vastus Medialis Muscle During Submaximal To Maximal Isometric And Isokinetic Muscle Actions

J Coburn, T Housh, J Cramer, J Weir, J Miller, T Beck, M Malek, G Johnson

044 - A Comparison Of The Mechanomyographic Amplitude Vs. Isometric Torque Relationships From A Piezoelectric Crystal Contact Sensor And An Accelerometer

M Malek, J Coburn, T Housh, J Weir, T Beck, G Johnson

072 - Mmg And Emg Responses Of The Superficial Quadriceps Femoris Muscles During The Wingate Anaerobic Cycle Ergometer Test.

S Rana

073 - Muscle Activity In Shod And Barefoot Healthy Young Subjects During Walking

B Begoña Gavilanes, J Goiriena

- 123 - Reliability And Validity Of A Clinical Video-Based Gait Assessment Tool
E Lamberg, E Godwin
- 126 - Peak Torque, Mean Power Output, And Mechanomyographic Responses To Concentric Isokinetic Strength Training Of The Quadriceps Femoris
T Evetovich, T Housh, G Johnson, D Housh, K Ebersole, D Smith
- 156 - The Biomechanical Characteristics Of Rotational Mobilisation Of The Lumbar Spine
R Lee, B Tsung, J Evans, P Tong
- 157 - Analysis Of The Righting Reaction Of Sitting Balance Against Tilting Stimuli: Study Of Difference Between Healthy Persons And Hemiplegic Patients.
K Amimoto, K Yanagisawa, M Morishita, K Nakazawa
- 165 - The Effect Of Abdominal Hollowing On Trunk Muscle Activation During Lifting
H Butler, C Hubley-Kozey, J Kozey
- 184 - Hip, Knee, Ankle Kinematics And Kinetics During Stair Ascent And Descent In Healthy Young Individuals
W Drechsler, A Protopapdaki
- 193 - Manual Lifting Pattern Prediction Based On Key Postures
C Chang
- 205 - The Influence Of Different Unloading Positions Upon Stature Recovery And Paraspinal Muscle Activity
E Healey, N Fowler, A Burden, I Mcewan
- 209 - A Case Study Examining The Effects Of Different Types Of Afo On An Adult Hemiplegic Subject
S Kinsella, K Moran
- 211 - The Effects Of Different Types Of Afo On Hemiplegic Gait
S Kinsella, K Moran
- 220 - Instantaneous Mean Frequency Vs. Range Of Motion For Surface Electromyographic And Mechanomyographic Signals Recorded During Isokinetic Leg Extensions
J Cramer, I Kremenec, T Housh, J Weir, J Coburn, T Beck, G Johnson
- 242 - Relationship Between Nerve Conduction Studies And Preliminary Surface Electromyography Measurements On Carpal Tunnel Syndrome Subjects.
T Semeghini, R Pinto, L Kröll, C Rezende Filho, F Bérzin
- 243 - Effect Of The Upper Body Movement During Standing Up
K Momose, K Suzuki, M Miwa, H Makabe, K Ihashi
- 263 - Wavelet And Fourier Based Estimates Of Mmg And Emg Responses To Isokinetic Muscle Actions Yield Similar Results
J Weir, J Coburn, T Housh, T Beck, M Malek, G Johnson, J Cramer
- 285 - Effects Of Back Pain On The Correlations Of The Lumbar Spine And Hip
T Wong, R Lee
- 314 - Comparative Analysis Between Abdominal Muscle Recruitment In Each Quarterly Of Pregnants Through Emgs.
C Torriani, K Wolhers, F Cyrillo, M Diniz
- 331 - Catchlike Property Decreases The Amplitude Of Mechanomyogram In Humans
Y Yoshitake, M Shinohara, Y Kawakami, H Kanehisa, T Fukunaga
- 355 - Association Between Heelstrike And Kinematic Parameters Of Gait – An Indirect Detection Method Without Foot Switches
L Oddsson, N Patronik, K Sienko, C Wall Iii
- 383 - Study Of Muscle Function In Process Of Fatigue Generated During Isometric Contraction Ans In Process Of Its Recovery With Use Of Both Mechanomyogram(Mmg) And Electromyogram(Emg)
K Sakamoto, Y Imai, K Mito, K Kaneko, M Takanokura, H Makabe

- 424 - Frequency Analysis Of Mechanomyogram Using Matching Pursuit
M Yoshida, M Yoshida, A Kadoishi
- 432 - Biomechanical Analysis Of Aggressive In-Line Skating: Landing And Balance During A Stall
M Major, P Kurath, M Bange, A Beaudoin, E Hsiao-Weckslar
- 436 - Gait Analysis In The Longitudinal Assessment Of Patients Suffering From Multiple Sclerosis
M Knaflitz, G Balestra, F Molinari, M Schieroni
- 464 - Seats Padded With Gel Reduce The Activity Of Back Muscles During Sitting
C De Luca, M Cheng
- 481 - Evaluation Of A Cart For The Transportinon Of Meals In A Hospital
M Caicoya, J Sutil
- 483 - Evaluation Of The Ergonomic Features Of The Comercial Chairs For Office Work
J Sutil, M Caicoya
- 493 - Lumbar Load For Flight Attendants During Trolley Handling Aboard Aircraft
M Jaeger, K Sawatzki, U Glitsch, H Ottersbach, R Ellegast, K Schaub, G Franz
- 505 - Mechanomyographic Responses To Postactivation Potentiation In Triceps Surae Muscles
K Akataki, K Mita

11:30 am – 1:00 pm

Occupational Medicine @ Conference Auditorium

- 008 - Static Load Repetition Is A Risk Factor In The Development Of Lumbar Cumulative Musculoskeletal Disorder
P Sbriccoli, K Yousuf, I Kupershtein, M Solomonow, B Zhou, M Zhu, Y Lu
- 021 - Measures Of Muscle Fatigue
S Kumar, Y Narayan, N Prasad
- 049 - Neuromuscular Control Of Neck Stiffness During Frontal And Rear-End Car Collisions
L Janshen
- 281 - Are There Measurable Differences Between Myoelectric Signal Parameters Recorded From Control Subjects And Those With Trapezius Myalgia In Response To Sustained Arm Holding?
N Goudy, L Mclean
- 358 - Surface Emg Signal Alterations In Carpal Tunnel Syndrome Patients. A Pilot Study
A Rainoldi, M Gazzoni, A Lantermo, R Merletti
- 494 - Electromyographical Investigation On Muscular Strain And Fatigue At Office Work
A Luttmann, H Kylian, K Schmidt, M Jaeger

Motion Analysis @ East Balcony

- 210 - The Effects Of Different Types Of Afo On Oxygen Consumption
S Kinsella, K Moran
- 340 - Effect Of Design Changes Of Military Load Carriage Systems On Gait And Posture: A Case Study
R Attwells, S Birrell, R Hooper, N Mansfield
- 437 - An Intelligent Procedure To Support The Selection Of Emg Probes Location For Gait Analysis
G Balestra, F Gerace, M Knaflitz, F Molinari
- 500 - Effect Of Walking Aids On Muscle Activation In Stroke Patients
J Buurke, H Hermens, C Erren-Wolters, A Nene
- 492 - Gait Risk Factors For Falls In Older Adults: A Dynamic Perspective
Y Barak, R Wagenaar, K Holt

104 - From Intuition To Quantification: Analysing Movement Dynamics In Patients With Shoulder Impingement Syndrome

S Williams, O Miltner, C Braun, G Rau, C Disselhorst-Klug

Muscle Fatigue @ Law Auditorium

012 - Correlation Between Fatigability Of The Sternocleidomastoid And Anterior Scalene Muscles And Duration Of Symptoms In Chronic Neck Pain Patients

D Falla, G Jull, G Stavrou, H Tsao, A Rainoldi

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K Masuda, H Akima, R Kinugasa, K Taga, H Kanehisa, H Fukuoka, T Yanagiya, T Fukunaga

217 - Changes In Voluntary Activation Of The First Dorsal Interosseous Muscle With Low, Moderate And High Force Fatiguing Contractions

T Eichelberger, M Bilodeau

218 - Using A Mathematical Model To Predict The Isometric Force-Intensity Relationship

J Ding, T Kesar, A Wexler, S Binder-Macleod

395 - The Effect Of 1 Khz Nmes On The Fatigue Of Wrist And Finger Flexor Muscles

K Pires, F Gomes, A Maluhy, A Malan, A Rocha, S Roy

359 - An Ergonomic Evaluation Of Physical Workload In Holding A Portable Device With And Without The Use Of Strap Support: A Surface Electromyography Study Application

N Koleini Mamaghani, Y Shimomura, K Iwanaga, T Katsuura

Augmented & Virtual Reality @ Metcalf Hall

053 - Innovative Virtual Reality Training For Hand Rehabilitation Post-Stroke

A Merians, S Adamovich, G Burdea, H Poizner

054 - Impact Of Visual Information On Posture Is Influenced By Other Sensory Inputs

E Keshner, R Kenyon, Y Dhaher

279 - Postural Stability And Adjustments In An Immersive Virtual Environment

J Fung, E Keshner

332 - Virtual Reality Applications For Assessment And Rehabilitation Of Cognitive And Motor Processes

A Rizzo, J Buckwalter, T Bowerly, S Yeh, J Hwang, M Thiebaut, G Kim

357 - A Virtual Environment With Simulated Gravity For Balance Rehabilitation Of Bedridden Patients And Frail Individuals

L Oddsson, C Wall Iii, P Meyer, J Konrad

425 - Development Of Complex Virtual Environments For Locomotor Training Following Stroke

B Mcfadyen, F Malouin, J Fung, F Comeau, S Chapdelaine, C Beaudoin, A Lamontagne, D Laurendeau

1:00 pm – 2:00

Lunch @ GSU Ballroom

Saturday, June 19, Afternoon

2:00 pm – 3:00 pm

Keynote Lecture @ Law Auditorium

057 - Issues In The Motor Control Of The Trapezius Muscle: Possible Relevance For The Development Of Shoulder Pain

R Westgaard, P Mork, C Westad

3:00pm – 4:00pm

Occupational Medicine @ Conference Auditorium

042 - Muscle Activities Of Emergency Medical Technicians (Emt'S) During Patient Transfer With And Without Transfer Aids

R Baratta, A Banks, D Lu, C Johnson

052 - Evaluation Of Back Muscle Strength And Fatigue In Healthy And Low-Back Pain Subjects: A Comparative Study Of Three Assessment Protocols.

R Da Silva Jr., B Arsenaault, D Gravel, C Larivière

095 - Comparative Study Of The Women'S Lumbar Concavity With 35 Weeks Of Gestation And In Post-Partum Period Through The Cifolordometry

E Guimarães, M Barauna, R Canto, R Silva, R Barreto, S Ferreira

212 - Gender Influence On Fatigability Of Back Muscles During Intermittent Isometric Contractions: A Study Of The Neuromuscular Activation Patterns

N Gaudreault, C Larivière, D Gravel, P Gardiner, A Arsenaault, D Gagnon, P Loisel

Motor Control @ East Balcony

125 - Impairment Of Coordination During Bimanual Arm Swinging In Adults With Hemiparesis.

K Ustinova, R Balasubramaniam, V Goussev, J Fung

222 - Synergistic Muscle Activation And Optimal Power Output In Lat Pulldown Exercise

M Yoshida, T Fujimori, Y Koyama, S Suzuki

246 - The Emergence Of Neuromuscular Adaptation To Changing Cadence In Children - The Role Of Aging And Experience

P Chao, J Jensen

335 - Reflex Modulation Of Spinal Motoneurons By Single Low Threshold Cutaneous Mechanoreceptors In The Glabrous Skin Of The Human Foot

P McNulty, J Fallon, L Bent, V Macefield

Muscle Fatigue @ Law Auditorium

059 - Protocol Of Determination Of Fatigue Index To Muscular Training In Patients With Duchenne'S Muscular Dystrophy

J Corrêa, A Fernandes, A Rodrigues, M Cunha, R Franco, F Bérzin

121 - Effect Of Weak Magnetic Stimulation For The Strained Peripheral Muscle

K Yunokuchi, A Nakashima, H Hosaka

363 - Motor Unit Firing Rate And Surface Emg Amplitude Behavior During Maximal-Effort Fatiguing Contractions In Young And Older Adults

S Rubinstein, G Kamen, J Kent-Braun

466 - Musculoskeletal Adaptations After Spinal Cord Injury Are Prevented With A Minimal Dose Of Daily Electrical Stimulation Exercise.
R Shields, S Dudley-Javoroski

Mechanomyogram @ Metcalf Hall

028 - Mechanomyographic Amplitude And Mean Power Frequency Versus Torque Relationships During Submaximal To Maximal Isokinetic And Isometric Muscle Actions Of The Biceps Brachii
T Beck, T Housh, G Johnson, J Weir, J Cramer, J Coburn, M Malek

181 - Biceps Brachii Motor Unit Deactivation And Activation Strategy Investigated By Surface Mechanomyogram
C Orizio, P Maccalli, P Bonera, B Diemont, M Gobbo

257 - Surface Mechanomyography – A Way To Assess Motor Control Changes In Presence Of Experimentally Induced Muscle Pain
P Madeleine, L Arendt-Nielsen

289 - Mmg And Emg Responses Together With Intramuscular Tissue Pressure During Low-Level Static Continuous And Intermittent As Well As Dynamic Contractions
G Sjøgaard, P Vedsted, A Blangsted, K Søgaard, C Orizio

4:00 pm – 5:00pm

Coffee Break, Poster Session, Exhibitors @ Ziskind Lounge

027 - Surface Emg Modifications In Response To Anterior Cruciate Ligament Creep Elicited During Cyclic Exercise
P Sbriccoli, M Solomonow, B Zhou

038 - Reaching In Reality And In Virtual Reality: A Comparison Of Movement Kinematics
M Levin, A Viau, B Mcfadyen, A Feldman

048 - The Effect Of Electrode Configuration On Emg Based Estimation Of Muscle Force Using A High-Density Emg Array
D Staudenmann, I Kingma, D Stegeman, J Van Dieen

063 - Electromyographic Parameters In Induced Fatigue By Prolonged Mastication In Temporomandibular Disorders Patients
A Oliveira, C Mendonça, C Pedroni, R Contato, F Bérzin

076 - Control Of Torque-Assisted Bicycle Based On Physical Activity During Repetitive Prolonged Cycling Exercise
T Kiryu, S Kato, T Moriya, Y Mizuno

089 - Evaluation Of The Force And Endurance Of The Paravertebral Muscles In Man And Woman: A Comparative Study Of The Different Dynamometric Tests
E De Oliveira, A Arsenault, D Gravel, J Fernades

112 - Does The Decrease Of Mpf/Mf Reflect Localized Muscelfatigue Specifically?
H Yang, M Wang

127 - Fatigue Assessment Using Discrete Wavelet Transforms For High Intensity Exercises (Wingate Test)
R Silvestre, R Guzman, J Letelier

135 - Visual Search For A Target In A Virtual Environment: Effects On Stabilization Of Posture In Young And Elderly
J Streepey, E Keshner, R Kenyon

141 - Leg Muscle Recruitment During Cycling Is Less Constrained In Triathletes Than Cyclists
P Hodges, A Chapman, B Vicenzino, P Blanch, J Knox

177 - Spectral Analysis Of Electromyographic Signal In Different Positions Of Electrodes
D Rodrigues, R Guirro, F Forti, K Cancelliero, H Pasini Neto

- 189 - Biomechanical Assessment Of Gloves. A Study Of The Sensitivity And Reliability Of Emg Parameters Related To The Level Of Activation And Fatigue Of Different Forearm Muscles
C Larivière, A Plamondon, J Lara, C Tellier, J Boutin, A Dagenais
- 214 - Monitoring The Fatigue Process Of Elbow Flexors In Sustained Maximal Contractions With Correlation Integrals.
A Stylianou, C Luchies, D Lerner, G King
- 227 - Neuromuscular Endurance In Ankle Muscles Of Older Male In Relation To Level Of Daily Physical Activity
M Shibata, T Moritani
- 234 - Evaluation Of Quadriceps Femoris Median Frequency After Anterior Cruciate Ligament Injury
D Bevilacqua-Grossi, J Arakaki, R Vasconcelos, A Simão, A Oliveira
- 259 - Virtual Reality Delivery Modalities Affect Displacement And Velocity Of The Center Of Pressure During Voluntary Reaching In Young And Old Adults
H Sveistrup, S Smith, E Bisson, Y Lajoie, J Mccomas
- 260 - A Virtual Reality Exercise Program Improves Balance And Mobility In Community-Living Adults With Traumatic Brain Injury
H Sveistrup, M Thornton, S Marshall, J Mccomas, H Finestone, A McCormick
- 269 - Knee Musculature Response Strategies During Self-Initiated Vertical Jump Landings
R Croce, P Russell, E Swartz, L Decoster
- 286 - Variation Of Muscle Activity Pattern Between Actual And Simulated Ski Jumping
& Murayama, & Ushiyama, & Kiryu
- 326 - M-Wave Size Is Influenced By The Range Of Conduction Velocities And The Timing Of Motor Unit Action Potentials
K Keenan, D Farina, R Merletti, R Enoka
- 327 - Muscular Intensity Activation At Open And Closed Kinetic Chain Exercise
C Lima, S Roy, M Cheng, A Amadio, C De Luca
- 337 - Do Array Electrodes Identify Cross Talk?
A Nene, L Kallenberg, L Schaake, H Hermens
- 338 - Differences Of Tibial Impact Acceleration During Running At Different Overground States
H Kurumadani, T Murakami, H Sasaki, K Miyake, K Murakami, T Yamashita
- 354 - Analysis Of Global Conduction Velocity Estimation From The Ssemg
R Beck, M O'Malley
- 361 - An On-Line Fatigue Monitor During Electrically Elicited Contractions
A Rainoldi, M Gazzoni, G Melchiorri, I Caruso
- 396 - Analysis Of Quadriceps Emg Activity In Counter Movement Jumping - A Comparative Study Between Eccentric And Concentric Muscle Contraction Phases.
R Ângelo, A Carvalho, P Mourão, S Fernandes, C Carvalho
- 398 - Analysis Of Quadriceps Emg Activity In Counter Movement Jumping - A Comparative Study Between Eccentric And Concentric Muscle Contraction Phases Of Subject Groups With Different Performances
R Ângelo, A Carvalho, P Mourão, S Fernandes, C Carvalho
- 399 - Emg Variables And Fiber Type Distribution In Elite Athletes
A Rainoldi, G Melchiorri, M Gazzoni, I Caruso
- 400 - Relationship Between Exercise-Related Interleukin-6 Production, Mechanical And Myoelectric Manifestations Of Fatigue
M Minetto, P Paccotti, M Ventura, A Rainoldi, M Gazzoni, R Merletti, A Dovio, A Angeli

411 - Analysis Of M. Vastus Lateralis And M. Biceps Femoris Temporal Patterns During Gait Of Transtibial Amputees Athletes

A Cerqueira Soares, J Serrão, R Soares, L Mochizuki, A Amadio

426 - 3D Arthrokinematics Of The Human Upper-Cervical Spine: In-Vitro Study Of Coupled Rotations

E Cattrysse, J Baeyens, P Van Roy, J Clarys

440 - Peroneal Emg Onset Patterns During Laterally-Tilted Treadmill Running With And Without Ankle Orthoses

D Wallace, R Harter

458 - Study About The Impulse'S Behaviour During Treadmill Walking With Varying Uphill And Downhill Slopes.

C Amorim, T Freitas, C Amorim, A Campos, L Amorim, N Serrão, H Macau, P Galhanone

459 - Ground Reaction Force'S Vertical Component Behaviour During Walking In Various Uphill And Downhill Slopes.

C Amorim, T Freitas, C Amorim, A Campos, L Amorim, H Macau, N Serrão, P Galhanone

5:00 pm – 6:30 pm

Motor Control @ Conference Auditorium

013 - Spatio-Temporal Evaluation Of Neck Muscle Activation During Postural Perturbations In Healthy Subjects
D Falla, A Rainoldi, R Merletti, G Jull

117 - The Control Of Trunk Movements After Tripping

J Van Dieën, J Van Der Burg

208 - Muscle Reaction Classification Of Low Back Pain

N Reeves, J Cholewicki, T Milner

392 - In Vivo Load Sharing Among The Three Heads Of Human Triceps Surae During Isometric And Submaximal Plantar Flexion

S Chung, E Rey, Z Bai, L Zhang

406 - Non-Invasive Assessment Of Recruitment Of The Abdominal Muscles In People With Low Back Pain: Ultrasound Measurement Of Muscle Activity

P Hodges, P Ferreira, M Ferreira

435 - Dynamic Trunk Kinematic Stiffness

K Moorhouse, G Kauffman, K Granata

Neurophysiology @ East Balcony

029 - Estimation Of Postsynaptic Potentials In Human Motoneurons

K Türker, R Powers

219 - Changes In Motoneuron Synaptic Properties In Human Spastic Hemiparesis

N Suresh, M Ellis, W Rymer

190 - Intrinsic Activation Of Human Motoneurons In Spinal Cord Injury

M Gorassini

270 - An Evaluation Of The Utility And Limitations Of Muap Counts In The Surface Emg

P Zhou, W Rymer

Motion Analysis @ Law Auditorium

159 - The Relationship Between Ipsilateral Hip Dysfunction And Contralateral Knee Degeneration

J Erhart, A Bhave, R Starr, J Herzenberg, D Paley, M Mont, G Etienne

236 - Energy Profiles Of Index Finger During Tapping

P Kuo, D Lee, D Jindrich, J Dennerlein

266 - An Index To Quantify Gait Deviations
V Chester, M Tingley, E Biden

297 - Effect Of Tai Chi On Gait And Obstacle Crossing Behaviors
E Hsiao-Wecksler, A Ramachandran, M Reed, Y Yang, K Rosengren

320 - Soft Tissue Artefact Description In Human Knee Motion Analysis By Combining 3D Fluoroscopy And Stereophotogrammetry
R Stagni, S Fantozzi, A Cappello, A Leardini

321 - Soft Tissue Artefact Compensation In Knee Kinematics By A New Method Based On Double Anatomical Landmark Calibration
R Stagni, A Cappello, S Fantozzi, A Leardini

447 - Segmentation Of Foot Switch Signals In Gait Analysis
M Knaflitz, F Gerace, G Balestra, F Molinari

Electrode Arrays @ Metcalf Hall

030 - A Flexible Two-Dimensional Electrode Array For High Spatial Resolution Emg Measurements Of Long (Minutes To Hours) Duration
G Rau, E Schulte, C Disselhorst-Klug

139 - Preliminary Results On The Use Of Equalization Filters For High Spatial Resolution Electrode Arrays
H Xia, E Clancy, M Bertolina

223 - Innervation Zones Of The Facial Muscles Estimated By Using Multichannel Surface Emg
T Sugahara, T Sadoyama, S Hosoya, M Kamijo, T Masuda

290 - Multifunction Myoelectric Control Using A Linear Electrode Array
K Davidge, V Buerkle, K Englehart, P Parker

352 - Optical Flow Applied To Multichannel Surface Myoelectrical Signals
N Östlund, J Karlsson, J Holmberg

477 - Surface Electrode-Array Electromyogram Decomposition Algorithm Based On Independent Component Analysis (Ica) And Template Matching
G García, R Okuno, K Akazawa

Sunday, June 20, Morning

7:00 am – 5:00 pm

Congress Registration @ GSU Link

8:00 am – 9:00 am

Keynote Lecture @ Law Auditorium

147 - Cervicomedullary Stimulation In Human Subjects
J Taylor

9:00 am – 10:30 am

Sports Medicine & Human Performance @ Conference Auditorium

085 - The Possibility Of Anterior Cruciate Ligament Healing By Conservative Treatment Reinforced With Extra-Articular Artificial Ligament In Rabbits
K Takayanagi, M Aoki, H Ihara

088 - Weakness And Voluntary Activation Failure Of Knee Muscles In Patients With Acl Deficiency And Reconstruction
S Hsiao, P Chou, I Tsai, J Li

128 - Neuromuscular Perturbation Training Decreases Co Contraction In Those With The Potential To Compensate Well For Acl Rupture
T Chmielewski, W Hurd, L Snyder-Mackler

129 - Gender Differences In Muscle Activity Patterns During Disturbed Walking Before And After Perturbation Enhanced Neuromuscular Training
W Hurd, T Chmielewski, L Snyder-Mackler

185 - Quadriceps Femoris Function And Emg Power Spectrum Profiles After Acl Reconstruction
W Drechsler, M Cramp, O Scott

438 - Coactivation In The Knee Joint After Anterior Cruciate Ligament Reconstruction And Rehabilitation
A Pássaro, I Sacco, A Marques, A Amadio

Posture @ East Balcony

014 - Balance Control: Gender And Age Differences In 9 To 16 Year Olds
L Nolan, A Grigorenko, A Thorstensson

197 - Effect Of Vision And Imposed Inclined Surface During Quiet Stance On Postural Sway
R Mezzarane, A Kohn

200 - Prediction Of Different Muscle Activity Patterns Between Soleus And Gastrocnemius During Standing In Humans: Preferred Direction Approach
T Hirano, D Nozaki, K Nakazawa, S Yamamoto, M Akai

416 - Excitabilities Of Stretch Reflexes In Antagonistic Ankle Muscles While Maintaining A Bipedal Standing Posture In Human
H Obata, N Kawashima, K Nakazawa, S Yamamoto, T Komeda, M Akai

448 - Influence Of Audio Feedback On Structural Properties Of Postural Sway
L Chiari, M Dozza, A Cappello, F Horak

473 - Effects Of Ageing And Degeneration On Regional Coupled Motion In The Cervical Spine.
P Van Roy, F Van Den Bogaerde, E Cattrysse, J Baeyens, L Verbruggen, J Clarijs

Symposium - Transcranial Magnetic Stimulation @ Law Auditorium

007 - Use-Dependent Plasticity Of The Human Motor Cortex In Health And Disease
L Sawaki

036 - Contralateral Organization Of The Human Central Nervous System
T Hortobágyi

068 - Role Of Afferent Input In Motor Organisation In Health And Disease
J Rothwell, K Rosenkranz

083 - Changes In Spinal Excitability Induced By Subthreshold High Or Low Frequency Repetitive Transcranial Magnetic Stimulation
A Valero-Cabre, A Pascual-Leone

Ambulatory Recordings @ Metcalf Hall

056 - Muscle Activity In Trapezius And Lower Back Muscles During Standing/Ambulating And Seated Work Postures
P Mork, R Westgaard

410 - Introduction To A Portable, Wireless Gait Evaluation And Biofeedback Tool
D Scarborough, S Morris, D Krebs, J Paradiso, E Asmussen, D Goldvasser

475 - A Wearable Functional Activity Monitor For Stroke Patients
S Roy, M Cheng, C De Luca

478 - Automated Activity Profiling For Use In Continuous Dynamic Human Motion.
C Baten, R Was, J Smeding, P Veltink

489 - Objective Field Assessment Of Exercise Capacity In Chronic Obstructive Pulmonary Disease
D Sherrill, M Moy, J Reilly, P Bonato

10:30 am – 11:30 am

Coffee Break, Poster Session, Exhibitors @ Ziskind Lounge

015 - A Tool To Quantify The Temporal And Spatial Properties Of Emg Patterns During Gait
A Ricamato, J Hidler

040 - Holding An Object Between Fingers While Moving The Arm: A Simulation Based On The Model For Motor Control
J Pilon, A Feldman

055 - Effects Of A Single Soleus Muscle Twitch On The Posture Of A Standing Subject Studied With A Force Platform And Electromyography
M Morimoto, A Kohn

069 - Corticomotor Inhibition During Passive Movement: Relationship To Movement Parameters
D Edwards, F Mastaglia, G Thickbroom, D Edwards

074 - Effects Of Contralateral Limb Activity At Different Intensities And Arousal On Steadiness Of Knee Extensor In Young Men And Women
S Zhou, H Hu

093 - Static Postural Equilibrium Assessment Of Normal Subjects Through Computerized Biophotogrammetry And Oscillometry
E Guimarães, M Barauna, R Canto, R Silva, R Barreto, S Ferreira

094 - Postural Evaluation Of Individuals Congenitally Totally Blind Using Computerized Biophotogrammetry
E Guimarães, M Barauna, R Canto, R Silva, R Barreto, S Ferreira

109 - Static Postural Equilibrium Assessment In Pregnants Through Computerized Biophotogrammetry
C Silva, M Baraúna, R Canto, F Duarte, R Silva

120 - Age-Related Postural Change During Gait: The Influence Of Musculoskeletal Functions And The Experience Of Falls

H Sato, K Shinkoda

161 - Activation Pattern Of The Masticatory Muscles In Individuals W Ith Craniomandibular Disorder

D Rodrigues, A Oliveira, F Bérzin

168 - Can Complexity Analysis Evaluate The Severity Of Parkinson Disease?

H Makabe, M Miwa, K Momose, T Miao, K Sakamoto, K Mito, K Kaneko

172 - Correlations Between Quadriceps Contraction Steadiness In Isometric And Dynamic Functional Movements

S Carville, M Perry, O Rutherford, D Newham

175 - Muap Rate In Chronic Pain Patients

L Kallenberg, H Hermens

176 - Delayed-Onset Muscle Soreness And Short And Long Latency Stretch Reflexes In Erector Spinae

N Hjortskov, M Essendrop, N Fallentin, J Skotte

179 - Short Latency Stretch Reflexes In Human Erector Spinae Muscles

J Skotte, N Hjortskov, M Essendrop, N Fallentin

191 - Effects Of Lower Median Nerve Block On Precision Grip

S Dun, R Kaufmann, Z Li

195 - Comparison Of Energy Expenditures While Going Up And Down The Staircase: Measured By 2-D Accelerometer And Respiratory Gas Analyzer

Y Furukawa, R Nagatomi, O Nakamata, T Chiba, M Hosoda, H Takei, O Nitta, S Kaneko

196 - The Effect Of Sandal Straps On Standing Posture Control

M Hosoda, K Takayanagi, O Nitta, F Furukawa, K Hara, I Isozaki, I Inoue, O Nakamata

277 - Patients With Chronic, Recurrent Low Back Pain Demonstrate More Generalized Joint Torque Patterns In Response To Postural Perturbations

S Jones, S Henry, C Raasch, J Hitt

299 - The Effects Of The Height Of Parallel Bars On Walking And Physical Movements

K Ishiguro, A Takagi, Y Kurokawa, K Sakamoto

304 - Preservation Of Grip Aperture Scaling To Object Size In The Impaired Hand Of Adults With Hemiparesis

S Michaelson, M Levin

315 - Use Of A New Brace For Clients With Sensory Disturbances During Waking.

A Takagi, K Nishibe, K Ikenouchi, M Otani, K Endho, T Imamura, Y Sakimura, T Nagaoka

322 - Lower Body Analysis Of Muscle Recruitment In Visually Impaired And Sighted Matches

M Horvat, C Ray, R Croce

328 - Muscle Activation Is Different When The Same Muscle Acts As An Agonist Or Antagonist During Voluntary Movement

M Shapiro, J Prodoehl, D Corcos, G Gottlieb

343 - Comparative Analysis Of The Erecting Spine Muscles Activity During The Gait In Subjects With And Without Scoliosis

C Cyrillo, P Pinto, T Torriani, S Seoane, R Rodrigues, C Coelho

366 - Extensor And Flexor Muscle Contribution To Active Trunk Stiffness

P Lee, K Moorhouse, K Granata

380 - Postural Coordination Dynamics During Voluntary Suprapostural Activity

D Smith, L Smart, E Otten

391 - Velocity Information Plays A Role In Controlling Ballistic Sway During Quiet Standing

K Masani, D Nozaki, M Kouzaki, K Nakazawa, T Thrasher, M Popovic

401 - Surface Emg Activity Of The Paraspinals And Hamstrings During Manual Force Application

M Agarabi, A Mcdonough

412 - Comparative Analysis Of The Trapezius Muscle Before And After The Use Of The Subcapal Bar Through Surface Electromyography (Emg)

D Debessa, C Camargo, L Sartori, C Cyrillo, T Torriani

453 - Analysis Of The Relationship Between Impulse And Propulsive Force In Hemiparetic Individuals During Treadmill Gait.

C Amorim, A Campos, D Ribeiro, T Freitas, L Amorim, H Macau, C Amorim

462 - Generalizability Of Stabilogram Diffusion Analysis

R Doyle, B Ragan, L Melnyk, E Hsiao-Wecksler, K Rosengren

488 - Monitoring Motor Fluctuations In Parkinson'S Disease: A Data Mining Approach

D Sherrill, P Bonato, D Standaert, S Salles

495 - The Role Of The Primary Motor Cortex During Skill Acquisition In A Two Degree-Of-Freedom Movement Task

J Shemmell, J Tresilian, S Riek, R Carson

499 - Reliability And Validity Of A One-Leg Stance Protocol Using The Biodex Balance System

M Perron, L Hebert, B Mcfadyen

11:30 am – 1:00 pm

Neurophysiology @ Conference Auditorium

066 - Motor Learning Of Hands In Patients With Parkinson'S Disease

Y Mano, T Chuma, F Reza, K Ikoma

115 - Activity-Dependent Plasticity Of Spinal Reflexes Associated With Locomotor Training In Individuals With Complete And Incomplete Sci

E Field-Fote, E Field-Fote, M Khan

258 - Effects Of Task Instruction On Cortical And Segmental Reflex Excitability

G Lewis, E Perreault, C Mackinnon

295 - Input-Output Properties In The Human Corticospinal Pathway And Intracortical Inhibition/ Facilitation Functions After Immobilization

F Kaneko, T Kizuka, H Yamada, T Yokoi, T Masuda

422 - Motor Unit Reinnervation And Control Properties In Intrinsic Muscles Of A Transplanted Hand

R Merletti, M Lanzetta, D Farina, M Pozzo, A Bottin

Motor Control @ East Balcony

079 - Localization Of Three-Dimensional Distribution Of Muscle Activation Using Muscle Functional Magnetic Resonance Imaging

R Kinugasa, Y Kawakami, T Fukunaga

180 - Muscle Force Frequency Response Of Human Tibialis Anterior

C Orizio, M Gobbo, B Diemont, R Baratta, M Solomonow

360 - Postural Strategies To Maintain Balance During Lateral Walking After Stroke

M Trivino, A Lamontagne, J Fung

433 - Force-Emg Relationship In Isometric And Dynamic Ballistic Contractions

N Vollestad, S Jubrias, M Kushmerick

442 - Measurement Of Muscular Effort: Effects Of Movement Frequency And Load

B Glenn, R Gregory

417 - Assessment Of Muscle Fiber Conduction Velocity During Explosive Contractions In Humans
M Pozzo, E Merlo, D Farina, G Antonutto, R Merletti, P Di Prampero

Physical Medicine & Rehabilitation @ Law Auditorium

252 - Electromyographic Activity Of Shoulder Muscles During Land And Water Proprioceptive Neuromuscular Facilitation Exercises

J Cardoso, M Nichele, A Zeghibi

382 - Knee Adduction And Abduction Moment Patterns During Normal Walking And Tai Chi Exercise: Application For Osteoarthritis Rehabilitation

W Liu, S Tseng, M Finley, K Mcquade

409 - Comparative Analysis Of The Recruitment Of The Muscle Tibial Anterior With Two Resistance Resources In Relation To Voluntary Isometric Contraction Maximum (C_{ivm}), Through Emgs

D Debessa, C Cyrillo, T Torriani, B Baltazar, F Fontanini, P Prates, M Mello, W Wohlers

452 - Study Of Inspiratory Capacity In Copd Through Surface Electromyography

C Amorim, C Amorim, N Serrão, A Campos, T Freitas, E Correa, L Amorim, F Ladeira

496 - Modulation Of Cortical And Spinal Excitability During Stretching Of The Rectus Femoris Muscle

L Tremblay, M Noël, M Nadeau, M Préfontaine, F Tremblay

256 - The Effects Of Hand Vibration On Motor Evoked Potentials In Hemiparetic Individuals

S Melo, R Forget

Rehabilitation Engineering @ Metcalf Hall

367 - A Novel Multichannel Programmable Neuromuscular Stimulator

M Pozzo, E Merlo, A Bottin, E Detoma

237 - Evaluation Of Botox® Effect On Upper Limb Of Stroke Patients By Portable Stretching Device Combined With Emg

Y Wu, J Chen, S Huang

364 - Stimulation Current Waveform Shape Has No Influence On Motor Unit Activation During Transcutaneous Electrical Stimulation

F Mandrile, D Farina, M Pozzo, R Merletti

501 - Lower Leg Activity Monitor For Deep Vein Thrombosis Applications

D O'Keefe, K O'Donovan, G Lyons

349 - Network Technologies For Intelligent Modular Prostheses

A Poulton, S Hill, D Binnie

160 - Hand Biomechanics In Healthy Subjects Performing Activities Of Daily Living: Analysis Of The Movement Patterns Of Wrist, Metacarpophalangeal And Proximal Interphalangeal Joints

A Murgia, P Kyberd

1:00 pm – 2:00 pm

Lunch @ GSU Ballroom

Sunday, June 20, Afternoon

2:00 pm – 3:00 pm

Keynote Lecture @ Law Auditorium

509 – Ligament function
J O'Connor

3:00 pm – 4:30 pm

Motor Control @ Conference Auditorium

100 - On The Hand Muscles Activation In Position Perturbed Adaptive Reaching In Human
M Tarata, J Blodel

132 - Index Finger Coordination During Tapping Across Different Postures
D Lee, P Kuo, D Jindrich, J Dennerlein

274 - Principal Components Analysis Applied To Anticipatory Postural Adjustments In Parkinsonian Patients
L Chiari, L Rocchi, F Horak

294 - Non-Linear Analysis Of The Surface Electromyographic Signal In Parkinsonian Patients
F Felici, G Filligoi, L Fattorini, N Accornero, A Rosponi, P Sbriccoli, M Trallesi, M Marchetti

311 - Balance Maintenance Strategies While Standing During Bilateral Achilles Tendon Vibration And Support Surface Perturbations
C Thompson, M Bélanger, J Fung

240 - Coherence Analysis Between Electroencephalogram And Electromyogram During Self-Sustained Contraction In Human.
Y Tomita, M Yoshihira, J Ushiba

Physical Medicine & Rehabilitation @ East Balcony

017 - Electromyographic Crosstalk In The Measurement Of Pelvic Floor Muscle Activation
S Madill, L Mclean

051 - Reliability Of Flexor Carpi Radialis Hoffmann Reflex Measures
A Christie, J Inglis, K Calder, D Gabriel

061 - Neuromuscular Changes With Aging: Implications For Knee Stability
L Schmitt, M Lewek, L Snyder-Mackler, K Rudolph

134 - Influence Of Treadmill Walking Speed On Plantar Flexor Emg Pattern
E Clancy, K Cairns, P Riley, M Meister, D Kerrigan

389 - Electromyographic Analysis Of Knee Muscles During Normal Walking And Tai-Chi Step In Health Adults
S Tseng, W Liu, M Finley, K Mcquade

443 - Reliability Of Voluntary Step Execution Behaviour Under Single And Dual Task Conditions In Healthy Young And Elderly Individuals
I Melzer, L Oddsson, N Rosenblatt

Whitaker Symposium @ Law Auditorium

502 - The Potential Of Dermal Fibroblasts As A Cell Source For The Repair Of Ligamentous Tissues
S Nicoll

506 - Strategies For Anterior Cruciate Ligament Tissue Engineering
M Spector, L Louie, H Hsu, C Guo, I Yannas

508 - Smart Scaffolds For Stimulation Of Anterior Cruciate Ligament Healing
M Murray

504 - Dynamic Stability And The Acl Injured Knee: Differential Neuromuscular Responses Reflect Functional Compensation (Implications For Bioengineering)
L Snyder-Mackler

Sports Medicine & Human Performance @ Metcalf Hall

071 - A New Method Of Quantifying The Bilateral Limb Deficit Phenomenon Using The Myoelectric Signal
U Kuruganti, P Parker, M Tingley

122 - Emg Activity And Rearfoot Kinematics In Asymptomatic Persons With Low And High Arch Feet.
J Garbalosa, T Gagne, D Catuccio

186 - Muscular Representation Of Bi-Lateral Transfer In Children Acquiring A Novel Skill
N Benjuya, E Wegman

199 - Muscle Activation During Knee Joint Torque Exertion Is Affected By Unintentionally Generated Hip Joint Torque: Intersubject Variability And Implication For Muscle Strength Training
D Nozaki, K Nakazawa, M Akai

202 - Effects Of Strength Training Versus Balance Training On Paravertebral Automatic Muscle Responses
G Ebenbichler, J Kollmitzer, A Sabo, L Oddsson, T Bochdansky

213 - Reliability Of Electromyography And Peak Torque During Maximum Concentric Knee Extensions
R Ângelo, A Carvalho, P Mourão, S Fernandes, C Carvalho

4:30 pm – 5:30 pm

Coffee Break, Poster Session, Exhibitors @ Ziskind Lounge

002 - Emg Analysis Of The Superior And Inferior Fascicles Of The Orbicularis Oris Muscle On Deaf Individuals
S Regalo, M Vitti, M Moraes, M Semprini, M Mattos, C Santos, C Felicio, J Hallak

004 - Emg Analysis Of The Orbicularis Oris Muscle In Deaf Individuals, In Mandibular Rest Position, Compared To Hearers
S Regalo, M Vitti, M Semprini, J Hallak

005 - Emg Analysis Of The Orbicularis Oculi Muscle In Normal And In Individuals Indicated To Receive Eye Prosthesis
M Mattos, M Vitti, M Semprini, D Tosello, R Lopes, P Moroni, S Regalo

010 - Electromyographic Analysis Of The Masseter And Temporal Muscles In Oralized Deaf Individuals
S Regalo, F Martinez, M Vitti, M Semprini, M Mattos, R Constâncio, S Siéssere, J Hallak

034 - Development Of A New Motion Analysis System Using Gyroscopic Sensors
L Sun, R Lee

035 - Validity Of An Inverse Kinematic Model In Determining The Intervertebral Movements Of The Lumbar Spine
L Sun, R Lee

039 - Arm-Trunk Compensations For Beyond-The-Reach Movements In Adults With Chronic Stroke
D Moro, M Levin

045 - The Effects Of Circumferential Air-Splint Pressure On Flexor Carpi Radialis H-Reflex In Subjects With And Without Neurological Deficits
J Agostinucci, A Holmgrn

060 - Evaluation Of The Biofeedback-Emg In The Treatment Of Enforcement Genuine Incontinence
J Corrêa, A Fernandes, R Franco, F Bérzin

- 078 - Soleus H-Reflex Modulation During Hip And Knee Joint Passive Movement In Spastic Stroke Patients
S Tanabe, Y Muraoka, A Kamiya, Y Tomita, Y Masakado
- 081 - Effect Of Sustained Volitional Muscle Relaxation On The Excitability Of The Anterior Horn Cells:
Comparison Between The F Wave And Transcranial Motor Evoked Potential (Mep)
F Okada, J Kimura
- 084 - Electrophysiological Examination Of Pyramidal Tract Functions In Patients With Subacute Myelo-Optico
Neuropathy (Smon) Studied By Magnetic Stimulation
A Matsumoto, Y Tajima, K Sudou, K Tashiro
- 091 - Evaluation Of The Thoracic Curve Through The Cifolordometer
M Barauna, J Bustamante, R Silva, C Silva, R Canto
- 108 - Changes Of Auditory Tone Modulates Human Eeg Activity
A Nuruki, Y Ueno, K Yunokuchi
- 110 - Neuromuscular Properties Of The Quadriceps Femoris After Knee Surgery Evaluated By Muscle Fmri And
Emg
H Akima, T Furukawa
- 142 - Modulation Of Motor Evoked Potentials (Meps) And Maximal Voluntary Contraction (Mvc) After Ischemic
Nerve Block
C Hsieh, Y Chang, A Wong, C Chen, Y Liu
- 145 - Electrically-Elicited Somatosensory Evoked Potentials In Drowsy And Awake States Of Free Moving Rats
H Chen, J Chen
- 230 - Analysis Of Anterior Tibial Translation And Quadriceps-Hamstrings Emg Ratio During Isometric
Quadriceps Contractions In Acl- Deficient Individuals
D Bevilaqua-Grossi, R Vasconcelos, J Arakaki, A Simão, A Oliveira
- 238 - Design Of Implantable Cuff Electrode With Surface Modification For Chronic Stimulation And Recording
Of Peripheral Nerve Activity
C Chang, J Chen, J Liao
- 251 - Study Of Technique Of Global Postural Re-Education During The Postural New Aligning
L Valentim
- 267 - Application Of The Electromyographics Biofeedback In The Treatment Of The Anal Incontinence
C Amorim, C Amorim, A Amorim, L Amorim, A Campos, T Freitas, M Pacheco, R Zangaro
- 272 - Can Standard Surface Emg Parameters Be Used To Estimate The Number Of Muaps In The Surface Emg?
P Zhou, W Rymer
- 275 - The Effects Of Functional Electrical Stimulation Gait Training On Joint Coordination And Muscle Activation
In The Child With Cerebral Palsy
C Laughton-Stackhouse, P Shewokis, R Lauer, S Pierce, B Smith, J Mccarthy
- 284 - Somatosensory Evoked Magnetic Fields Following The Saphenus Nerve Stimulation
H Onishi, M Oishi, M Oyama, T Soma, Y Kurokawa, S Kameyama
- 287 - Emg Activities Of Shoulder Joint Muscles While Standing On One Leg With A Crutch
T Soma, H Onishi, M Oyama, Y Kurokawa, K Tachino
- 309 - Dynamic Asymmetry Of Cerebrum With Sport Activity
A Harutyunyan
- 345 - Electromyography Analysis Of The Quadriceps Femoris Muscle Group After Application Of Short-Wave
Continuous
D Debessa, R Rodrigues, F Filoso, T Torriani, C Cyrillo, P Pelozo
- 372 - Motor Unit Firing Patterns In Patients With Cerebellar Ataxia
M Manto, C Sauvage, A Adam, R Roark, S Nawab, C De Luca

381 - Vestibular Influences On Human Muscle Spindles

L Bent, P Bolton, V Macefield

387 - Electromyographic And Radiological Evaluation, Pre Treatment And Post Treatment, Through The Maitland Method In The Cervical Spine, On Patient With Neurological Lesion: A Case Report

R De Barros Santos, C Torrinani, D Gonzalez, F Cyrillo

402 - Presentation Of A Low Cost Orthosis That Makes Feasible The Orthostatism Of Bearers Of Cerebral Palsy

T Torriani, M Monteiro, W Werneck, A Andrade, D Debessa

403 - Quantitative Measurement Of The Muscular Recruitment Of A Bearer Of Cerebral Paralysis With Scoliosis During Therapeutic Activity Of Balance Reaction

T Torriani, M Monteiro, C Cyrillo, P Prumes, T Tomasi, G Gomes

428 - The Effect Of Forearm Position On The Size Of Response To Transcranial Magnetic Stimulation In Human Extensor Carpi Radialis Longus

M Oyama, K Aizu, H Onishi, T Soma, M Sato, M Ichie, Y Handa

431 - A New Method For Periodical In-Situ Re-Calibration Of Force Platforms

L Chiari, A Cappello, D Lenzi

446 - Effect Of Type Of Practice On Arm Motor Recovery In Chronic Stroke Patients

C Cirstea, A Pfito, M Levin

451 - Electromyographic Analysis Of Abdominal Muscle In Chronical Obstrutive Pulmonar Disease Patients During Slow Vital Capacity Maneuver

C Amorim, C Amorim, N Serrão, A Campos, T Freitas, E Correa, L Amorim, F Ladeira

457 - Electromyographic Analysis Of Extensor Carpi Radialis Longus, Flexor Carpi Ulnaris And 2Nd Dorsal Ulnaris Muscles During Objets Grasping Movement For Daily Life Activities (Dla).

C Amorim, L Amorim, C Amorim, H Macau, A Campos, T Freitas, R Zângaro, N Silva

6:00 pm

GSU Link

Board Busses for Boston Harbor Blues Cruise

7:00 pm – 10:00 pm

Spirit of Boston

Blues Cruise

Monday, June 21, Morning

7:00 am – 5:00 pm

Congress Registration @ GSU Link

8:00 am – 9:00 am

Keynote Lecture @ Law Auditorium

106 - Decision-Making Based On Surface Emg-Signals: Different Ap-Proaches To Information Extraction
C Disselhorst-Klug

9:00 am – 10:30 pm

EMG Modeling & Signal Processing @ Conference Auditorium

163 - Recording Of Isometric Shoulder Muscle Activation For Biomechanical Analysis And Clinical Evaluation.
J De Groot, C Meskers, H Arwert, L Rozendaal, J Arendzen

067 - A New Emg Signal Decomposition Approach Using Factor Graphs
V Koch, H Loeliger

467 - Assessment Of The Accuracy Of Extraction Of The Motor Command Through The Pulse Density
Demodulation Processing Utilizing Synthetic Electromyogram
K Imaizumi, S Hiki

041 - Experimental Validation Of A Surface Emg Model
D Gabriel

103 - A Gmm-Based Classification Scheme For Myoelectric Control Of Powered Upper Limb Prostheses
Y Huang, K Englehart, B Hudgins, A Chan

133 - Muscle Fiber Conduction Velocity Distribution Estimation From Elicited Motor Responses
I Ledoux, M Garcia-Gonzalez, J Hogrel, J Duchène

Physical Medicine & Rehabilitation @ East Balcony

265 - Atypical Shoulder Muscle Activation Parameters In Subjects With Multidirectional Instability
J Barden, R Balyk, V Raso, M Moreau, K Bagnall

192 - Analysis Of The Paraspinal Muscles Activity In Patients With Duchenne Muscular Dystrophy
J Thouin, P Mathieu, O Ciolofan, J Joncas, G Zoabli, C Aubin

043 - Changes In Foot Contact And Emg Occur After Botulinum Toxin Type A Injection And Physical Therapy In
A Child With A Diagnosis Of Idiopathic Toe Walking-A Case Study
S Li, M Bishop, C Senesac, R Woo, B Horodyski, D Brunt

282 - The Effects Of Scapular Taping On The Surface Emg Activity Of Shoulder Girdle Muscles During Upper
Extremity Elevation In Individuals With Shoulder Impingement Syndrome
D Selkowitz, C Chaney, G Vlad

342 - Comparative Emg-Analysis Of The Pain And The Constriction Of Ascending Stample Fibers Of The
Trapezius, After Application Of Techniques Tens And Prt - Positional Release Therapy
C Cyrillo, S Sencovici, S Sartori, T Torriani

408 - Maximal Recruitment Of The Knee Musculature In Moderate Osteoarthritis: Implications For Management
J Mcnutt, C Hubley-Kozey, M Agarabi, K Deluzio, S Landry, W Stanish

Symposium - NeuroMuscular Assessment @ Law Auditorium

288 - The New-Study. Neuromuscular Assessment In Elderly Workers From 4 Eu Countries With And Without Work Related Musculoskeletal Disorders.

G Sjøgaard, K Sjøgaard, H Hermens, L Sandsjö, T Läubli, S Thorn, M Vollenbroek-Hutten, H Christensen

170 - Fatigue Development In The Upper Trapezius And Biceps Brachii In Subjects With Neck-Shoulder Pain

K Sjøgaard, E Schulte, L Kallenberg, H Christensen, C Disselhorst-Klug, H Hermens, G Rau

318 - Single Motor Unit Contribution To Surface Mechanomyogram Investigated In Two Hand Muscles

C Orizio, C Cescon, M Gobbo, M Gazzoni, D Farina

300 - Analysis Of Fatigue In The Erector Spinae Muscle During Sustained Isometric Back Extension By Means Of Seng

M Essendrop, N Hjortskov, C Cescon, K Sjøgaard, N Fallentin

206 - Three Advanced Approaches To Surface Emg Decomposition At Low Contraction Forces

A Holobar, D Zazula

174 - Muap Rate: A New Measure To Assess Motor Control

L Kallenberg, H Hermens

Innovation in EMG @ Metcalf Hall

037 - Automatic Speech Recognition Using Myoelectric Signals

A Chan, K Englehart, B Hudgins

162 - Using A Mapping Index To Assess Muscle Fatigue

D Macisaac, P Parker, K Englehart

207 - Crosstalk And Coactivation In Bipolar Surface Emg Data: A New Methodology For Detection, Discrimination And Quantification

L Meinecke, C Disselhorst-Klug, G Rau

313 - Implantable Myoelectric Sensors (Imes) For Upper-Extremity Prosthesis Control - Independence Of Multiple Intra-Muscular Emgs

R Weir, T Kuiken, A Ajiboye

329 - The Emg Signal As A Pre-Symptomatic Indicator Of Organophosphates In The Body

C De Luca, J Buccafusco, S Roy, G De Luca, A Johansson, S Nawab

418 - Assessment Of Muscle Fiber Conduction Velocity From Surface Emg Signals In Dynamic Contractions

D Farina, M Pozzo, E Merlo, A Bottin, R Merletti

10:30 am – 11:30 am

Coffee Break, Poster Session, Exhibitors @ Ziskind Lounge

001 - Electromyographic Analysis Of Masticatory And Facial Muscles In Individuals With Schwartz-Jampel Syndrome

M Semprini, M Vitti, K Diaz Serrano, C Brandão, R Brandão, S Regalo

003 - Effect Of Denture Quality On Perioral Muscle Activity During Speech

M Vitti, C Santos, M Mattos, M Semprini, H Paranhos, J Hallak, S Regalo

050 - Clinical Decision Support Using Hybrid Fuzzy Analysis Of Quantitative Emg Data

A Hamilton-Wright, D Stashuk

064 - Relationship Between Contact Pressure And Contact Impedance In The Ring Shaped Emg Measurement System

H Manabe, M Fukumoto

090 - Wrist Muscle Activity Patterns Change With Use Of A Haptic Mouse

J Dennerlein, M Dimarino, T Becker

- 092 - Shoulder Movement Range Assessment In Mastectomized Women Through Computerized Biophotogrammetry
M Barauna, R Canto, R Silva, C Silva, M Veras, V Freitas, V Silva, P Barauna
- 113 - Electromyographic Activities During Repetitive Neck Motions In Asymptomatic Young And Middle-Aged Adults
S Wang, K Lin, J Lin
- 116 - Comparison Among Subjects With Different Occlusion Classes Of Angle With And Without Bruxism
I Gadotti, F Berzin, D Biasotto-Gonzalez
- 119 - The Investigation Of Motor Unit Recruitment Using Inhomogeneous Muscle Activation
A Holtermann, K Roeleveld, S Karlsson
- 124 - The Effect Of Varying Levels Of Contractile Force On Intramuscular And Surface-Detected Motor Unit Potential Size And Firing Rate
S Boe, T Doherty, D Stashuk
- 130 - Pattern Of Electric Activity Of The Masticatory And Cervical Muscle In Violinists And Violists
E Ribeiro, J Milanesi, F Bérzin
- 131 - Electromyography Evaluation Of Chewing Muscles Before And After Body Posture Treatment In Mouth Breathing Children
E Ribeiro, F Bérzin, A Silva, A Ferla
- 149 - Electromyographic Study Of Hyperactive Masticatory Muscles In Patients With Temporomandibular Disorders
C Duarte, F Bérzin
- 155 - Effectiveness Of The Manual Therapy On The Electric Activity Of The Chewing Muscles In Temporomandibular Disordered Patients
E Ribeiro, L Ries, C Borini, F Bérzin
- 167 - Contractile Property Of Muscle Fibers During Repetitive Electrical Stimulation In Humans
M Kamo, S Morimoto
- 183 - Electromyographic Analysis Of Chewing Muscles In Mouth And Nasal Breathing Children
E Ribeiro, A Ferla, A Silva, F Bérzin
- 194 - Recruitment And Derecruitment Of Motor Units In Biceps Brachii Muscle During Isovelocity Flexion Movement
K Akazawa, R Okuno, M Yoshida
- 203 - Theoretical Interpretation Of Motor Unit Coherence And Frequencygram
J Ushiba, Y Nishimura, H Endoh, Y Masakado, Y Tomita
- 228 - New Human Interface Using Surface Emg Signals
Y Koike, K Yagishita, K Nakayama, A Katayama, J Kim, M Sato
- 231 - The Effect Of Cervical Mobilization On Electromyographic Activity Of Masticatory Muscles In Patients With Temporomandibular Disorders
C Pedroni, A Oliveira, F Bérzin
- 232 - The Direct Effect Of The Functional Orthopedics Maxillary Treatment In Mastigatory Muscles'S Electromyographic Activity . A Case Report.
C Pedroni, E Sakai, F Bérzin
- 239 - Relationship Between The Features Of Surface Motor Unit Action Potential And Its Source Position
H Endoh, Y Tomita, J Ushiba
- 245 - Emg Analysis Of The Biceps Brachii Muscle In Deaf Individuals, Compared To Hearers
S Regalo, V Teixeira, M Vitti, A Oliveira, M Semprini, J Hallak

- 283 - Effects Of Spatial Filtering On Multi-Channel Surface Emg Muap Shapes
S Thorn, L Kallenberg, M Forsman, H Hermens
- 301 - The Relationship Between Time And Frequency Domain Methods Of Estimating Low Frequency Common Drive
L Myers, Z Erim, M Lowery
- 312 - Emg Pattern Classification Using Fuzzy Logic For Controlling Below-Elbow Myoelectric Hand Protheses
A Ajiboye, R Weir
- 344 - Electromyography Analysis Of Infra-Spinal Muscle Fibers Recruitment During A Pnf Pattern And In A Bad Ragaz Pattern - An Effectiveness Comparison Between Dry Land And Water
T Torriani, B Baltaduonis, F Fernandes, C Cyrillo
- 346 - Analysis Of The Tibial Anterior And Medial And Lateral Gastrocnemius Muscular Recruitment During The Gait In Subjects With Concave And Plane Foot, Through The Surface Electromyography (Semg)
S Santos, C Cyrillo, T Torriani, P Pelozo
- 348 - Electromyography Analysis Of Infra-Spinal Muscle Recruitment During The Use Of Two Differents Resistance Water Devices - An Effectiveness Comparison Between Resistance In Water
T Torriani, F Figueiredo, F Fernandes, C Cyrillo
- 350 - The Influence Of Three Intermittent Myofeedback Relaxation Training Schedules On Trapezius Muscle Activity While Performing A Gross-Motor Task
L Sandsjö, G Voerman, M Vollenbroek-Hutten, C Groothuis-Oudshoorn, H Hermens
- 351 - How To Improve Working Conditions For Spinal Cord Injured? An Intervention Study Including Myofeedback Training
L Sandsjö, L Grundell, K Valtonen, A Karlsson, H Hermens, E Viikari-Juntura
- 368 - Assessment Of Fatigue In Low Back Muscles Of Elderly Nurses
M Pozzo, C Cescon, S Venturi, R Bonfiglioli, R Merletti, F Violante
- 413 - Comparative Evaluation Case Study Of The Abdominal Musculature Between Pregnant And Non-Pregnant Women During Isotonic Movement Through Surface Electromyography
T Torriani, C Cyrillo, W Wohlers, W Werneck, D Diniz, A Azar
- 414 - Comparative Evaluation Case Study Of The Abdominal Musculature Between Pregnant And Non-Pregnant Women During Isometric Movement Through Surface Electromyography
T Torriani, C Cyrillo, W Wohlers, W Werneck, D Diniz, A Azar
- 419 - Low-Threshold Motor Unit Twitch Force And Conduction Velocity Following Sub-Maximal Fatiguing Contractions
D Farina, L Arendt-Nielsen, R Merletti, T Graven-Nielsen
- 430 - Comparison Of The Activity Of The Paravertebrals Ridge Muscles, During Posture Maintenance In Dry Land And Immersed Through Surface Electromyography
C Cyrillo, R Rosa, Y Yanaga, R Rodrigues, T Torriani
- 486 - Sweat Test For Electro-Mechanical Stability Of The Emg Electrode-Skin Interface
G De Luca, A Johansson, S Roy, M Cheng, L Gilmore, P Bergman, C De Luca
- 503 - A Telemetry System For Monitoring Physiological Parameters In Cyclists
W Veneziano, T Dantas, A Da Rocha, J Do Carmo, M De Andrade, F De Oliveira Nascimento, K Pires

11:30 am – 1:00 pm

Posture @ Conference Auditorium

- 262 - Learning Different Postural Tasks In Patients With Poststroke Hemiparesis, Cerebellar Ataxia And Parkinson'S Disease
M Ioffe, K Ustinova, L Chernikova

356 - Vibrotactile Feedback Improves Balance Control In Vestibulopathic Individuals During Pseudorandom Horizontal Surface Perturbations

L Oddsson, E Kentala, P Meyer, H Kubert, C Wall III

407 - Reduced Tonic Activity Of The Deep Trunk Muscle During Locomotion In People With Low Back Pain
P Hodges, S Saunders

427 - Can Simple Biomechanical Test Are Able To Identify Elderly Fallers?

I Melzer, N Benjuya, J Kaplanski

439 - On A Common Fractal Property Of Body Fluctuations In Human Gait And Posture

M Abe, K Nakazawa, K Masani, M Akai

465 - Influences To Human Posture Control In Cooling And Stimulation Conditions Of Foot Soles

K Takayanagi, A Nakayama, M Hosoda

EMG Modeling & Signal Processing @ East Balcony

137 - Time-Frequency Analysis Of Surface Electromyographic Signals Via Hilbert Spectrum

A Andrade, P Kyberd, S Nasuto

215 - Frequency Analysis Of Eccentric And Concentric Isokinetic Quadriceps Contractions Using Fourier Transform- And Wavelet-Based Methods

I Kremenec, M Mchugh

164 - Optimal Electromyogram Amplitude Estimation Algorithm For Epoch-Based Applications

E Clancy, J Tranquilli, C Salini, P Prakash, D Brown

025 - Influence Of Fiber Shortening On Estimates Of Motor Unit Conduction Velocity And Spectral Frequencies

G Rau, E Schulte, D Farina, R Merletti, C Disselhorst-Klug

264 - Robust Estimation Of Upper Limb Emgs From Multichannel Intracortical Recordings

E Perreault, D Westwick, E Pohlmeier, S Solla

298 - Toward A Quantitative Analysis Of Voluntary Motor Control: A Voluntary Response Index (Vri) Derived From Surface Emg Recordings During Voluntary Maneuvers

A Sherwood, H Lim, D Lee, W Mckay, M Priebe, S Holmes

Physical Medicine & Rehabilitation @ Law Auditorium

171 - Assessment Of Proprioceptive Reflexes In Patients With Spasticity After Stroke

C Meskers, A Schouten, J De Groot, J Arendzen

323 - Activity Of Lower Limb Muscles During Driving A Cycling Chair In Hemiparetic Stroke Patients.

K Seki, M Sato, T Fujii, M Ichie, Y Handa

151 - Visualizing And Testing Spasticity

T Kakebeeke, H Lechner, P Knapp

107 - Initial Feasibility Of Wavelet Analysis Of Gait In Children With Cerebral Palsy

R Lauer, C Stackhouse, B Smith, M Orlin, S Pierce, J Mccarthy

490 - Functional Electrical Stimulation (Fes) Of Gastrocnemius-Soleus (G-S) Improves Gait Patterns By Addressing The Changed Dynamic Resources Of Children With Spastic Cerebral Palsy (Cp)

C Ho, K Holt, E Saltzman, R Wagenaar

070 - Use Of Emg Techniques In Ergonomics Analysis To Prevent Muscle-Skeletal Injuries In Industrial Jobs

J Aguilar

Motor Unit @ Metcalf Hall

415 - Human Inspiratory Muscles: Insights From Motor Unit Recordings

S Gandevia

388 - Changes In Thenar Motor Unit Electromyographic Activity And Force With Repeated Activation
C Thomas, R Johansson, B Bigland-Ritchie

153 - Age-Related Changes In Human Motor Unit Properties
C Rice

075 - Differential Control Of Low-Threshold Motoneurons In Human Masseter From Ipsilateral And Contralateral
Motor Cortex
M Nordstrom

390 - Excitatory And Inhibitory Responses Of Single Motor Units To Trans Cranial Magnetic Stimulation: A
Comparative Study In Healthy Subjects And Patients With Motoneurone Diseases.
A Schmied, S Attarian, J Vedel

405 - How Is Force Maintained When Motor Unit Firing Rate Is Decreased During Experimental Pain?
Investigation Of Synergist Muscles
P Hodges, U Ervilha, T Graven-Neilsen

1:00 pm – 2:30 pm

Lunch, Award Ceremony, and ISEK Assembly @ GSU Ballroom

Monday, June 21, Afternoon

2:30 am – 3:30 pm

Keynote Lecture @ Law Auditorium

507 - The Extremity Constraint Induced Therapy Evaluation (Excite) Trial For Upper Extremity Stroke Rehabilitation: Potential Linkages To Isek
S Wolf, A Butler, J Alberts

3:30 pm – 4:30 pm

Coffee Break, Poster Session, Exhibitors @ Ziskind Lounge

020 - Modelling Of Skeletal Motor Unit Innervation Process
N Jiang, P Parker, K Englehart

032 - Modification Of Dimitrov'S Convolutional Model To Introduce Variation In The Sfaf Peak-Ratio
A Malanda-Trigueros, J Rodriguez-Falces, L Gila-Useros, J Navallas-Irujo, I Rodriguez-Carreño

047 - Improving Emg Based Force Estimation Using Principle Component Analysis On A High-Density Emg Array
D Staudenmann, I Kingma, A Daffertshofer, D Stegeman, J Van Dieen

080 - The Influence Of Extremity Positions On The Relationship Between Activities Of The Rectus Femoris And Vastus Medialis And Torque In Extension Of The Knee -A Study Of A Method For Approximation Of The Relationship Between Surface Emg And Torque To Power Equation-
O Niita, K Yanagisawa, H Tomita, M Sibata

101 - On Single Trial Detection Of M1 & M2 Stretch Reflex (Sr) Activity
M Tarata, G Staude, W Wolf

187 - Pattern Discovery Used To Assess Motor Unit Potential Train Validity
X Wang, D Stashuk

188 - Clinical Electrophysiological Characterization Of Muscle Based On Motor Unit Potential Classification Using Residual Analysis And Weight Of Evidence
D Stashuk, M Emrani

225 - Synchronization Analysis Of Human Motor Units In Ankle Flexor/Extensor Using A New Wavelet-Pca Decomposition Technique
R Yamada, J Ushiba, Y Masakado, Y Tomita

226 - The Effect Of Time Delay Dispersion Filtering On The Snr Of Myoelectric Communication Channel
H Ma, Y Zhang

229 - Analysis Of Intramuscular Emg Signals With A Decomposition Program
J Florestal, P Mathieu, A Malanda

233 - Electromyographic Evaluation Of The Balance Functional In The Wearers The Complete Dentures
C Pedroni, D Ferreira, F Bérzin, M Mesquita

235 - Study Of Electromyographic Signs The Masseter Muscle In Sleep Bruxism After Use Occlusal Splint
L Ferreira, C Amorim, C Amorim, L Amorim, M Tambelini, C Santos, L Oliveira

244 - Electromyography Study Of Sternocleidomastoid Muscle Co-Activation Pattern In Different Jaw Movements.
T Semeghini, L Kröll, F Bérzin, V Monteiro-Pedro

253 - Wavelet-Based Compression Of Isometric Emg Signals
A Rocha, P Berger, F Nascimento, J Carmo, S Roy

- 254 - Wavelet Analysis Of Electromyographic Signals For The Assessment Of Physical Conditioning
A Rocha, P Berger, F Nascimento, J Carmo, S Roy
- 255 - Eletromyographic Evaluation Of Masticatory Muscles Before And After Functional Orthopedics Of Maxillary Associated With Orthodontics Terapy In A Patient With Absence Of The Coronoid Process - Clinical Case Report
M Coelho-Ferraz, D Nouer, C Pedroni, F Bérzin
- 261 - Electromyographical Analysis Of The Masseter Muscle In Dentulous And Partially Toothless Patients With Temporomandibular Joint Disorders
M Silva, J Issa, M Vitti, A Silva, M Semprini, S Regalo
- 273 - Surface Electromyographic Spike Activity And Motor Unit Firing Rates At Different Levels Of Maximum Contraction
D Gabriel, S Rubinstein, A Christie, J Inglis, G Kamen
- 278 - Emg Analysis Of The Orbicular Oris Muscle, In Edentulous Patients, Before And After Complete Denture Implantation
M Vitti, C Santos, M Mattos, M Semprini, H Paranhos, S Regalo
- 291 - Kinesiological Analysis Of Tempromandibular Joint In Pregnant
J Tosato, D Biasotto-Gonzalez, T Gonzalez
- 303 - Importance Of Selecting An Appropriate Q Value In Analyses Of Spine Stability
S Brown, J Potvin
- 305 - A Novel Evaluation Of Motor Unit Activity Based On Acceleration And Inhibition Between Interpulse Intervals Of Motor Unit Discharges
H Nakamura, M Yoshida, T Moritani
- 308 - Muap Duration Algorithm Based On The Wavelet Transform
I Rodriguez-Carreño, A Malanda-Trigueros, L Gila-Useros, I García-Gurtubay, J Rodriguez-Falces, J Navallas-Irujo
- 339 - Variability Of Single Motor Unit Conduction Velocity During Non-Fatiguing Sustained Contractions
J Hogrel, J Duchêne
- 353 - Can The Electrical Activity Of Individual Motor Units Be Monitored Using The Surface Electromyogram?
R Beck, M O'Malley, C Houtman
- 370 - Toward A Quantitative Analysis Of Voluntary Motor Control: The Test-Retest Reliability Of A Voluntary Response Index (Vri) Derived From Surface Emg Recordings
A Sherwood
- 373 - Clinical Evaluation Of Laryngeal Muscle Dysfunction Using Advanced Emg Decomposition
R Roark, A Adam, C Zalvan, M Manto, S Nawab, C De Luca
- 374 - Study Of Postural Pattern And Muscular Activity In Temporo-Mandibular Disordered Patients: Biophotogrametric And Eletromyographic Analysis
E Ribeiro, A Peroni, A Silva, S Marchiori, F Bérzin
- 376 - The Influence Of A Realistic Limb Geometry On Simulated Surface-Detected Muscle Fiber Action Potentials
M Lowery, N Stoykov, T Kuiken
- 378 - Second Generation Precision Decomposition: Solutions
R Wotiz, C De Luca, S Nawab
- 379 - Second Generation Precision Decomposition: Challenges
S Nawab, R Wotiz, C De Luca
- 420 - Muscle Fiber Membrane Properties Of Sub-Threshold Motor Units Vary During Sustained Contractions
D Farina, M Gazzoni, F Camelia, R Merletti

455 - Electromyographic Analysis Of Mouth'S Orbicular Muscle In Individuals With Bucal Respiratory Patterns.
C Amorim, C Amorim, L Amorim, A Campos, T Freitas, H Macau, L Oliveira, R Zângaro

456 - Evaluation Of Electromyographic Activities Of Masseter And Temporal Muscles, Before And After The Use Of Palatal Device In Individuals With Temporomandibular Dysfunction.

C Amorim, C Amorim, L Amorim, A Campos, T Freitas, H Macau, L Oliveira, M Pacheco

468 - Application Of The Pulse Density Demodulation Processing To Observed Electromyographic Waveform
S Hiki, K Imaizumi

474 - Orofacial Contraction Does Not Affect Neck Muscle Activity In A Clinical Test

C Skaggs, J Gray, S McGill

498 - Evaluation Of Masticatory Muscles In Deaf Subjects During Mastication

A Oliveira, T Chaves, D Bevilacqua-Grossi, S Regalo, M Vitti, V Teixeira

4:30 pm – 5:30 pm

Motor Unit @ Conference Auditorium

371 - The Second-Generation Precision Decomposition System For Emg Signals: An Overview

C De Luca, S Nawab, A Adam, R Roark, M Manto, R Wotiz, R Srivastava, L Gilmore

319 - Decomposition Of Surface Emg Signals Detected By Two-Dimensional Arrays Of Electrodes

A Holobar, D Zazula, D Farina, M Gazzoni, R Merletti

317 - Coordination Of Motor Units In Different Proximodistal Bands Of A Series-Fibered Muscle

K McGill, Z Lateva

375 - A Model Of The Motoneuron Pool To Examine The Effect Of Common Oscillatory Inputs On Motor Unit Firing Patterns

M Lowery, Z Erim

EMG Modeling & Signal Processing @ East Balcony

302 - Improved Statistics For The Estimation Of Time-Dependent Coherence Using Wavelets

L Myers, Z Erim

362 - A Novel Adaptive Filtering Approach For Removing Stimulation Artifact From M-Waves

F Mandrile, F Assumma, D Farina, K Englehart, P Parker, R Merletti

429 - Signal Quality Evaluation In Multichannel Surface-Emg

C Grönlund, K Roeleveld, J Karlsson

444 - Observing Time-Frequency Characteristic Changes With Empirical Mode Decomposition On Semg Of Lower Back Muscles Under Static Loads

Q Song, X Wang, H Guo, J Wang

Physical Medicine & Rehabilitation @ Law Auditorium

201 - Assessment Of Stretching And Resistive Exercise On Muscle Oxygenation In Poststroke Hemiplegic Patients Using Near-Infrared Spectroscopy

N Ichinoseki-Sekine, T Miyazaki, S Tagami, T Yuji, T Tamura, T Fujimoto

019 - A Novel Electromyographic Technique For The Assessment Of The Deep Cervical Flexor Muscles

D Falla, G Jull, A Rainoldi, R Merletti, P Dall'Alba

062 - Electromyographic Assessment Of Upper Limb Proprioceptive Exercises In Closed Kinetic Chain With Medicine Ball

A Oliveira, M Carvalho, D Brum, R Contato

293 - Changes In Muscle Coalitions In The Upper Extremities In Patients With A Cervical Spinal Cord Injury

H Seelen, Y Janssen-Potten, C Pons

Rehabilitation Engineering @ Metcalf Hall

096 - Wearable Conductive Fiber Sensors For Measuring Joint Movements

P Gibbs, H Asada

138 - Issues Surrounding The Design And Testing Of A Surface Fes Stimulator With An Output That Is Proportional To Surface Measurements Of Emg Signals Collected Whilst Stimulating

R Lane, P Taylor

385 - Measurement Of Joint Stiffness To Assess Fes-Induced Muscle Strength And Co-Contraction

D Rafolt, E Gallasch, M Fend, G Kinz, C Hofer, H Kern, W Mayr

365 - The Biphasic Waveform Compensation Technique Is Not Effective For Reducing The Stimulation Artifact In Emg Recordings

F Mandrile, D Farina, M Pozzo, R Merletti

5:30 pm – 6:30 pm

Motor Unit @ Conference Auditorium

271 - The Effects Of Muap Duration On The Change Of Emg Amplitude And Emg-Force Relation Caused By Motor Unit Synchrony

P Zhou, W Rymer

316 - The Dynamic Sensitivity Of Human Motoneurons

K McGill, Z Lateva

330 - Motor Unit Control In Vastus Lateralis Muscle During Fatigue

A Adam, C De Luca

306 - Motor Unit Coherence Is Influenced By Skilled Hand Muscle Use In Humans

J Semmler, M Sale, F Meyer, M Nordstrom

Sports Medicine & Human Performance @ East Balcony

384 - Differential Patterns Of Muscle Activation In Patients With Symptomatic And Asymptomatic Rotator Cuff Tears

S Backus, B Kelly, R Williams, F Cordasco, J Otis, M Lenhoff, T Wickiewicz, D Altchek

386 - Differences In Biceps Brachii Isometric Endurance And Isokinetic Torque Between Young And Older Men.

L Fattorini, F Felici, P Sbriccoli, I Bazzucchi, A Rosponi, V Castellano, M Marchetti

449 - Analysis Of Force Perception And Electric Activity In Forearm Flexion Movements Through Dynamometry And Electromyography

A Soares, L Gouvêa E Silva, T Domiciano, A Silgueira, D De Oliveira Silva, G Da Cunha Sousa

450 - Electromyographic Study Of The Simultaneous Action Of The Flexor Carpi Radialis, Extensor Carpi Radialis Brevis And Pronator Teres Muscles In Forearm Flexion Movements

A Soares, D De Oliveira Silva, L Gouvêa E Silva, Z Silva, G Da Cunha Sousa, F Luiz, M Paulo, T A Pinheiro

EMG Modeling & Signal Processing @ Law Auditorium

421 - Effect Of Local In-Homogeneities In The Subcutaneous Tissue On Muscle Fiber Conduction Velocity Estimates Assessed With A Novel Analytical Surface Emg Model

R Merletti, L Mesin, D Farina

434 - Parametric Deconvolution For The Calculation Of Dynamic Trunk Stiffness

K Moorhouse, K Granata

445 - Linearly Fitting Emg-Impulse Proportionality In Emg Tuning Analysis Of Arm Pointing

Q Song

333 - Comparing The Use Of Signal Whitening And Extreme Highpass Filtering To Improve Surface Emg-Based Muscle Force Estimates

J Potvin, S Brown

Posture @ Metcalf Hall

065 - Biomechanical Analyses Of Postural Responses To An Unexpected Slip During Gait In Healthy Young Adults.

S Kojima, Y Nakajima, M Katayose, J Takada, T Yamashita

114 - Individuals With Medial Compartment Knee Osteoarthritis Have An Altered Neuromuscular Response To A Rapid Valgus Perturbation At The Knee In Standing

M Lewek, L Snyder-Mackler, K Rudolph

476 - Vibrotactile Display Of Body Tilt: Progression From Standing To Walking Experiments

C Wall, L Oddsson, K Sienko, H Kubert

484 - Vibrating Insoles Improve Balance In Patients With Stroke

A Priplata, B Patritti, R Hughes, J Stein, P Bonato, J Collins

Abstract Schedules

Abstract Schedules

- 001 - Electromyographic Analysis Of Masticatory And Facial Muscles In Individuals With Schwartz-Jampel Syndrome
M Semprini, M Vitti, K Diaz Serrano, C Brandão, R Brandão, S Regalo
Monday, June 21, 2004, 10:30 AM - 11:30 AM, Temporomandibular Dysfunction
- 002 - Emg Analysis Of The Superior And Inferior Fascicles Of The Orbicularis Oris Muscle On Deaf Individuals
S Regalo, M Vitti, M Moraes, M Semprini, M Mattos, C Santos, C Felicio, J Hallak
Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Physical Medicine & Rehabilitation
- 003 - Effect Of Denture Quality On Perioral Muscle Activity During Speech
M Vitti, C Santos, M Mattos, M Semprini, H Paranhos, J Hallak, S Regalo
Monday, June 21, 2004, 10:30 AM - 11:30 AM, Temporomandibular Dysfunction
- 004 - Emg Analysis Of The Orbicularis Oris Muscle In Deaf Individuals, In Mandibular Rest Position, Compared To Hearers
S Regalo, M Vitti, M Semprini, J Hallak
Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Physical Medicine & Rehabilitation
- 005 - Emg Analysis Of The Orbicularis Oculi Muscle In Normal And In Individuals Indicated To Receive Eye Prosthesis
M Mattos, M Vitti, M Semprini, D Tosello, R Lopes, P Moroni, S Regalo
Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Physical Medicine & Rehabilitation
- 007 - Use-Dependent Plasticity Of The Human Motor Cortex In Health And Disease
L Sawaki
Sunday, June 20, 2004, 9:00 AM - 10:30 AM, Symposium - Transcranial Magnetic Stimulation
- 008 - Static Load Repetition Is A Risk Factor In The Development Of Lumbar Cumulative Musculoskeletal Disorder
P Sbriccoli, K Yousuf, I Kupershtein, M Solomonow, B Zhou, M Zhu, Y Lu
Saturday, June 19, 2004, 11:30 AM - 1:00 PM, Occupational Medicine
- 010 - Electromyographic Analysis Of The Masseter And Temporal Muscles In Oralized Deaf Individuals
S Regalo, F Martinez, M Vitti, M Semprini, M Mattos, R Constância, S Siéssere, J Hallak
Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Physical Medicine & Rehabilitation
- 012 - Correlation Between Fatigability Of The Sternocleidomastoid And Anterior Scalene Muscles And Duration Of Symptoms In Chronic Neck Pain Patients
D Falla, G Jull, G Stavrou, H Tsao, A Rainoldi
Saturday, June 19, 2004, 11:30 AM - 1:00 PM, Muscle Fatigue
- 013 - Spatio-Temporal Evaluation Of Neck Muscle Activation During Postural Perturbations In Healthy Subjects
D Falla, A Rainoldi, R Merletti, G Jull
Saturday, June 19, 2004, 5:00 PM - 6:30 PM, Motor Control
- 014 - Balance Control: Gender And Age Differences In 9 To 16 Year Olds
L Nolan, A Grigorenko, A Thorstensson
Sunday, June 20, 2004, 9:00 AM - 10:30 AM, Posture
- 015 - A Tool To Quantify The Temporal And Spatial Properties Of Emg Patterns During Gait
A Ricamato, J Hidler
Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Ambulatory Recordings
- 017 - Electromyographic Crosstalk In The Measurement Of Pelvic Floor Muscle Activation
S Madill, L Mclean
Sunday, June 20, 2004, 3:00 PM - 4:30 PM, Physical Medicine & Rehabilitation
- 018 - Comparison Of Muscle Activity During Gait In Subjects With And Without Stroke
J Corrêa, D Carvalho, A Fernandes, C Amorin, F Bérzin
Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Motion Analysis
- 019 - A Novel Electromyographic Technique For The Assessment Of The Deep Cervical Flexor Muscles
D Falla, G Jull, A Rainoldi, R Merletti, P Dall'Alba
Monday, June 21, 2004, 4:30 PM - 5:30 PM, Physical Medicine & Rehabilitation

Abstract Schedules

020 - Modelling Of Skeletal Motor Unit Innervation Process

N Jiang, P Parker, K Englehart

Monday, June 21, 2004, 3:30 PM - 4:30 PM, EMG Modeling & Signal Processing

021 - Measures Of Muscle Fatigue

S Kumar, Y Narayan, N Prasad

Saturday, June 19, 2004, 11:30 AM - 1:00 PM, Occupational Medicine

022 - Standing Platform For Chronic Lowback Pain Patients

S Kumar, Y Narayan

Saturday, June 19, 2004, 9:00 AM - 10:30 AM, Symposium - Back Assessment

025 - Influence Of Fiber Shortening On Estimates Of Motor Unit Conduction Velocity And Spectral Frequencies

G Rau, E Schulte, D Farina, R Merletti, C Disselhorst-Klug

Monday, June 21, 2004, 11:30 AM - 1:00 PM, EMG Modeling & Signal Processing

027 - Surface Emg Modifications In Response To Anterior Cruciate Ligament Creep Elicited During Cyclic Exercise

P Sbriccoli, M Solomonow, B Zhou

Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Sports Medicine & Human Performance

028 - Mechanomyographic Amplitude And Mean Power Frequency Versus Torque Relationships During Submaximal To Maximal Isokinetic And Isometric Muscle Actions Of The Biceps Brachii

T Beck, T Housh, G Johnson, J Weir, J Cramer, J Coburn, M Malek

Saturday, June 19, 2004, 3:00 PM - 4:00 PM, Mechanomyogram

029 - Estimation Of Postsynaptic Potentials In Human Motoneurons

K Türker, R Powers

Saturday, June 19, 2004, 5:00 PM - 6:30 PM, Neurophysiology

030 - A Flexible Two-Dimensional Electrode Array For High Spatial Resolution Emg Measurements Of Long (Minutes To Hours) Duration

G Rau, E Schulte, C Disselhorst-Klug

Saturday, June 19, 2004, 5:00 PM - 6:30 PM, Electrode Arrays

032 - Modification Of Dimitrov'S Convolutional Model To Introduce Variation In The Sfaf Peak-Ratio

A Malanda-Trigueros, J Rodriguez-Falces, L Gila-Useros, J Navallas-Irujo, I Rodriguez-Carreño

Monday, June 21, 2004, 3:30 PM - 4:30 PM, EMG Modeling & Signal Processing

033 - Mechanomyographic Time And Frequency Domain Responses Of The Vastus Medialis Muscle During Submaximal To Maximal Isometric And Isokinetic Muscle Actions

J Coburn, T Housh, J Cramer, J Weir, J Miller, T Beck, M Malek, G Johnson

Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Mechanomyogram

034 - Development Of A New Motion Analysis System Using Gyroscopic Sensors

L Sun, R Lee

Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Rehabilitation Engineering

035 - Validity Of An Inverse Kinematic Model In Determining The Intervertebral Movements Of The Lumbar Spine

L Sun, R Lee

Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Rehabilitation Engineering

036 - Contralateral Organization Of The Human Central Nervous System

T Hortobágyi

Sunday, June 20, 2004, 9:00 AM - 10:30 AM, Symposium - Transcranial Magnetic Stimulation

037 - Automatic Speech Recognition Using Myoelectric Signals

A Chan, K Englehart, B Hudgins

Monday, June 21, 2004, 9:00 AM - 10:30 AM, Innovation in EMG

038 - Reaching In Reality And In Virtual Reality: A Comparison Of Movement Kinematics

M Levin, A Viau, B Mcfadyen, A Feldman

Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Augmented & Virtual Reality

039 - Arm-Trunk Compensations For Beyond-The-Reach Movements In Adults With Chronic Stroke

D Moro, M Levin

Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Physical Medicine & Rehabilitation

Abstract Schedules

040 - Holding An Object Between Fingers While Moving The Arm: A Simulation Based On The Model For Motor Control

J Pilon, A Feldman

Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Motor Control

041 - Experimental Validation Of A Surface Emg Model

D Gabriel

Monday, June 21, 2004, 9:00 AM - 10:30 AM, EMG Modeling & Signal Processing

042 - Muscle Activities Of Emergency Medical Technicians (Emt'S) During Patient Transfer With And Without Transfer Aids

R Baratta, A Banks, D Lu, C Johnson

Saturday, June 19, 2004, 3:00 PM - 4:00 PM, Occupational Medicine

043 - Changes In Foot Contact And Emg Occur After Botulinum Toxin Type A Injection And Physical Therapy In A Child With A Diagnosis Of Idiopathic Toe Walking-A Case Study

S Li, M Bishop, C Senesac, R Woo, B Horodyski, D Brunt

Monday, June 21, 2004, 9:00 AM - 10:30 AM, Physical Medicine & Rehabilitation

044 - A Comparison Of The Mechanomyographic Amplitude Vs. Isometric Torque Relationships From A Piezoelectric Crystal Contact Sensor And An Accelerometer

M Malek, J Coburn, T Housh, J Weir, T Beck, G Johnson

Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Mechanomyogram

045 - The Effects Of Circumferential Air-Splint Pressure On Flexor Carpi Radialis H-Reflex In Subjects With And Without Neurological Deficits

J Agostinucci, A Holmgrn

Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Physical Medicine & Rehabilitation

047 - Improving Emg Based Force Estimation Using Principle Component Analysis On A High-Density Emg Array

D Staudenmann, I Kingma, A Daffertshofer, D Stegeman, J Van Dieen

Monday, June 21, 2004, 3:30 PM - 4:30 PM, EMG Modeling & Signal Processing

048 - The Effect Of Electrode Configuration On Emg Based Estimation Of Muscle Force Using A High-Density Emg Array

D Staudenmann, I Kingma, D Stegeman, J Van Dieen

Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Electrode Arrays

049 - Neuromuscular Control Of Neck Stiffness During Frontal And Rear-End Car Collisions

L Janshen

Saturday, June 19, 2004, 11:30 AM - 1:00 PM, Occupational Medicine

050 - Clinical Decision Support Using Hybrid Fuzzy Analysis Of Quantitative Emg Data

A Hamilton-Wright, D Stashuk

Monday, June 21, 2004, 10:30 AM - 11:30 AM, Innovation in EMG

051 - Reliability Of Flexor Carpi Radialis Hoffmann Reflex Measures

A Christie, J Inglis, K Calder, D Gabriel

Sunday, June 20, 2004, 3:00 PM - 4:30 PM, Physical Medicine & Rehabilitation

052 - Evaluation Of Back Muscle Strength And Fatigue In Healthy And Low-Back Pain Subjects: A Comparative Study Of Three Assessment Protocols.

R Da Silva Jr., B Arsenault, D Gravel, C Larivière

Saturday, June 19, 2004, 3:00 PM - 4:00 PM, Occupational Medicine

053 - Innovative Virtual Reality Training For Hand Rehabilitation Post-Stroke

A Merians, S Adamovich, G Burdea, H Poizner

Saturday, June 19, 2004, 11:30 AM - 1:00 PM, Augmented & Virtual Reality

054 - Impact Of Visual Information On Posture Is Influenced By Other Sensory Inputs

E Keshner, R Kenyon, Y Dhaher

Saturday, June 19, 2004, 11:30 AM - 1:00 PM, Augmented & Virtual Reality

055 - Effects Of A Single Soleus Muscle Twitch On The Posture Of A Standing Subject Studied With A Force Platform And Electromyography

M Morimoto, A Kohn

Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Posture

Abstract Schedules

056 - Muscle Activity In Trapezius And Lower Back Muscles During Standing/Ambulating And Seated Work Postures

P Mork, R Westgaard

Sunday, June 20, 2004, 9:00 AM - 10:30 AM, Ambulatory Recordings

057 - Issues In The Motor Control Of The Trapezius Muscle: Possible Relevance For The Development Of Shoulder Pain

R Westgaard, P Mork, C Westad

Saturday, June 19, 2004, 2:00 PM - 3:00 PM, Keynote Lecture

059 - Protocol Of Determination Of Fatigue Index To Muscular Training In Patients With Duchenne'S Muscular Dystrophy

J Corrêa, A Fernandes, A Rodrigues, M Cunha, R Franco, F Bérzin

Saturday, June 19, 2004, 3:00 PM - 4:00 PM, Muscle Fatigue

060 - Evaluation Of The Biofeedback-Emg In The Treatment Of Enforcement Genuine Incontinence

J Corrêa, A Fernandes, R Franco, F Bérzin

Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Physical Medicine & Rehabilitation

061 - Neuromuscular Changes With Aging: Implications For Knee Stability

L Schmitt, M Lewek, L Snyder-Mackler, K Rudolph

Sunday, June 20, 2004, 3:00 PM - 4:30 PM, Physical Medicine & Rehabilitation

062 - Electromyographic Assessment Of Upper Limb Proprioceptive Exercises In Closed Kinetic Chain With Medicine Ball

A Oliveira, M Carvalho, D Brum, R Contato

Monday, June 21, 2004, 4:30 PM - 5:30 PM, Physical Medicine & Rehabilitation

063 - Electromyographic Parameters In Induced Fatigue By Prolonged Mastication In Temporomandibular Disorders Patients

A Oliveira, C Mendonça, C Pedroni, R Contato, F Bérzin

Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Muscle Fatigue

064 - Relationship Between Contact Pressure And Contact Impedance In The Ring Shaped Emg Measurement System

H Manabe, M Fukumoto

Monday, June 21, 2004, 10:30 AM - 11:30 AM, Innovation in EMG

065 - Biomechanical Analyses Of Postural Responses To An Unexpected Slip During Gait In Healthy Young Adults.

S Kojima, Y Nakajima, M Katayose, J Takada, T Yamashita

Monday, June 21, 2004, 5:30 PM - 6:30 PM, Posture

066 - Motor Learning Of Hands In Patients With Parkinson'S Disease

Y Mano, T Chuma, F Reza, K Ikoma

Sunday, June 20, 2004, 11:30 AM - 1:00 PM, Neurophysiology

067 - A New Emg Signal Decomposition Approach Using Factor Graphs

V Koch, H Loeliger

Monday, June 21, 2004, 9:00 AM - 10:30 AM, EMG Modeling & Signal Processing

068 - Role Of Afferent Input In Motor Organisation In Health And Disease

J Rothwell, K Rosenkranz

Sunday, June 20, 2004, 9:00 AM - 10:30 AM, Symposium - Transcranial Magnetic Stimulation

069 - Corticomotor Inhibition During Passive Movement: Relationship To Movement Parameters

D Edwards, F Mastaglia, G Thickbroom, D Edwards

Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Motor Control

070 - Use Of Emg Techniques In Ergonomics Analysis To Prevent Muscle-Skeletal Injuries In Industrial Jobs

J Aguilar

Monday, June 21, 2004, 11:30 AM - 1:00 PM, Physical Medicine & Rehabilitation

071 - A New Method Of Quantifying The Bilateral Limb Deficit Phenomenon Using The Myoelectric Signal

U Kuruganti, P Parker, M Tingley

Sunday, June 20, 2004, 3:00 PM - 4:30 PM, Sports Medicine & Human Performance

Abstract Schedules

072 - Mmg And Emg Responses Of The Superficial Quadriceps Femoris Muscles During The Wingate Anaerobic Cycle Ergometer Test.

S Rana

Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Mechanomyogram

073 - Muscle Activity In Shod And Barefoot Healthy Young Subjects During Walking

B Begoña Gavilanes, J Goirienea

Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Motion Analysis

074 - Effects Of Contralateral Limb Activity At Different Intensities And Arousal On Steadiness Of Knee Extensor In Young Men And Women

S Zhou, H Hu

Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Motor Control

075 - Differential Control Of Low-Threshold Motoneurons In Human Masseter From Ipsilateral And Contralateral Motor Cortex

M Nordstrom

Monday, June 21, 2004, 11:30 AM - 1:00 PM, Motor Unit

076 - Control Of Torque-Assisted Bicycle Based On Physical Activity During Repetitive Prolonged Cycling Exercise

T Kiryu, S Kato, T Moriya, Y Mizuno

Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Sports Medicine & Human Performance

078 - Soleus H-Reflex Modulation During Hip And Knee Joint Passive Movement In Spastic Stroke Patients

S Tanabe, Y Muraoka, A Kamiya, Y Tomita, Y Masakado

Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Physical Medicine & Rehabilitation

079 - Localization Of Three-Dimensional Distribution Of Muscle Activation Using Muscle Functional Magnetic Resonance Imaging

R Kinugasa, Y Kawakami, T Fukunaga

Sunday, June 20, 2004, 11:30 AM - 1:00 PM, Motor Control

080 - The Influence Of Extremity Positions On The Relationship Between Activities Of The Rectus Femoris And Vastus Medialis And Torque In Extension Of The Knee -A Study Of A Method For Approximation Of The Relationship Between Surface Emg And Torque To Power Equation-

O Niita, K Yanagisawa, H Tomita, M Sibata

Monday, June 21, 2004, 3:30 PM - 4:30 PM, EMG Modeling & Signal Processing

081 - Effect Of Sustained Volitional Muscle Relaxation On The Excitability Of The Anterior Horn Cells: Comparison Between The F Wave And Transcranial Motor Evoked Potential (Mep)

F Okada, J Kimura

Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Neurophysiology

083 - Changes In Spinal Excitability Induced By Subthreshold High Or Low Frequency Repetitive Transcranial Magnetic Stimulation

A Valero-Cabre, A Pascual-Leone

Sunday, June 20, 2004, 9:00 AM - 10:30 AM, Symposium - Transcranial Magnetic Stimulation

084 - Electrophysiological Examination Of Pyramidal Tract Functions In Patients With Subacute Myelo-Optico Neuropathy (Smon) Studied By Magnetic Stimulation

A Matsumoto, Y Tajima, K Sudou, K Tashiro

Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Neurophysiology

085 - The Possibility Of Anterior Cruciate Ligament Healing By Conservative Treatment Reinforced With Extra-Articular Artificial Ligament In Rabbits

K Takayanagi, M Aoki, H Ihara

Sunday, June 20, 2004, 9:00 AM - 10:30 AM, Sports Medicine & Human Performance

088 - Weakness And Voluntary Activation Failure Of Knee Muscles In Patients With Acl Deficiency And Reconstruction

S Hsiao, P Chou, I Tsai, J Li

Sunday, June 20, 2004, 9:00 AM - 10:30 AM, Sports Medicine & Human Performance

Abstract Schedules

- 089 - Evaluation Of The Force And Endurance Of The Paravertebral Muscles In Man And Woman: A Comparative Study Of The Different Dynamometric Tests
E De Oliveira, A Arsenault, D Gravel, J Fernades
Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Muscle Fatigue
- 090 - Wrist Muscle Activity Patterns Change With Use Of A Haptic Mouse
J Dennerlein, M Dimarino, T Becker
Monday, June 21, 2004, 10:30 AM - 11:30 AM, Physical Medicine & Rehabilitation
- 091 - Evaluation Of The Thoracic Curve Through The Cifolordometer
M Barauna, J Bustamante, R Silva, C Silva, R Canto
Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Physical Medicine & Rehabilitation
- 092 - Shoulder Movement Range Assessment In Mastectomized Women Through Computerized Biophotogrammetry
M Barauna, R Canto, R Silva, C Silva, M Veras, V Freitas, V Silva, P Barauna
Monday, June 21, 2004, 10:30 AM - 11:30 AM, Physical Medicine & Rehabilitation
- 093 - Static Postural Equilibrium Assessment Of Normal Subjects Through Computerized Biophotogrammetry And Oscillometry
E Guimarães, M Barauna, R Canto, R Silva, R Barreto, S Ferreira
Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Posture
- 094 - Postural Evaluation Of Individuals Congenitally Totally Blind Using Computerized Biophotogrammetry
E Guimarães, M Barauna, R Canto, R Silva, R Barreto, S Ferreira
Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Posture
- 095 - Comparative Study Of The Women'S Lumbar Concavity With 35 Weeks Of Gestation And In Post-Partum Period Through The Cifolordometry
E Guimarães, M Barauna, R Canto, R Silva, R Barreto, S Ferreira
Saturday, June 19, 2004, 3:00 PM - 4:00 PM, Occupational Medicine
- 096 - Wearable Conductive Fiber Sensors For Measuring Joint Movements
P Gibbs, H Asada
Monday, June 21, 2004, 4:30 PM - 5:30 PM, Rehabilitation Engineering
- 099 - The Mechanomyogram (Mmg) In Monitoring The Muscular Fatigue In The Isometric, Isotonic Contraction
M Tarata
Saturday, June 19, 2004, 9:00 AM - 10:30 AM, Mechanomyogram
- 100 - On The Hand Muscles Activation In Position Perturbed Adaptive Reaching In Human
M Tarata, J Blodel
Sunday, June 20, 2004, 3:00 PM - 4:30 PM, Motor Control
- 101 - On Single Trial Detection Of M1 & M2 Stretch Reflex (Sr) Activity
M Tarata, G Staude, W Wolf
Monday, June 21, 2004, 3:30 PM - 4:30 PM, EMG Modeling & Signal Processing
- 103 - A Gmm-Based Classification Scheme For Myoelectric Control Of Powered Upper Limb Protheses
Y Huang, K Englehart, B Hudgins, A Chan
Monday, June 21, 2004, 9:00 AM - 10:30 AM, EMG Modeling & Signal Processing
- 104 - From Intuition To Quantification: Analysing Movement Dynamics In Patients With Shoulder Impingement Syndrome
S Williams, O Miltner, C Braun, G Rau, C Disselhorst-Klug
Saturday, June 19, 2004, 11:30 AM - 1:00 PM, Motion Analysis
- 106 - Decision-Making Based On Surface Emg-Signals: Different Ap-Proaches To Information Extraction
C Disselhorst-Klug
Monday, June 21, 2004, 8:00 AM - 9:00 AM, Keynote Lecture
- 107 - Initial Feasibility Of Wavelet Analysis Of Gait In Children With Cerebral Palsy
R Lauer, C Stackhouse, B Smith, M Orlin, S Pierce, J Mccarthy
Monday, June 21, 2004, 11:30 AM - 1:00 PM, Physical Medicine & Rehabilitation
- 108 - Changes Of Auditory Tone Modulates Human Eeg Activity
A Nuruki, Y Ueno, K Yunokuchi
Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Neurophysiology

Abstract Schedules

- 109 - Static Postural Equilibrium Assessment In Pregnants Through Computerized Biophotogrammetry
C Silva, M Baraúna, R Canto, F Duarte, R Silva
Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Posture
- 110 - Neuromuscular Properties Of The Quadriceps Femoris After Knee Surgery Evaluated By Muscle Fmri And Emg
H Akima, T Furukawa
Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Physical Medicine & Rehabilitation
- 111 - Myoelectric Signal Characteristics Of Lumbar Muscle In Lbp Patients
H Fang, X Wang
Saturday, June 19, 2004, 9:00 AM - 10:30 AM, Symposium - Back Assessment
- 112 - Does The Decrease Of Mpf/Mf Reflect Localized Muscletatigue Specifically?
H Yang, M Wang
Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Muscle Fatigue
- 113 - Electromyographic Activities During Repetitive Neck Motions In Asymptomatic Young And Middle-Aged Adults
S Wang, K Lin, J Lin
Monday, June 21, 2004, 10:30 AM - 11:30 AM, Physical Medicine & Rehabilitation
- 114 - Individuals With Medial Compartment Knee Osteoarthritis Have An Altered Neuromuscular Response To A Rapid Valgus Perturbation At The Knee In Standing
M Lewek, L Snyder-Mackler, K Rudolph
Monday, June 21, 2004, 5:30 PM - 6:30 PM, Posture
- 115 - Activity-Dependent Plasticity Of Spinal Reflexes Associated With Locomotor Training In Individuals With Complete And Incomplete Sci
E Field-Fote, E Field-Fote, M Khan
Sunday, June 20, 2004, 11:30 AM - 1:00 PM, Neurophysiology
- 116 - Comparison Among Subjects With Different Occlusion Classes Of Angle With And Without Bruxism
I Gadotti, F Berzin, D Biasotto-Gonzalez
Monday, June 21, 2004, 10:30 AM - 11:30 AM, Temporomandibular Dysfunction
- 117 - The Control Of Trunk Movements After Tripping
J Van Dieën, J Van Der Burg
Saturday, June 19, 2004, 5:00 PM - 6:30 PM, Motor Control
- 119 - The Investigation Of Motor Unit Recruitment Using Inhomogeneous Muscle Activation
A Holtermann, K Roeleveld, S Karlsson
Monday, June 21, 2004, 10:30 AM - 11:30 AM, Innovation in EMG
- 120 - Age-Related Postural Change During Gait: The Influence Of Musculoskeletal Functions And The Experience Of Falls
H Sato, K Shinkoda
Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Posture
- 121 - Effect Of Weak Magnetic Stimulation For The Strained Peripheral Muscle
K Yunokuchi, A Nakashima, H Hosaka
Saturday, June 19, 2004, 3:00 PM - 4:00 PM, Muscle Fatigue
- 122 - Emg Activity And Rearfoot Kinematics In Asymptomatic Persons With Low And High Arch Feet.
J Garbalosa, T Gagne, D Catuccio
Sunday, June 20, 2004, 3:00 PM - 4:30 PM, Sports Medicine & Human Performance
- 123 - Reliability And Validity Of A Clinical Video-Based Gait Assessment Tool
E Lamberg, E Godwin
Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Motion Analysis
- 124 - The Effect Of Varying Levels Of Contractile Force On Intramuscular And Surface-Detected Motor Unit Potential Size And Firing Rate
S Boe, T Doherty, D Stashuk
Monday, June 21, 2004, 10:30 AM - 11:30 AM, Motor Unit
- 125 - Impairment Of Coordination During Bimanual Arm Swinging In Adults With Hemiparesis.
K Ustinova, R Balasubramaniam, V Goussev, J Fung
Saturday, June 19, 2004, 3:00 PM - 4:00 PM, Motor Control

Abstract Schedules

126 - Peak Torque, Mean Power Output, And Mechanomyographic Responses To Concentric Isokinetic Strength Training Of The Quadriceps Femoris

T Evetovich, T Housh, G Johnson, D Housh, K Ebersole, D Smith

Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Mechanomyogram

127 - Fatigue Assessment Using Discrete Wavelet Transforms For High Intensity Exercises (Wingate Test)

R Silvestre, R Guzman, J Letelier

Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Muscle Fatigue

128 - Neuromuscular Perturbation Training Decreases Co Contraction In Those With The Potential To Compensate Well For Acl Rupture

T Chmielewski, W Hurd, L Snyder-Mackler

Sunday, June 20, 2004, 9:00 AM - 10:30 AM, Sports Medicine & Human Performance

129 - Gender Differences In Muscle Activity Patterns During Disturbed Walking Before And After Perturbation Enhanced Neuromuscular Training

W Hurd, T Chmielewski, L Snyder-Mackler

Sunday, June 20, 2004, 9:00 AM - 10:30 AM, Sports Medicine & Human Performance

130 - Pattern Of Electric Activity Of The Masticatory And Cervical Muscle In Violinists And Violists

E Ribeiro, J Milanesi, F Bérzin

Monday, June 21, 2004, 10:30 AM - 11:30 AM, Temporomandibular Dysfunction

131 - Electromyography Evaluation Of Chewing Muscles Before And After Body Posture Treatment In Mouth Breathing Children

E Ribeiro, F Bérzin, A Silva, A Ferla

Monday, June 21, 2004, 10:30 AM - 11:30 AM, Temporomandibular Dysfunction

132 - Index Finger Coordination During Tapping Across Different Postures

D Lee, P Kuo, D Jindrich, J Dennerlein

Sunday, June 20, 2004, 3:00 PM - 4:30 PM, Motor Control

133 - Muscle Fiber Conduction Velocity Distribution Estimation From Elicited Motor Responses

I Ledoux, M Garcia-Gonzalez, J Hogrel, J Duchêne

Monday, June 21, 2004, 9:00 AM - 10:30 AM, EMG Modeling & Signal Processing

134 - Influence Of Treadmill Walking Speed On Plantar Flexor Emg Pattern

E Clancy, K Cairns, P Riley, M Meister, D Kerrigan

Sunday, June 20, 2004, 3:00 PM - 4:30 PM, Physical Medicine & Rehabilitation

135 - Visual Search For A Target In A Virtual Environment: Effects On Stabilization Of Posture In Young And Elderly

J Streepey, E Keshner, R Kenyon

Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Augmented & Virtual Reality

136 - Functional Activity Characteristics Of Individuals With And Without Shoulder Disorders

J Lin, W Hanten, S Olson, T Roddey, D Soto, H Lim, A Sherwood

Saturday, June 19, 2004, 9:00 AM - 10:30 AM, Motion Analysis

137 - Time-Frequency Analysis Of Surface Electromyographic Signals Via Hilbert Spectrum

A Andrade, P Kyberd, S Nasuto

Monday, June 21, 2004, 11:30 AM - 1:00 PM, EMG Modeling & Signal Processing

138 - Issues Surrounding The Design And Testing Of A Surface Fes Stimulator With An Output That Is Proportional To Surface Measurements Of Emg Signals Collected Whilst Stimulating

R Lane, P Taylor

Monday, June 21, 2004, 4:30 PM - 5:30 PM, Rehabilitation Engineering

139 - Preliminary Results On The Use Of Equalization Filters For High Spatial Resolution Electrode Arrays

H Xia, E Clancy, M Bertolina

Saturday, June 19, 2004, 5:00 PM - 6:30 PM, Electrode Arrays

141 - Leg Muscle Recruitment During Cycling Is Less Constrained In Triathletes Than Cyclists

P Hodges, A Chapman, B Vicenzino, P Blanch, J Knox

Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Sports Medicine & Human Performance

Abstract Schedules

142 - Modulation Of Motor Evoked Potentials (Meps) And Maximal Voluntary Contraction (Mvc) After Ischemic Nerve Block

C Hsieh, Y Chang, A Wong, C Chen, Y Liu

Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Neurophysiology

143 - Localized Muscular Fatigue: The Limiting Factor For Lifting

A Wrigley, W Albert, G Sleivert

Saturday, June 19, 2004, 9:00 AM - 10:30 AM, Muscle Fatigue

144 - Mechanomyogram To Assess Motor Unit Fusion Property During Sustained Isometric Contraction

T Kimura, T Hamada, T Watanabe, A Maeda, T Moritani

Saturday, June 19, 2004, 9:00 AM - 10:30 AM, Mechanomyogram

145 - Electrically-Elicited Somatosensory Evoked Potentials In Drowsy And Awake States Of Free Moving Rats

H Chen, J Chen

Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Neurophysiology

146 - Isek2004_Abstract_Masuda.Doc

K Masuda, H Akima, R Kinugasa, K Taga, H Kanehisa, H Fukuoka, T Yanagiya, T Fukunaga

Saturday, June 19, 2004, 11:30 AM - 1:00 PM, Muscle Fatigue

147 - Cervicomedullary Stimulation In Human Subjects

J Taylor

Sunday, June 20, 2004, 8:00 AM - 9:00 AM, Keynote Lecture

149 - Electromyographic Study Of Hyperactive Masticatory Muscles In Patients With Temporomandibular Disorders

C Duarte, F Bérzin

Monday, June 21, 2004, 10:30 AM - 11:30 AM, Temporomandibular Dysfunction

150 - Efforts Can Stop As A Direct Consequence Of Postural Muscle Exhaustion

S Le Bozec, S Bouisset

Saturday, June 19, 2004, 9:00 AM - 10:30 AM, Muscle Fatigue

151 - Visualizing And Testing Spasticity

T Kakebeeke, H Lechner, P Knapp

Monday, June 21, 2004, 11:30 AM - 1:00 PM, Physical Medicine & Rehabilitation

152 - Fatigue-Related Changes In The Relative Activation Of The Muscles Forming The Quadriceps Femoris With The Hip Flexed Versus Extended

M Iguchi, J Wilken, M Shaffer, B Floy, J James, M Bilodeau

Saturday, June 19, 2004, 9:00 AM - 10:30 AM, Muscle Fatigue

153 - Age-Related Changes In Human Motor Unit Properties

C Rice

Monday, June 21, 2004, 11:30 AM - 1:00 PM, Motor Unit

155 - Effectiveness Of The Manual Therapy On The Electric Activity Of The Chewing Muscles In Temporomandibular Disordered Patients

E Ribeiro, L Ries, C Borini, F Bérzin

Monday, June 21, 2004, 10:30 AM - 11:30 AM, Temporomandibular Dysfunction

156 - The Biomechanical Characteristics Of Rotational Mobilisation Of The Lumbar Spine

R Lee, B Tsung, J Evans, P Tong

Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Occupational Medicine

157 - Analysis Of The Righting Reaction Of Sitting Balance Against Tilting Stimuli: Study Of Difference Between Healthy Persons And Hemiplegic Patients.

K Amimoto, K Yanagisawa, M Morishita, K Nakazawa

Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Motion Analysis

158 - Semg As An Objective Tool To Assess The Responses Of Car Passengers To Lateral Accelerations

D Hewson, G Farah, C Petit-Boulanger, J Duchêne

Saturday, June 19, 2004, 9:00 AM - 10:30 AM, Muscle Fatigue

159 - The Relationship Between Ipsilateral Hip Dysfunction And Contralateral Knee Degeneration

J Erhart, A Bhave, R Starr, J Herzenberg, D Paley, M Mont, G Etienne

Saturday, June 19, 2004, 5:00 PM - 6:30 PM, Motion Analysis

Abstract Schedules

160 - Hand Biomechanics In Healthy Subjects Performing Activities Of Daily Living: Analysis Of The Movement Patterns Of Wrist, Metacarpophalangeal And Proximal Interphalangeal Joints

A Murgia, P Kyberd

Sunday, June 20, 2004, 11:30 AM - 1:00 PM, Rehabilitation Engineering

161 - Activation Pattern Of The Masticatory Muscles In Individuals With Craniomandibular Disorder

D Rodrigues, A Oliveira, F Bérzin

Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Motor Control

162 - Using A Mapping Index To Assess Muscle Fatigue

D Macisaac, P Parker, K Englehart

Monday, June 21, 2004, 9:00 AM - 10:30 AM, Innovation in EMG

163 - Recording Of Isometric Shoulder Muscle Activation For Biomechanical Analysis And Clinical Evaluation.

J De Groot, C Meskers, H Arwert, L Rozendaal, J Arendzen

Monday, June 21, 2004, 9:00 AM - 10:30 AM, EMG Modeling & Signal Processing

164 - Optimal Electromyogram Amplitude Estimation Algorithm For Epoch-Based Applications

E Clancy, J Tranquilli, C Salini, P Prakash, D Brown

Monday, June 21, 2004, 11:30 AM - 1:00 PM, EMG Modeling & Signal Processing

165 - The Effect Of Abdominal Hollowing On Trunk Muscle Activation During Lifting

H Butler, C Hubley-Kozey, J Kozey

Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Occupational Medicine

167 - Contractile Property Of Muscle Fibers During Repetitive Electrical Stimulation In Humans

M Kamo, S Morimoto

Monday, June 21, 2004, 10:30 AM - 11:30 AM, Motor Unit

168 - Can Complexity Analysis Evaluate The Severity Of Parkinson Disease?

H Makabe, M Miwa, K Momose, T Miao, K Sakamoto, K Mito, K Kaneko

Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Motor Control

170 - Fatigue Development In The Upper Trapezius And Biceps Brachii In Subjects With Neck-Shoulder Pain

K Søgaaard, E Schulte, L Kallenberg, H Christensen, C Disselhorst-Klug, H Hermens, G Rau

Monday, June 21, 2004, 9:00 AM - 10:30 AM, Symposium - NeuroMuscular Assessment

171 - Assessment Of Proprioceptive Reflexes In Patients With Spasticity After Stroke

C Meskers, A Schouten, J De Groot, J Arendzen

Monday, June 21, 2004, 11:30 AM - 1:00 PM, Physical Medicine & Rehabilitation

172 - Correlations Between Quadriceps Contraction Steadiness In Isometric And Dynamic Functional Movements

S Carville, M Perry, O Rutherford, D Newham

Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Motor Control

174 - Muap Rate: A New Measure To Assess Motor Control

L Kallenberg, H Hermens

Monday, June 21, 2004, 9:00 AM - 10:30 AM, Symposium - NeuroMuscular Assessment

175 - Muap Rate In Chronic Pain Patients

L Kallenberg, H Hermens

Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Motor Control

176 - Delayed-Onset Muscle Soreness And Short And Long Latency Stretch Reflexes In Erector Spinae

N Hjortskov, M Essendrop, N Fallentin, J Skotte

Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Motor Control

177 - Spectral Analysis Of Electromyographic Signal In Different Positions Of Electrodes

D Rodrigues, R Guirro, F Forti, K Cancelliero, H Pasini Neto

Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Electrode Arrays

178 - The Influence Of Fatigue On The Efficiency Of Electrical-Mechanical Activity Of The Superficial Quadriceps Femoris Muscles

K Ebersole, K O'Connor, A Wier

Saturday, June 19, 2004, 9:00 AM - 10:30 AM, Mechanomyogram

Abstract Schedules

179 - Short Latency Stretch Reflexes In Human Erector Spinae Muscles

J Skotte, N Hjortskov, M Essendrop, N Fallentin

Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Motor Control

180 - Muscle Force Frequency Response Of Human Tibialis Anterior

C Orizio, M Gobbo, B Diemont, R Baratta, M Solomonow

Sunday, June 20, 2004, 11:30 AM - 1:00 PM, Motor Control

181 - Biceps Brachii Motor Unit Deactivation And Activation Strategy Investigated By Surface Mechanomyogram

C Orizio, P Maccalli, P Bonera, B Diemont, M Gobbo

Saturday, June 19, 2004, 3:00 PM - 4:00 PM, Mechanomyogram

182 - The Effect Of Postural Correction On Muscle Activation Amplitudes Recorded From The Cervicobrachial Region

L Mclean

Saturday, June 19, 2004, 9:00 AM - 10:30 AM, Symposium - Back Assessment

183 - Electromyographic Analysis Of Chewing Muscles In Mouth And Nasal Breathing Children

E Ribeiro, A Ferla, A Silva, F Bézin

Monday, June 21, 2004, 10:30 AM - 11:30 AM, Temporomandibular Dysfunction

184 - Hip, Knee, Ankle Kinematics And Kinetics During Stair Ascent And Descent In Healthy Young Individuals

W Drechsler, A Protopapdaki

Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Motion Analysis

185 - Quadriceps Femoris Function And Emg Power Spectrum Profiles After Acl Reconstruction

W Drechsler, M Cramp, O Scott

Sunday, June 20, 2004, 9:00 AM - 10:30 AM, Sports Medicine & Human Performance

186 - Muscular Representation Of Bi-Lateral Transfer In Children Acquiring A Novel Skill

N Benjuya, E Wegman

Sunday, June 20, 2004, 3:00 PM - 4:30 PM, Sports Medicine & Human Performance

187 - Pattern Discovery Used To Assess Motor Unit Potential Train Validity

X Wang, D Stashuk

Monday, June 21, 2004, 3:30 PM - 4:30 PM, EMG Modeling & Signal Processing

188 - Clinical Electrophysiological Characterization Of Muscle Based On Motor Unit Potential Classification Using Residual Analysis And Weight Of Evidence

D Stashuk, M Emrani

Monday, June 21, 2004, 3:30 PM - 4:30 PM, EMG Modeling & Signal Processing

189 - Biomechanical Assessment Of Gloves. A Study Of The Sensitivity And Reliability Of Emg Parameters Related To The Level Of Activation And Fatigue Of Different Forearm Muscles

C Larivière, A Plamondon, J Lara, C Tellier, J Boutin, A Dagenais

Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Muscle Fatigue

190 - Intrinsic Activation Of Human Motoneurons In Spinal Cord Injury

M Gorassini

Saturday, June 19, 2004, 5:00 PM - 6:30 PM, Neurophysiology

191 - Effects Of Lower Median Nerve Block On Precision Grip

S Dun, R Kaufmann, Z Li

Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Motor Control

192 - Analysis Of The Paraspinal Muscles Activity In Patients With Duchenne Muscular Dystrophy

J Thouin, P Mathieu, O Ciolofan, J Joncas, G Zoabli, C Aubin

Monday, June 21, 2004, 9:00 AM - 10:30 AM, Physical Medicine & Rehabilitation

193 - Manual Lifting Pattern Prediction Based On Key Postures

C Chang

Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Occupational Medicine

194 - Recruitment And Derecruitment Of Motor Units In Biceps Brachii Muscle During Isovelocity Flexion Movement

K Akazawa, R Okuno, M Yoshida

Monday, June 21, 2004, 10:30 AM - 11:30 AM, Motor Unit

Abstract Schedules

195 - Comparison Of Energy Expenditures While Going Up And Down The Staircase: Measured By 2-D Accelerometer And Respiratory Gas Analyzer

Y Furukawa, R Nagatomi, O Nakamata, T Chiba, M Hosoda, H Takei, O Nitta, S Kaneko

Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Ambulatory Recordings

196 - The Effect Of Sandal Straps On Standing Posture Control

M Hosoda, K Takayanagi, O Nitta, F Furukawa, K Hara, I Isozaki, I Inoue, O Nakamata

Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Posture

197 - Effect Of Vision And Imposed Inclined Surface During Quiet Stance On Postural Sway

R Mezzarane, A Kohn

Sunday, June 20, 2004, 9:00 AM - 10:30 AM, Posture

199 - Muscle Activation During Knee Joint Torque Exertion Is Affected By Unintentionally Generated Hip Joint Torque: Intersubject Variability And Implication For Muscle Strength Training

D Nozaki, K Nakazawa, M Akai

Sunday, June 20, 2004, 3:00 PM - 4:30 PM, Sports Medicine & Human Performance

200 - Prediction Of Different Muscle Activity Patterns Between Soleus And Gastrocnemius During Standing In Humans: Preferred Direction Approach

T Hirano, D Nozaki, K Nakazawa, S Yamamoto, M Akai

Sunday, June 20, 2004, 9:00 AM - 10:30 AM, Posture

201 - Assessment Of Stretching And Resistive Exercise On Muscle Oxygenation In Poststroke Hemiplegic Patients Using Near-Infrared Spectroscopy

N Ichinoseki-Sekine, T Miyazaki, S Tagami, T Yuji, T Tamura, T Fujimoto

Monday, June 21, 2004, 4:30 PM - 5:30 PM, Physical Medicine & Rehabilitation

202 - Effects Of Strength Training Versus Balance Training On Paravertebral Automatic Muscle Responses

G Ebenbichler, J Kollmitzer, A Sabo, L Oddsson, T Bochsansky

Sunday, June 20, 2004, 3:00 PM - 4:30 PM, Sports Medicine & Human Performance

203 - Theoretical Interpretation Of Motor Unit Coherence And Frequencygram

J Ushiba, Y Nishimura, H Endoh, Y Masakado, Y Tomita

Monday, June 21, 2004, 10:30 AM - 11:30 AM, Motor Unit

205 - The Influence Of Different Unloading Positions Upon Stature Recovery And Paraspinal Muscle Activity

E Healey, N Fowler, A Burden, I Mcewan

Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Occupational Medicine

206 - Three Advanced Approaches To Surface Emg Decomposition At Low Contraction Forces

A Holobar, D Zazula

Monday, June 21, 2004, 9:00 AM - 10:30 AM, Symposium - NeuroMuscular Assessment

207 - Crosstalk And Coactivation In Bipolar Surface Emg Data: A New Methodology For Detection, Discrimination And Quantification

L Meinecke, C Disselhorst-Klug, G Rau

Monday, June 21, 2004, 9:00 AM - 10:30 AM, Innovation in EMG

208 - Muscle Reaction Classification Of Low Back Pain

N Reeves, J Cholewicki, T Milner

Saturday, June 19, 2004, 5:00 PM - 6:30 PM, Motor Control

209 - A Case Study Examining The Effects Of Different Types Of Afo On An Adult Hemiplegic Subject

S Kinsella, K Moran

Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Motion Analysis

210 - The Effects Of Different Types Of Afo On Oxygen Consumption

S Kinsella, K Moran

Saturday, June 19, 2004, 11:30 AM - 1:00 PM, Motion Analysis

211 - The Effects Of Different Types Of Afo On Hemiplegic Gait

S Kinsella, K Moran

Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Motion Analysis

Abstract Schedules

212 - Gender Influence On Fatigability Of Back Muscles During Intermittent Isometric Contractions: A Study Of The Neuromuscular Activation Patterns

N Gaudreault, C Larivière, D Gravel, P Gardiner, A Arsenault, D Gagnon, P Loisel

Saturday, June 19, 2004, 3:00 PM - 4:00 PM, Occupational Medicine

213 - Reliability Of Electromyography And Peak Torque During Maximum Concentric Knee Extensions

R Ângelo, A Carvalho, P Mourão, S Fernandes, C Carvalho

Sunday, June 20, 2004, 3:00 PM - 4:30 PM, Sports Medicine & Human Performance

214 - Monitoring The Fatigue Process Of Elbow Flexors In Sustained Maximal Contractions With Correlation Integrals.

A Stylianou, C Luchies, D Lerner, G King

Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Muscle Fatigue

215 - Frequency Analysis Of Eccentric And Concentric Isokinetic Quadriceps Contractions Using Fourier Transform- And Wavelet-Based Methods

I Kremenic, M Mchugh

Monday, June 21, 2004, 11:30 AM - 1:00 PM, EMG Modeling & Signal Processing

216 - Are Abdominal Muscle Temporal Activation Patterns Related To Lumbar-Pelvic Motion Control? C Hubley-Kozey

Saturday, June 19, 2004, 9:00 AM - 10:30 AM, Symposium - Back Assessment

217 - Changes In Voluntary Activation Of The First Dorsal Interosseous Muscle With Low, Moderate And High Force Fatiguing Contractions

T Eichelberger, M Bilodeau

Saturday, June 19, 2004, 11:30 AM - 1:00 PM, Muscle Fatigue

218 - Using A Mathematical Model To Predict The Isometric Force-Intensity Relationship

J Ding, T Kesar, A Wexler, S Binder-Macleod

Saturday, June 19, 2004, 11:30 AM - 1:00 PM, Muscle Fatigue

219 - Changes In Motoneuron Synaptic Properties In Human Spastic Hemiparesis

N Suresh, M Ellis, W Rymer

Saturday, June 19, 2004, 5:00 PM - 6:30 PM, Neurophysiology

220 - Instantaneous Mean Frequency Vs. Range Of Motion For Surface Electromyographic And Mechanomyographic Signals Recorded During Isokinetic Leg Extensions

J Cramer, I Kremenic, T Housh, J Weir, J Coburn, T Beck, G Johnson

Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Mechanomyogram

222 - Synergistic Muscle Activation And Optimal Power Output In Lat Pulldown Exercise

M Yoshida, T Fujimori, Y Koyama, S Suzuki

Saturday, June 19, 2004, 3:00 PM - 4:00 PM, Motor Control

223 - Innervation Zones Of The Facial Muscles Estimated By Using Multichannel Surface Emg

T Sugahara, T Sadoyama, S Hosoya, M Kamijo, T Masuda

Saturday, June 19, 2004, 5:00 PM - 6:30 PM, Electrode Arrays

224 - Effect Of Shoes And Muscle Stiffness And Damping Interactions On Simulated Upper Body Deformation During Running

A Pourmoghaddam, M Rahimian, A Noorzad, F Abolhasani

Saturday, June 19, 2004, 9:00 AM - 10:30 AM, Motion Analysis

225 - Synchronization Analysis Of Human Motor Units In Ankle Flexor/Extensor Using A New Wavelet-Pca Decomposition Technique

R Yamada, J Ushiba, Y Masakado, Y Tomita

Monday, June 21, 2004, 3:30 PM - 4:30 PM, Motor Unit

226 - The Effect Of Time Delay Dispersion Filtering On The Snr Of Myoelectric Communication Channel

H Ma, Y Zhang

Monday, June 21, 2004, 3:30 PM - 4:30 PM, EMG Modeling & Signal Processing

227 - Neuromuscular Endurance In Ankle Muscles Of Older Male In Relation To Level Of Daily Physical Activity

M Shibata, T Moritani

Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Muscle Fatigue

Abstract Schedules

- 228 - New Human Interface Using Surface Emg Signals
Y Koike, K Yagishita, K Nakayama, A Katayama, J Kim, M Sato
Monday, June 21, 2004, 10:30 AM - 11:30 AM, Innovation in EMG
- 229 - Analysis Of Intramuscular Emg Signals With A Decomposition Program
J Florestal, P Mathieu, A Malanda
Monday, June 21, 2004, 3:30 PM - 4:30 PM, EMG Modeling & Signal Processing
- 230 - Analysis Of Anterior Tibial Translation And Quadriceps-Hamstrings Emg Ratio During Isometric Quadriceps Contractions In Acl- Deficient Individuals
D Bevilaqua-Grossi, R Vasconcelos, J Arakaki, A Simão, A Oliveira
Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Physical Medicine & Rehabilitation
- 231 - The Effect Of Cervical Mobilization On Electromyographic Activity Of Masticatory Muscles In Patients With Temporomandibular Disorders
C Pedroni, A Oliveira, F Bérzin
Monday, June 21, 2004, 10:30 AM - 11:30 AM, Temporomandibular Dysfunction
- 232 - The Direct Effect Of The Functional Orthopedics Maxillary Treatment In Masticatory Muscles' S Electromyographic Activity . A Case Report.
C Pedroni, E Sakai, F Bérzin
Monday, June 21, 2004, 10:30 AM - 11:30 AM, Temporomandibular Dysfunction
- 233 - Electromyographic Evaluation Of The Balance Functional In The Wearers The Complete Dentures
C Pedroni, D Ferreira, F Bérzin, M Mesquita
Monday, June 21, 2004, 3:30 PM - 4:30 PM, Temporomandibular Dysfunction
- 234 - Evaluation Of Quadriceps Femoris Median Frequency After Anterior Cruciate Ligament Injury
D Bevilaqua-Grossi, J Arakaki, R Vasconcelos, A Simão, A Oliveira
Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Sports Medicine & Human Performance
- 235 - Study Of Electromyographic Signs The Masseter Muscle In Sleep Bruxism After Use Occlusal Splint
L Ferreira, C Amorim, C Amorim, L Amorim, M Tambelini, C Santos, L Oliveira
Monday, June 21, 2004, 3:30 PM - 4:30 PM, Temporomandibular Dysfunction
- 236 - Energy Profiles Of Index Finger During Tapping
P Kuo, D Lee, D Jindrich, J Dennerlein
Saturday, June 19, 2004, 5:00 PM - 6:30 PM, Motion Analysis
- 237 - Evaluation Of Botox® Effect On Upper Limb Of Stroke Patients By Portable Stretching Device Combined With Emg
Y Wu, J Chen, S Huang
Sunday, June 20, 2004, 11:30 AM - 1:00 PM, Rehabilitation Engineering
- 238 - Design Of Implantable Cuff Electrode With Surface Modification For Chronic Stimulation And Recording Of Peripheral Nerve Activity
C Chang, J Chen, J Liao
Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Rehabilitation Engineering
- 239 - Relationship Between The Features Of Surface Motor Unit Action Potential And Its Source Position
H Endoh, Y Tomita, J Ushiba
Monday, June 21, 2004, 10:30 AM - 11:30 AM, Motor Unit
- 240 - Coherence Analysis Between Electroencephalogram And Electromyogram During Self-Sustained Contraction In Human.
Y Tomita, M Yoshihira, J Ushiba
Sunday, June 20, 2004, 3:00 PM - 4:30 PM, Motor Control
- 242 - Relationship Between Nerve Conduction Studies And Preliminary Surface Electromyography Measurements On Carpal Tunnel Syndrome Subjects.
T Semeghini, R Pinto, L Kröll, C Rezende Filho, F Bérzin
Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Occupational Medicine
- 243 - Effect Of The Upper Body Movement During Standing Up
K Momose, K Suzuki, M Miwa, H Makabe, K Ihashi
Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Motion Analysis

Abstract Schedules

244 - Electromyography Study Of Sternocleidomastoid Muscle Co-Activation Pattern In Different Jaw Movements.

T Semeghini, L Kröll, F Bérzin, V Monteiro-Pedro

Monday, June 21, 2004, 3:30 PM - 4:30 PM, Temporomandibular Dysfunction

245 - Emg Analysis Of The Biceps Brachii Muscle In Deaf Individuals, Compared To Hearers

S Regalo, V Teixeira, M Vitti, A Oliveira, M Semprini, J Hallak

Monday, June 21, 2004, 10:30 AM - 11:30 AM, Physical Medicine & Rehabilitation

246 - The Emergence Of Neuromuscular Adaptation To Changing Cadence In Children - The Role Of Aging And Experience

P Chao, J Jensen

Saturday, June 19, 2004, 3:00 PM - 4:00 PM, Motor Control

251 - Study Of Technique Of Global Postural Re-Education During The Postural New Aligning

L Valentim

Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Physical Medicine & Rehabilitation

252 - Electromyographic Activity Of Shoulder Muscles During Land And Water Proprioceptive Neuromuscular Facilitation Exercises

J Cardoso, M Nichele, A Zeghibi

Sunday, June 20, 2004, 11:30 AM - 1:00 PM, Physical Medicine & Rehabilitation

253 - Wavelet-Based Compression Of Isometric Emg Signals

A Rocha, P Berger, F Nascimento, J Carmo, S Roy

Monday, June 21, 2004, 3:30 PM - 4:30 PM, EMG Modeling & Signal Processing

254 - Wavelet Analysis Of Electromyographic Signals For The Assessment Of Physical Conditioning

A Rocha, P Berger, F Nascimento, J Carmo, S Roy

Monday, June 21, 2004, 3:30 PM - 4:30 PM, EMG Modeling & Signal Processing

255 - Electromyographic Evaluation Of Masticatory Muscles Before And After Functional Orthopedics Of Maxillary Associated With Orthodontics Terapy In A Patient With Absence Of The Coronoid Process - Clinical Case Report

M Coelho-Ferraz, D Nouer, C Pedroni, F Bérzin

Monday, June 21, 2004, 3:30 PM - 4:30 PM, Temporomandibular Dysfunction

256 - The Effects Of Hand Vibration On Motor Evoked Potentials In Hemiparetic Individuals

S Melo, R Forget

Sunday, June 20, 2004, 11:30 AM - 1:30 PM, Physical Medicine & Rehabilitation

257 - Surface Mechanomyography – A Way To Assess Motor Control Changes In Presence Of Experimentally Induced Muscle Pain

P Madeleine, L Arendt-Nielsen

Saturday, June 19, 2004, 3:00 PM - 4:00 PM, Mechanomyogram

258 - Effects Of Task Instruction On Cortical And Segmental Reflex Excitability

G Lewis, E Perreault, C Mackinnon

Sunday, June 20, 2004, 11:30 AM - 1:00 PM, Neurophysiology

259 - Virtual Reality Delivery Modalities Affect Displacement And Velocity Of The Center Of Pressure During Voluntary Reaching In Young And Old Adults

H Sveistrup, S Smith, E Bisson, Y Lajoie, J Mccomas

Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Augmented & Virtual Reality

260 - A Virtual Reality Exercise Program Improves Balance And Mobility In Community-Living Adults With Traumatic Brain Injury

H Sveistrup, M Thornton, S Marshall, J Mccomas, H Finestone, A McCormick

Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Augmented & Virtual Reality

261 - Electromyographical Analysis Of The Masseter Muscle In Dentulous And Partially Toothless Patients With Temporomandibular Joint Disorders

M Silva, J Issa, M Vitti, A Silva, M Semprini, S Regalo

Monday, June 21, 2004, 3:30 PM - 4:30 PM, Temporomandibular Dysfunction

262 - Learning Different Postural Tasks In Patients With Poststroke Hemiparesis, Cerebellar Ataxia And Parkinson'S Disease

M Ioffe, K Ustinova, L Chernikova

Monday, June 21, 2004, 11:30 AM - 1:00 PM, Posture

Abstract Schedules

263 - Wavelet And Fourier Based Estimates Of Mmg And Emg Responses To Isokinetic Muscle Actions Yield Similar Results

J Weir, J Coburn, T Housh, T Beck, M Malek, G Johnson, J Cramer

Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Mechanomyogram

264 - Robust Estimation Of Upper Limb Emgs From Multichannel Intracortical Recordings

E Perreault, D Westwick, E Pohlmeyer, S Solla

Monday, June 21, 2004, 11:30 AM - 1:00 PM, EMG Modeling & Signal Processing

265 - Atypical Shoulder Muscle Activation Parameters In Subjects With Multidirectional Instability

J Barden, R Balyk, V Raso, M Moreau, K Bagnall

Monday, June 21, 2004, 9:00 AM - 10:30 AM, Physical Medicine & Rehabilitation

266 - An Index To Quantify Gait Deviations

V Chester, M Tingley, E Biden

Saturday, June 19, 2004, 5:00 PM - 6:30 PM, Motion Analysis

267 - Application Of The Electromyographics Biofeedback In The Treatment Of The Anal Incontinence

C Amorim, C Amorim, A Amorim, L Amorim, A Campos, T Freitas, M Pacheco, R Zangaro

Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Physical Medicine & Rehabilitation

269 - Knee Musculature Response Strategies During Self-Initiated Vertical Jump Landings

R Croce, P Russell, E Swartz, L Decoster

Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Sports Medicine & Human Performance

270 - An Evaluation Of The Utility And Limitations Of Muap Counts In The Surface Emg

P Zhou, W Rymer

Saturday, June 19, 2004, 5:00 PM - 6:30 PM, Neurophysiology

271 - The Effects Of Muap Duration On The Change Of Emg Amplitude And Emg-Force Relation Caused By Motor Unit Synchrony

P Zhou, W Rymer

Monday, June 21, 2004, 5:30 PM - 6:30 PM, Motor Unit

272 - Can Standard Surface Emg Parameters Be Used To Estimate The Number Of Muaps In The Surface Emg?

P Zhou, W Rymer

Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Neurophysiology

273 - Surface Electromyographic Spike Activity And Motor Unit Firing Rates At Different Levels Of Maximum Contraction

D Gabriel, S Rubinstein, A Christie, J Inglis, G Kamen

Monday, June 21, 2004, 3:30 PM - 4:30 PM, EMG Modeling & Signal Processing

274 - Principal Components Analysis Applied To Anticipatory Postural Adjustments In Parkinsonian Patients

L Chiari, L Rocchi, F Horak

Sunday, June 20, 2004, 3:00 PM - 4:30 PM, Motor Control

275 - The Effects Of Functional Electrical Stimulation Gait Training On Joint Coordination And Muscle Activation In The Child With Cerebral Palsy

C Laughton-Stackhouse, P Shewokis, R Lauer, S Pierce, B Smith, J Mccarthy

Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Physical Medicine & Rehabilitation

277 - Patients With Chronic, Recurrent Low Back Pain Demonstrate More Generalized Joint Torque Patterns In Response To Postural Perturbations

S Jones, S Henry, C Raasch, J Hitt

Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Posture

278 - Emg Analysis Of The Orbicular Oris Muscle, In Edentulous Patients, Before And After Complete Denture Implantation

M Vitti, C Santos, M Mattos, M Semprini, H Paranhos, S Regalo

Monday, June 21, 2004, 3:30 PM - 4:30 PM, Temporomandibular Dysfunction

279 - Postural Stability And Adjustments In An Immersive Virtual Environment

J Fung, E Keshner

Saturday, June 19, 2004, 11:30 AM - 1:00 PM, Augmented & Virtual Reality

Abstract Schedules

281 - Are There Measurable Differences Between Myoelectric Signal Parameters Recorded From Control Subjects And Those With Trapezius Myalgia In Response To Sustained Arm Holding?

N Goudy, L Mclean

Saturday, June 19, 2004, 11:30 AM - 1:00 PM, Occupational Medicine

282 - The Effects Of Scapular Taping On The Surface Emg Activity Of Shoulder Girdle Muscles During Upper Extremity Elevation In Individuals With Shoulder Impingement Syndrome

D Selkowitz, C Chaney, G Vlad

Monday, June 21, 2004, 9:00 AM - 10:30 AM, Physical Medicine & Rehabilitation

283 - Effects Of Spatial Filtering On Multi-Channel Surface Emg Muap Shapes

S Thorn, L Kallenberg, M Forsman, H Hermens

Monday, June 21, 2004, 10:30 AM - 11:30 AM, NM Assessment

284 - Somatosensory Evoked Magnetic Fields Following The Saphenus Nerve Stimulation

H Onishi, M Oishi, M Oyama, T Soma, Y Kurokawa, S Kameyama

Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Neurophysiology

285 - Effects Of Back Pain On The Correlations Of The Lumbar Spine And Hip

T Wong, R Lee

Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Occupational Medicine

286 - Variation Of Muscle Activity Pattern Between Actual And Simulated Ski Jumping & Murayama, & Ushiyama, & Kiryu

Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Sports Medicine & Human Performance

287 - Emg Activities Of Shoulder Joint Muscles While Standing On One Leg With A Crutch

T Soma, H Onishi, M Oyama, Y Kurokawa, K Tachino

Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Physical Medicine & Rehabilitation

288 - The New-Study. Neuromuscular Assessment In Elderly Workers From 4 Eu Countries With And Without Work Related Musculoskeletal Disorders.

G Sjøgaard, K Sjøgaard, H Hermens, L Sandsjö, T Läubli, S Thorn, M Vollenbroek-Hutten, H Christensen

Monday, June 21, 2004, 9:00 AM - 10:30 AM, Symposium - NeuroMuscular Assessment

289 - Mmg And Emg Responses Together With Intramuscular Tissue Pressure During Low-Level Static Continuous And Intermittent As Well As Dynamic Contractions

G Sjøgaard, P Vedsted, A Blangsted, K Sjøgaard, C Orizio

Saturday, June 19, 2004, 3:00 PM - 4:00 PM, Mechanomyogram

290 - Multifunction Myoelectric Control Using A Linear Electrode Array

K Davidge, V Buerkle, K Englehart, P Parker

Saturday, June 19, 2004, 5:00 PM - 6:30 PM, Electrode Arrays

291 - Kinesiologic Analysis Of Temporomandibular Joint In Pregnant

J Tosato, D Biasotto-Gonzalez, T Gonzalez

Monday, June 21, 2004, 3:30 PM - 4:30 PM, Temporomandibular Dysfunction

292 - Fatigue Related Changes In The Mechanomyogram Are Not Due To Changes In Intramuscular Pressure Or Force Steadiness.

K Sjøgaard, A Blangsted, P Vedsted, C Orizio

Saturday, June 19, 2004, 9:00 AM - 10:30 AM, Mechanomyogram

293 - Changes In Muscle Coalitions In The Upper Extremities In Patients With A Cervical Spinal Cord Injury

H Seelen, Y Janssen-Potten, C Pons

Monday, June 21, 2004, 4:30 PM - 5:30 PM, Physical Medicine & Rehabilitation

294 - Non-Linear Analysis Of The Surface Electromyographic Signal In Parkinsonian Patients

F Felici, G Filligoi, L Fattorini, N Accornero, A Rosponi, P Sbriccoli, M Trallesi, M Marchetti

Sunday, June 20, 2004, 3:00 PM - 4:30 PM, Motor Control

295 - Input-Output Properties In The Human Corticospinal Pathway And Intracortical Inhibition/ Facilitation Functions After Immobilization

F Kaneko, T Kizuka, H Yamada, T Yokoi, T Masuda

Sunday, June 20, 2004, 11:30 AM - 1:00 PM, Neurophysiology

Abstract Schedules

296 - Phase Difference In Mechanomyogram Between Knee Extensor Synergists During Maximal Voluntary Contraction

M Kouzaki, M Shinohara

Saturday, June 19, 2004, 9:00 AM - 10:30 AM, Mechanomyogram

297 - Effect Of Tai Chi On Gait And Obstacle Crossing Behaviors

E Hsiao-Wecksler, A Ramachandran, M Reed, Y Yang, K Rosengren

Saturday, June 19, 2004, 5:00 PM - 6:30 PM, Motion Analysis

298 - Toward A Quantitative Analysis Of Voluntary Motor Control: A Voluntary Response Index (Vri) Derived From Surface Emg Recordings During Voluntary Maneuvers

A Sherwood, H Lim, D Lee, W Mckay, M Priebe, S Holmes

Monday, June 21, 2004, 11:30 AM - 1:00 PM, EMG Modeling & Signal Processing

299 - The Effects Of The Height Of Parallel Bars On Walking And Physical Movements

K Ishiguro, A Takagi, Y Kurokawa, K Sakamoto

Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Ambulatory Recordings

300 - Analysis Of Fatigue In The Erector Spinae Muscle During Sustained Isometric Back Extension By Means Of Semg

M Essendrop, N Hjortskov, C Cescon, K Søgaaard, N Fallentin

Monday, June 21, 2004, 9:00 AM - 10:30 AM, Symposium - NeuroMuscular Assessment

301 - The Relationship Between Time And Frequency Domain Methods Of Estimating Low Frequency Common Drive

L Myers, Z Erim, M Lowery

Monday, June 21, 2004, 10:30 AM - 11:30 AM, Motor Unit

302 - Improved Statistics For The Estimation Of Time-Dependent Coherence Using Wavelets

L Myers, Z Erim

Monday, June 21, 2004, 4:30 PM - 5:30 PM, EMG Modeling & Signal Processing

303 - Importance Of Selecting An Appropriate Q Value In Analyses Of Spine Stability

S Brown, J Potvin

Monday, June 21, 2004, 3:30 PM - 4:30 PM, EMG Modeling & Signal Processing

304 - Preservation Of Grip Aperture Scaling To Object Size In The Impaired Hand Of Adults With Hemiparesis

S Michaelson, M Levin

Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Motor Control

305 - A Novel Evaluation Of Motor Unit Activity Based On Acceleration And Inhibition Between Interpulse Intervals Of Motor Unit Discharges

H Nakamura, M Yoshida, T Moritani

Monday, June 21, 2004, 3:30 PM - 4:30 PM, Motor Unit

306 - Motor Unit Coherence Is Influenced By Skilled Hand Muscle Use In Humans

J Semmler, M Sale, F Meyer, M Nordstrom

Monday, June 21, 2004, 5:30 PM - 6:30 PM, Motor Unit

308 - Muap Duration Algorithm Based On The Wavelet Transform

I Rodriguez-Carreño, A Malanda-Trigueros, L Gila-Useros, I García-Gurtubay, J Rodriguez-Falces, J Navallas-Irujo

Monday, June 21, 2004, 3:30 PM - 4:30 PM, EMG Modeling & Signal Processing

309 - Dynamic Asymmetry Of Cerebrum With Sport Activity

A Harutyunyan

Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Neurophysiology

311 - Balance Maintenance Strategies While Standing During Bilateral Achilles Tendon Vibration And Support Surface Perturbations

C Thompson, M Bélanger, J Fung

Sunday, June 20, 2004, 3:00 PM - 4:30 PM, Motor Control

312 - Emg Pattern Classification Using Fuzzy Logic For Controlling Below-Elbow Myoelectric Hand Prostheses

A Ajiboye, R Weir

Monday, June 21, 2004, 10:30 AM - 11:30 AM, Innovation in EMG

Abstract Schedules

313 - Implantable Myoelectric Sensors (Imes) For Upper-Extremity Prosthesis Control - Independence Of Multiple Intra-Muscular Emgs

R Weir, T Kuiken, A Ajiboye

Monday, June 21, 2004, 9:00 AM - 10:30 AM, Innovation in EMG

314 - Comparative Analysis Between Abdominal Muscle Recruitment In Each Quarterly Of Pregnants Through Emgs.

C Torriani, K Wolhers, F Cyrillo, M Diniz

Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Motion Analysis

315 - Use Of A New Brace For Clients With Sensory Disturbances During Waking.

A Takagi, K Nishibe, K Ikenouchi, M Otani, K Endho, T Imamura, Y Sakimura, T Nagaoka

Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Ambulatory Recordings

316 - The Dynamic Sensitivity Of Human Motoneurons

K McGill, Z Lateva

Monday, June 21, 2004, 5:30 PM - 6:30 PM, Motor Unit

317 - Coordination Of Motor Units In Different Proximodistal Bands of A Series-Fibered Muscle

K McGill, Z Lateva

Monday, June 21, 2004, 4:30 PM - 5:30 PM, Motor Unit

318 - Single Motor Unit Contribution To Surface Mechanomyogram Investigated In Two Hand Muscles

C Orizio, C Cescon, M Gobbo, M Gazzoni, D Farina

Monday, June 21, 2004, 9:00 AM - 10:30 AM, Symposium - NeuroMuscular Assessment

319 - Decomposition Of Surface Emg Signals Detected By Two-Dimensional Arrays Of Electrodes

A Holobar, D Zazula, D Farina, M Gazzoni, R Merletti

Monday, June 21, 2004, 4:30 PM - 5:30 PM, Motor Unit

320 - Soft Tissue Artefact Description In Human Knee Motion Analysis By Combining 3D Fluoroscopy And Stereophotogrammetry

R Stagni, S Fantozzi, A Cappello, A Leardini

Saturday, June 19, 2004, 5:00 PM - 6:30 PM, Motion Analysis

321 - Soft Tissue Artefact Compensation In Knee Kinematics By A New Method Based On Double Anatomical Landmark Calibration

R Stagni, A Cappello, S Fantozzi, A Leardini

Saturday, June 19, 2004, 5:00 PM - 6:30 PM, Motion Analysis

322 - Lower Body Analysis Of Muscle Recruitment In Visually Impaired And Sighted Matches

M Horvat, C Ray, R Croce

Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Motor Control

323 - Activity Of Lower Limb Muscles During Driving A Cycling Chair In Hemiparetic Stroke Patients.

K Seki, M Sato, T Fujii, M Ichie, Y Handa

Monday, June 21, 2004, 11:30 AM - 1:00 PM, Physical Medicine & Rehabilitation

325 - Development Of A New Functional Test To Assess The Capacity Of Back Muscles : Assessment Of Face Validity

C Larivière, D Gravel, P Gardiner, A Arsenault, D Gagnon, P Loisel

Saturday, June 19, 2004, 9:00 AM - 10:30 AM, Symposium - Back Assessment

326 - M-Wave Size Is Influenced By The Range Of Conduction Velocities And The Timing Of Motor Unit Action Potentials

K Keenan, D Farina, R Merletti, R Enoka

Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Muscle Fatigue

327 - Muscular Intensity Activation At Open And Closed Kinetic Chain Exercise

C Lima, S Roy, M Cheng, A Amadio, C De Luca

Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Sports Medicine & Human Performance

328 - Muscle Activation Is Different When The Same Muscle Acts As An Agonist Or Antagonist During Voluntary Movement

M Shapiro, J Prodoehl, D Corcos, G Gottlieb

Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Motor Control

329 - The Emg Signal As A Pre-Symptomatic Indicator Of Organophosphates In The Body

C De Luca, J Buccafusco, S Roy, G De Luca, A Johansson, S Nawab

Monday, June 21, 2004, 9:00 AM - 10:30 AM, Innovation in EMG

Abstract Schedules

- 330 - Motor Unit Control In Vastus Lateralis Muscle During Fatigue
A Adam, C De Luca
Monday, June 21, 2004, 5:30 PM - 6:30 PM, Motor Unit
- 331 - Catchlike Property Decreases The Amplitude Of Mechanomyogram In Humans
Y Yoshitake, M Shinohara, Y Kawakami, H Kanehisa, T Fukunaga
Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Mechanomyogram
- 332 - Virtual Reality Applications For Assessment And Rehabilitation Of Cognitive And Motor Processes
A Rizzo, J Buckwalter, T Bowerly, S Yeh, J Hwang, M Thiebaut, G Kim
Saturday, June 19, 2004, 11:30 AM - 1:00 PM, Augmented & Virtual Reality
- 333 - Comparing The Use Of Signal Whitening And Extreme Highpass Filtering To Improve Surface Emg-Based Muscle Force Estimates
J Potvin, S Brown
Monday, June 21, 2004, 5:30 PM - 6:30 PM, EMG Modeling & Signal Processing
- 335 - Reflex Modulation Of Spinal Motoneurons By Single Low Threshold Cutaneous Mechanoreceptors In The Glabrous Skin Of The Human Foot
P McNulty, J Fallon, L Bent, V Macefield
Saturday, June 19, 2004, 3:00 PM - 4:00 PM, Motor Control
- 337 - Do Array Electrodes Identify Cross Talk?
A Nene, L Kallenberg, L Schaake, H Hermens
Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Electrode Arrays
- 338 - Differences Of Tibial Impact Acceleration During Running At Different Overground States
H Kurumadani, T Murakami, H Sasaki, K Miyake, K Murakami, T Yamashita
Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Sports Medicine & Human Performance
- 339 - Variability Of Single Motor Unit Conduction Velocity During Non-Fatiguing Sustained Contractions
J Hogrel, J Duchêne
Monday, June 21, 2004, 3:30 PM - 4:30 PM, EMG Modeling & Signal Processing
- 340 - Effect Of Design Changes Of Military Load Carriage Systems On Gait And Posture: A Case Study
R Attwells, S Birrell, R Hooper, N Mansfield
Saturday, June 19, 2004, 11:30 AM - 1:00 PM, Motion Analysis
- 342 - Comparative Emg-Analysis Of The Pain And The Constriction Of Ascending Stample Fibers Of The Trapezius, After Application Of Techniques Tens And Prt - Positional Release Therapy
C Cyrillo, S Sencovici, S Sartori, T Torriani
Monday, June 21, 2004, 9:00 AM - 10:30 AM, Physical Medicine & Rehabilitation
- 343 - Comparative Analysis Of The Erecting Spine Muscles Activity During The Gait In Subjects With And Without Scoliosis
C Cyrillo, P Pinto, T Torriani, S Seoane, R Rodrigues, C Coelho
Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Posture
- 344 - Electromyography Analysis Of Infra-Spinal Muscle Fibers Recruitment During A Pnf Pattern And In A Bad Ragaz Pattern - An Effectiveness Comparison Between Dry Land And Water
T Torriani, B Baltaduonis, F Fernandes, C Cyrillo
Monday, June 21, 2004, 10:30 AM - 11:30 AM, Physical Medicine & Rehabilitation
- 345 - Electromyography Analysis Of The Quadriceps Femoris Muscle Group After Application Of Short-Wave Continuous
D Debessa, R Rodrigues, F Filoso, T Torriani, C Cyrillo, P Pelozo
Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Physical Medicine & Rehabilitation
- 346 - Analysis Of The Tibial Anterior And Medial And Lateral Gastrocnemius Muscular Recruitment During The Gait In Subjects With Concave And Plane Foot, Through The Surface Electromyography (Semg)
S Santos, C Cyrillo, T Torriani, P Pelozo
Monday, June 21, 2004, 10:30 AM - 11:30 AM, Physical Medicine & Rehabilitation
- 348 - Electromyography Analysis Of Infra-Spinal Muscle Recruitment During The Use Of Two Differents Resistance Water Devices - An Effectiveness Comparison Between Resistance In Water
T Torriani, F Figueiredo, F Fernandes, C Cyrillo
Monday, June 21, 2004, 10:30 AM - 11:30 AM, Physical Medicine & Rehabilitation

Abstract Schedules

349 - Network Technologies For Intelligent Modular Prostheses

A Poulton, S Hill, D Binnie

Sunday, June 20, 2004, 11:30 AM - 1:00 PM, Rehabilitation Engineering

350 - The Influence Of Three Intermittent Myofeedback Relaxation Training Schedules On Trapezius Muscle Activity While Performing A Gross-Motor Task

L Sandsjö, G Voerman, M Vollenbroek-Hutten, C Groothuis-Oudshoorn, H Hermens

Monday, June 21, 2004, 10:30 AM - 11:30 AM, NM Assessment

351 - How To Improve Working Conditions For Spinal Cord Injured? An Intervention Study Including Myofeedback Training

L Sandsjö, L Grundell, K Valtonen, A Karlsson, H Hermens, E Viikari-Juntura

Monday, June 21, 2004, 10:30 AM - 11:30 AM, NM Assessment

352 - Optical Flow Applied To Multichannel Surface Myoelectrical Signals

N Östlund, J Karlsson, J Holmberg

Saturday, June 19, 2004, 5:00 PM - 6:30 PM, Electrode Arrays

353 - Can The Electrical Activity Of Individual Motor Units Be Monitored Using The Surface Electromyogram?

R Beck, M O'Malley, C Houtman

Monday, June 21, 2004, 3:30 PM - 4:30 PM, Motor Unit

354 - Analysis Of Global Conduction Velocity Estimation From The Semg

R Beck, M O'Malley

Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Muscle Fatigue

355 - Association Between Heelstrike And Kinematic Parameters Of Gait – An Indirect Detection Method Without Foot Switches

L Oddsson, N Patronik, K Sienko, C Wall iij

Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Motion Analysis

356 - Vibrotactile Feedback Improves Balance Control In Vestibulopathic Individuals During Pseudorandom Horizontal Surface Perturbations

L Oddsson, E Kentala, P Meyer, H Kubert, C Wall iij

Monday, June 21, 2004, 11:30 AM - 1:00 PM, Posture

357 - A Virtual Environment With Simulated Gravity For Balance Rehabilitation Of Bedridden Patients And Frail Individuals

L Oddsson, C Wall iij, P Meyer, J Konrad

Saturday, June 19, 2004, 11:30 AM - 1:00 PM, Augmented & Virtual Reality

358 - Surface Emg Signal Alterations In Carpal Tunnel Syndrome Patients. A Pilot Study

A Rainoldi, M Gazzoni, A Lantermo, R Merletti

Saturday, June 19, 2004, 11:30 AM - 1:00 PM, Occupational Medicine

359 - An Ergonomic Evaluation Of Physical Workload In Holding A Portable Device With And Without The Use Of Strap Support: A Surface Electromyography Study Application

N Koleini Mamaghani, Y Shimomura, K Iwanaga, T Katsuura

Saturday, June 19, 2004, 11:30 AM - 1:00 PM, Muscle Fatigue

360 - Postural Strategies To Maintain Balance During Lateral Walking After Stroke

M Trivino, A Lamontagne, J Fung

Sunday, June 20, 2004, 11:30 AM - 1:00 PM, Motor Control

361 - An On-Line Fatigue Monitor During Electrically Elicited Contractions

A Rainoldi, M Gazzoni, G Melchiorri, I Caruso

Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Muscle Fatigue

362 - A Novel Adaptive Filtering Approach For Removing Stimulation Artifact From M-Waves

F Mandrile, F Assumma, D Farina, K Englehart, P Parker, R Merletti

Monday, June 21, 2004, 4:30 PM - 5:30 PM, EMG Modeling & Signal Processing

363 - Motor Unit Firing Rate And Surface Emg Amplitude Behavior During Maximal-Effort Fatiguing Contractions In Young And Older Adults

S Rubinstein, G Kamen, J Kent-Braun

Saturday, June 19, 2004, 3:00 PM - 4:00 PM, Muscle Fatigue

Abstract Schedules

- 364 - Stimulation Current Waveform Shape Has No Influence On Motor Unit Activation During Transcutaneous Electrical Stimulation
F Mandrile, D Farina, M Pozzo, R Merletti
Sunday, June 20, 2004, 11:30 AM - 1:00 PM, Rehabilitation Engineering
- 365 - The Biphasic Waveform Compensation Technique Is Not Effective For Reducing The Stimulation Artifact In Emg Recordings
F Mandrile, D Farina, M Pozzo, R Merletti
Monday, June 21, 2004, 4:30 PM - 5:30 PM, Rehabilitation Engineering
- 366 - Extensor And Flexor Muscle Contribution To Active Trunk Stiffness
P Lee, K Moorhouse, K Granata
Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Motor Control
- 367 - A Novel Multichannel Programmable Neuromuscular Stimulator
M Pozzo, E Merlo, A Bottin, E Detoma
Sunday, June 20, 2004, 11:30 AM - 1:00 PM, Rehabilitation Engineering
- 368 - Assessment Of Fatigue In Low Back Muscles Of Elderly Nurses
M Pozzo, C Cescon, S Venturi, R Bonfiglioli, R Merletti, F Violante
Monday, June 21, 2004, 10:30 AM - 11:30 AM, NM Assessment
- 369 - Analysis Of Muscle Fatigue In Pathological Subjects During Biking
F Molinari, G Balestra, M Knaflitz, F Aina, C Ariatti
Saturday, June 19, 2004, 9:00 AM - 10:30 AM, Muscle Fatigue
- 370 - Toward A Quantitative Analysis Of Voluntary Motor Control: The Test-Retest Reliability Of A Voluntary Response Index (Vri) Derived From Surface Emg Recordings
A Sherwood
Monday, June 21, 2004, 3:30 PM - 4:30 PM, EMG Modeling & Signal Processing
- 371 - The Second-Generation Precision Decomposition System For Emg Signals: An Overview
C De Luca, S Nawab, A Adam, R Roark, M Manto, R Wotiz, R Srivastava, L Gilmore
Monday, June 21, 2004, 4:30 PM - 5:30 PM, Motor Unit
- 372 - Motor Unit Firing Patterns In Patients With Cerebellar Ataxia
M Manto, C Sauvage, A Adam, R Roark, S Nawab, C De Luca
Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Neurophysiology
- 373 - Clinical Evaluation Of Laryngeal Muscle Dysfunction Using Advanced Emg Decomposition
R Roark, A Adam, C Zalvan, M Manto, S Nawab, C De Luca
Monday, June 21, 2004, 3:30 PM - 4:30 PM, Motor Unit
- 374 - Study Of Postural Pattern And Muscular Activity In Temporomandibular Disordered Patients: Biophotogrammetric And Electromyographic Analysis
E Ribeiro, A Peroni, A Silva, S Marchiori, F Bérzin
Monday, June 21, 2004, 3:30 PM - 4:30 PM, Temporomandibular Dysfunction
- 375 - A Model Of The Motoneuron Pool To Examine The Effect Of Common Oscillatory Inputs On Motor Unit Firing Patterns
M Lowery, Z Erim
Monday, June 21, 2004, 4:30 PM - 5:30 PM, Motor Unit
- 376 - The Influence Of A Realistic Limb Geometry On Simulated Surface-Detected Muscle Fiber Action Potentials
M Lowery, N Stoykov, T Kuiken
Monday, June 21, 2004, 3:30 PM - 4:30 PM, EMG Modeling & Signal Processing
- 377 - The Partition Of Spin Angular Momentum In Human Walking
M Popovic, A Englehart, H Herr
Saturday, June 19, 2004, 9:00 AM - 10:30 AM, Motion Analysis
- 378 - Second Generation Precision Decomposition: Solutions
R Wotiz, C De Luca, S Nawab
Monday, June 21, 2004, 3:30 PM - 4:30 PM, Motor Unit
- 379 - Second Generation Precision Decomposition: Challenges
S Nawab, R Wotiz, C De Luca
Monday, June 21, 2004, 3:30 PM - 4:30 PM, Motor Unit

Abstract Schedules

- 380 - Postural Coordination Dynamics During Voluntary Suprapostural Activity
D Smith, L Smart, E Otten
Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Posture
- 381 - Vestibular Influences On Human Muscle Spindles
L Bent, P Bolton, V Macefield
Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Neurophysiology
- 382 - Knee Adduction And Abduction Moment Patterns During Normal Walking And Tai Chi Exercise: Application For Osteoarthritis Rehabilitation
W Liu, S Tseng, M Finley, K Mcquade
Sunday, June 20, 2004, 11:30 AM - 1:00 PM, Physical Medicine & Rehabilitation
- 383 - Study Of Muscle Function In Process Of Fatigue Generated During Isometric Contraction And In Process Of Its Recovery With Use Of Both Mechanomyogram(Mmg) And Electromyogram(Emg)
K Sakamoto, Y Imai, K Mito, K Kaneko, M Takanokura, H Makabe
Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Mechanomyogram
- 384 - Differential Patterns Of Muscle Activation In Patients With Symptomatic And Asymptomatic Rotator Cuff Tears
S Backus, B Kelly, R Williams, F Cordasco, J Otis, M Lenhoff, T Wickiewicz, D Altchek
Monday, June 21, 2004, 5:30 PM - 6:30 PM, Sports Medicine & Human Performance
- 385 - Measurement Of Joint Stiffness To Assess Fes-Induced Muscle Strength And Co-Contraction
D Rafolt, E Gallasch, M Fend, G Kinz, C Hofer, H Kern, W Mayr
Monday, June 21, 2004, 4:30 PM - 5:30 PM, Rehabilitation Engineering
- 386 - Differences In Biceps Brachii Isometric Endurance And Isokinetic Torque Between Young And Older Men.
L Fattorini, F Felici, P Sbriccoli, I Bazzucchi, A Rosponi, V Castellano, M Marchetti
Monday, June 21, 2004, 5:30 PM - 6:30 PM, Sports Medicine & Human Performance
- 387 - Electromyographic And Radiological Evaluation, Pre Treatment And Post Treatment, Through The Maitland Method In The Cervical Spine, On Patient With Neurological Lesion: A Case Report
R De Barros Santos, C Torrinani, D Gonzalez, F Cyrillo
Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Physical Medicine & Rehabilitation
- 388 - Changes In Thenar Motor Unit Electromyographic Activity And Force With Repeated Activation
C Thomas, R Johansson, B Bigland-Ritchie
Monday, June 21, 2004, 11:30 AM - 1:00 PM, Motor Unit
- 389 - Electromyographic Analysis Of Knee Muscles During Normal Walking And Tai-Chi Step In Healthy Adults
S Tseng, W Liu, M Finley, K Mcquade
Sunday, June 20, 2004, 3:00 PM - 4:30 PM, Physical Medicine & Rehabilitation
- 390 - Excitatory And Inhibitory Responses Of Single Motor Units To Trans Cranial Magnetic Stimulation: A Comparative Study In Healthy Subjects And Patients With Motoneurone Diseases.
A Schmied, S Attarian, J Vedel
Monday, June 21, 2004, 11:30 AM - 1:00 PM, Motor Unit
- 391 - Velocity Information Plays A Role In Controlling Ballistic Sway During Quiet Standing
K Masani, D Nozaki, M Kouzaki, K Nakazawa, T Thrasher, M Popovic
Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Posture
- 392 - In Vivo Load Sharing Among The Three Heads Of Human Triceps Surae During Isometric And Submaximal Plantar Flexion
S Chung, E Rey, Z Bai, L Zhang
Saturday, June 19, 2004, 5:00 PM - 6:30 PM, Motor Control
- 393 - Gait Deviations In Sound Limbs Of Transfemoral Amputees In Response To Alterations Of Sagittal Socket Alignment
S Chung, T Han
Saturday, June 19, 2004, 9:00 AM - 10:30 AM, Motion Analysis
- 394 - Effects Of Lower Extremity Exercise On Balance Recovery From A Forward Fall
G King, C Luchies, A Stylianou, L Richards, L Richards
Saturday, June 19, 2004, 9:00 AM - 10:30 AM, Motion Analysis

Abstract Schedules

- 395 - The Effect Of 1 Khz Nmes On The Fatigue Of Wrist And Finger Flexor Muscles
K Pires, F Gomes, A Maluhy, A Malan, A Rocha, S Roy
Saturday, June 19, 2004, 11:30 AM - 1:00 PM, Muscle Fatigue
- 396 - Analysis Of Quadriceps Emg Activity In Counter Movement Jumping - A Comparative Study Between Eccentric And Concentric Muscle Contraction Phases.
R Ângelo, A Carvalho, P Mourão, S Fernandes, C Carvalho
Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Sports Medicine & Human Performance
- 398 - Analysis Of Quadriceps Emg Activity In Counter Movement Jumping - A Comparative Study Between Eccentric And Concentric Muscle Contraction Phases Of Subject Groups With Different Performances
R Ângelo, A Carvalho, P Mourão, S Fernandes, C Carvalho
Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Sports Medicine & Human Performance
- 399 - Emg Variables And Fiber Type Distribution In Elite Athletes
A Rainoldi, G Melchiorri, M Gazzoni, I Caruso
Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Sports Medicine & Human Performance
- 400 - Relationship Between Exercise-Related Interleukin-6 Production, Mechanical And Myoelectric Manifestations Of Fatigue
M Minetto, P Paccotti, M Ventura, A Rainoldi, M Gazzoni, R Merletti, A Dovio, A Angeli
Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Sports Medicine & Human Performance
- 401 - Surface Emg Activity Of The Paraspinals And Hamstrings During Manual Force Application
M Agarabi, A Mcdonough
Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Motor Control
- 402 - Presentation Of A Low Cost Orthosis That Makes Feasible The Orthostatism Of Bearers Of Cerebral Palsy
T Torriani, M Monteiro, W Werneck, A Andrade, D Debessa
Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Rehabilitation Engineering
- 403 - Quantitative Measurement Of The Muscular Recruitment Of A Bearer Of Cerebral Paralysis With Scoliosis During Therapeutic Activity Of Balance Reaction
T Torriani, M Monteiro, C Cyrillo, P Prumes, T Tomasi, G Gomes
Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Physical Medicine & Rehabilitation
- 404 - Comparison Between Fourier And Wavelet Transforms In Emg-Based Muscle Fatigue Analysis
M Andrade, J Carmo, A Rocha, W Veneziano, F Nascimento
Saturday, June 19, 2004, 9:00 AM - 10:30 AM, Muscle Fatigue
- 405 - How Is Force Maintained When Motor Unit Firing Rate Is Decreased During Experimental Pain? Investigation Of Synergist Muscles
P Hodges, U Ervilha, T Graven-Neilsen
Monday, June 21, 2004, 11:30 AM - 1:00 PM, Motor Unit
- 406 - Non-Invasive Assessment Of Recruitment Of The Abdominal Muscles In People With Low Back Pain: Ultrasound Measurement Of Muscle Activity
P Hodges, P Ferreira, M Ferreira
Saturday, June 19, 2004, 5:00 PM - 6:30 PM, Motor Control
- 407 - Reduced Tonic Activity Of The Deep Trunk Muscle During Locomotion In People With Low Back Pain
P Hodges, S Saunders
Monday, June 21, 2004, 11:30 AM - 1:00 PM, Posture
- 408 - Maximal Recruitment Of The Knee Musculature In Moderate Osteoarthritis: Implications For Management
J Mcnutt, C Hubleby-Kozey, M Agarabi, K Deluzio, S Landry, W Stanish
Monday, June 21, 2004, 9:00 AM - 10:30 AM, Physical Medicine & Rehabilitation
- 409 - Comparative Analysis Of The Recruitment Of The Muscle Tibial Anterior With Two Resistance Resources In Relation To Voluntary Isometric Contraction Maximum (Civm), Through Emgs
D Debessa, C Cyrillo, T Torriani, B Baltazar, F Fontanini, P Prates, M Mello, W Wohlers
Sunday, June 20, 2004, 11:30 AM - 1:00 PM, Physical Medicine & Rehabilitation

Abstract Schedules

- 410 - Introduction To A Portable, Wireless Gait Evaluation And Biofeedback Tool
D Scarborough, S Morris, D Krebs, J Paradiso, E Asmussen, D Goldvasser
Sunday, June 20, 2004, 9:00 AM - 10:30 AM, Ambulatory Recordings
- 411 - Analysis Of M. Vastus Lateralis And M. Biceps Femoris Temporal Patterns During Gait Of Transtibial Amputees Athletes
A Cerqueira Soares, J Serrão, R Soares, L Mochizuki, A Amadio
Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Sports Medicine & Human Performance
- 412 - Comparative Analysis Of The Trapezius Muscle Before And After The Use Of The Subcapal Bar Through Surface Electromyography (Emg)
D Debessa, C Camargo, L Sartori, C Cyrillo, T Torriani
Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Posture
- 413 - Comparative Evaluation Case Study Of The Abdominal Musculature Between Pregnant And Non-Pregnant Women During Isotonic Movement Through Surface Electromyography
T Torriani, C Cyrillo, W Wohlers, W Werneck, D Diniz, A Azar
Monday, June 21, 2004, 10:30 AM - 11:30 AM, Innovation in EMG
- 414 - Comparative Evaluation Case Study Of The Abdominal Musculature Between Pregnant And Non-Pregnant Women During Isometric Movement Through Surface Electromyography
T Torriani, C Cyrillo, W Wohlers, W Werneck, D Diniz, A Azar
Monday, June 21, 2004, 10:30 AM - 11:30 AM, Physical Medicine & Rehabilitation
- 415 - Human Inspiratory Muscles: Insights From Motor Unit Recordings
S Gandevia
Monday, June 21, 2004, 11:30 AM - 1:00 PM, Motor Unit
- 416 - Excitabilities Of Stretch Reflexes In Antagonistic Ankle Muscles While Maintaining A Bipedal Standing Posture In Human
H Obata, N Kawashima, K Nakazawa, S Yamamoto, T Komeda, M Akai
Sunday, June 20, 2004, 9:00 AM - 10:30 AM, Posture
- 417 - Assessment Of Muscle Fiber Conduction Velocity During Explosive Contractions In Humans
M Pozzo, E Merlo, D Farina, G Antonutto, R Merletti, P Di Prampero
Sunday, June 20, 2004, 11:30 AM - 1:00 PM, Motor Control
- 418 - Assessment Of Muscle Fiber Conduction Velocity From Surface Emg Signals In Dynamic Contractions
D Farina, M Pozzo, E Merlo, A Bottin, R Merletti
Monday, June 21, 2004, 9:00 AM - 10:30 AM, Innovation in EMG
- 419 - Low-Threshold Motor Unit Twitch Force And Conduction Velocity Following Sub-Maximal Fatiguing Contractions
D Farina, L Arendt-Nielsen, R Merletti, T Graven-Nielsen
Monday, June 21, 2004, 10:30 AM - 11:30 AM, Motor Unit
- 420 - Muscle Fiber Membrane Properties Of Sub-Threshold Motor Units Vary During Sustained Contractions
D Farina, M Gazzoni, F Camelia, R Merletti
Monday, June 21, 2004, 3:30 PM - 4:30 PM, Motor Unit
- 421 - Effect Of Local In-Homogeneities In The Subcutaneous Tissue On Muscle Fiber Conduction Velocity Estimates Assessed With A Novel Analytical Surface Emg Model
R Merletti, L Mesin, D Farina
Monday, June 21, 2004, 5:30 PM - 6:30 PM, EMG Modeling & Signal Processing
- 422 - Motor Unit Reinnervation And Control Properties In Intrinsic Muscles Of A Transplanted Hand
R Merletti, M Lanzetta, D Farina, M Pozzo, A Bottin
Sunday, June 20, 2004, 11:30 AM - 1:00 PM, Neurophysiology
- 424 - Frequency Analysis Of Mechanomyogram Using Matching Pursuit
M Yoshida, M Yoshida, A Kadoishi
Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Mechanomyogram
- 425 - Development Of Complex Virtual Environments For Locomotor Training Following Stroke
B Mcfadyen, F Malouin, J Fung, F Comeau, S Chapdelaine, C Beaudoin, A Lamontagne, D Laurendeau
Saturday, June 19, 2004, 11:30 AM - 1:00 PM, Augmented & Virtual Reality

Abstract Schedules

- 426 - 3D Arthrokinematics Of The Human Upper-Cervical Spine: In-Vitro Study Of Coupled Rotations
E Cattrysse, J Baeyens, P Van Roy, J Clarys
Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Motion Analysis
- 427 - Can Simple Biomechanical Test Are Able To Identify Elderly Fallers?
I Melzer, N Benjuya, J Kaplanski
Monday, June 21, 2004, 11:30 AM - 1:00 PM, Posture
- 428 - The Effect Of Forearm Position On The Size Of Response To Transcranial Magnetic Stimulation In Human Extensor Carpi Radialis Longus
M Oyama, K Aizu, H Onishi, T Soma, M Sato, M Ichie, Y Handa
Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Neurophysiology
- 429 - Signal Quality Evaluation In Multichannel Surface-Emg
C Grönlund, K Roeleveld, J Karlsson
Monday, June 21, 2004, 4:30 PM - 5:30 PM, EMG Modeling & Signal Processing
- 430 - Comparison Of The Activity Of The Paravertebrals Ridge Muscles, During Posture Maintenance In Dry Land And Immersed Through Surface Electromyography
C Cyrillo, R Rosa, Y Yanaga, R Rodrigues, T Torriani
Monday, June 21, 2004, 10:30 AM - 11:30 AM, Physical Medicine & Rehabilitation
- 431 - A New Method For Periodical In-Situ Re-Calibration Of Force Platforms
L Chiari, A Cappello, D Lenzi
Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Rehabilitation Engineering
- 432 - Biomechanical Analysis Of Aggressive In-Line Skating: Landing And Balance During A Stall
M Major, P Kurath, M Bange, A Beaudoin, E Hsiao-Wecksler
Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Motion Analysis
- 433 - Force-Emg Relationship In Isometric And Dynamic Ballistic Contractions
N Vollestad, S Jubrias, M Kushmerick
Sunday, June 20, 2004, 11:30 AM - 1:00 PM, Motor Control
- 434 - Parametric Deconvolution For The Calculation Of Dynamic Trunk Stiffness
K Moorhouse, K Granata
Monday, June 21, 2004, 5:30 PM - 6:30 PM, EMG Modeling & Signal Processing
- 435 - Dynamic Trunk Kinematic Stiffness
K Moorhouse, G Kauffman, K Granata
Saturday, June 19, 2004, 5:00 PM - 6:30 PM, Motor Control
- 436 - Gait Analysis In The Longitudinal Assessment Of Patients Suffering From Multiple Sclerosis
M Knaflitz, G Balestra, F Molinari, M Schieron
Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Motion Analysis
- 437 - An Intelligent Procedure To Support The Selection Of Emg Probes Location For Gait Analysis
G Balestra, F Gerace, M Knaflitz, F Molinari
Saturday, June 19, 2004, 11:30 AM - 1:00 PM, Motion Analysis
- 438 - Coactivation In The Knee Joint After Anterior Cruciate Ligament Reconstruction And Rehabilitation
A Pássaro, I Sacco, A Marques, A Amadio
Sunday, June 20, 2004, 9:00 AM - 10:30 AM, Sports Medicine & Human Performance
- 439 - On A Common Fractal Property Of Body Fluctuations In Human Gait And Posture
M Abe, K Nakazawa, K Masani, M Akai
Monday, June 21, 2004, 11:30 AM - 1:00 PM, Posture
- 440 - Peroneal Emg Onset Patterns During Laterally-Tilted Treadmill Running With And Without Ankle Orthoses
D Wallace, R Harter
Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Sports Medicine & Human Performance
- 442 - Measurement Of Muscular Effort: Effects Of Movement Frequency And Load
B Glenn, R Gregory
Sunday, June 20, 2004, 11:30 AM - 1:00 PM, Motor Control
- 443 - Reliability Of Voluntary Step Execution Behaviour Under Single And Dual Task Conditions In Healthy Young And Elderly Individuals
I Melzer, L Oddsson, N Rosenblatt
Sunday, June 20, 2004, 3:00 PM - 4:30 PM, Physical Medicine & Rehabilitation

Abstract Schedules

444 - Observing Time-Frequency Characteristic Changes With Empirical Mode Decomposition On Semg Of Lower Back Muscles Under Static Loads

Q Song, X Wang, H Guo, J Wang

Monday, June 21, 2004, 4:30 PM - 5:30 PM, EMG Modeling & Signal Processing

445 - Linearly Fitting Emg-Impulse Proportionality In Emg Tuning Analysis Of Arm Pointing

Q Song

Monday, June 21, 2004, 5:30 PM - 6:30 PM, EMG Modeling & Signal Processing

446 - Effect Of Type Of Practice On Arm Motor Recovery In Chronic Stroke Patients

C Cirstea, A Ptito, M Levin

Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Physical Medicine & Rehabilitation

447 - Segmentation Of Foot Switch Signals In Gait Analysis

M Knaflitz, F Gerace, G Balestra, F Molinari

Saturday, June 19, 2004, 5:00 PM - 6:30 PM, Motion Analysis

448 - Influence Of Audio Feedback On Structural Properties Of Postural Sway

L Chiari, M Dozza, A Cappello, F Horak

Sunday, June 20, 2004, 9:00 AM - 10:30 AM, Posture

449 - Analysis Of Force Perception And Electric Activity In Forearm Flexion Movements Through Dynamometry And Electromyography

A Soares, L Gouvêa E Silva, T Domiciano, A Silgueira, D De Oliveira Silva, G Da Cunha Sousa

Monday, June 21, 2004, 5:30 PM - 6:30 PM, Sports Medicine & Human Performance

450 - Electromyographic Study Of The Simultaneous Action Of The Flexor Carpi Radialis, Extensor Carpi Radialis Brevis And Pronator Teres Muscles In Forearm Flexion Movements

A Soares, D De Oliveira Silva, L Gouvêa E Silva, Z Silva, G Da Cunha Sousa, F Luiz, M Paulo, T A Pinheiro

Monday, June 21, 2004, 5:30 PM - 6:30 PM, Sports Medicine & Human Performance

451 - Electromyographic Analysis Of Abdominal Muscle In Chronical Obstrutive Pulmonar Disease Patients During Slow Vital Capacity Maneuver

C Amorim, C Amorim, N Serrão, A Campos, T Freitas, E Correa, L Amorim, F Ladeira

Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Physical Medicine & Rehabilitation

452 - Study Of Inspiratory Capacity In Copd Through Surface Electromyography

C Amorim, C Amorim, N Serrão, A Campos, T Freitas, E Correa, L Amorim, F Ladeira

Sunday, June 20, 2004, 11:30 AM - 1:00 PM, Physical Medicine & Rehabilitation

453 - Analysis Of The Relationship Between Impulse And Propulsive Force In Hemiparetic Individuals During Treadmill Gait.

C Amorim, A Campos, D Ribeiro, T Freitas, L Amorim, H Macau, C Amorim

Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Motor Control

455 - Electromyographic Analysis Of Mouth'S Orbicular Muscle In Individuals With Bucal Respiratory Patterns.

C Amorim, C Amorim, L Amorim, A Campos, T Freitas, H Macau, L Oliveira, R Zângaro

Monday, June 21, 2004, 3:30 PM - 4:30 PM, Temporomandibular Dysfunction

456 - Evaluation Of Electromyographic Activities Of Masseter And Temporal Muscles, Before And After The Use Of Palatal Device In Individuals With Temporomandibular Disfunction.

C Amorim, C Amorim, L Amorim, A Campos, T Freitas, H Macau, L Oliveira, M Pacheco

Monday, June 21, 2004, 3:30 PM - 4:30 PM, Temporomandibular Dysfunction

457 - Electromyographic Analysis Of Extensor Carpi Radialis Longus, Flexor Carpi Ulnaris And 2Nd Dorsal Ulnaris Muscles During Objets Grasping Movement For Daily Life Activities (Dla).

C Amorim, L Amorim, C Amorim, H Macau, A Campos, T Freitas, R Zângaro, N Silva

Sunday, June 20, 2004, 4:30 PM - 5:30 PM, Physical Medicine & Rehabilitation

458 - Study About The Impulse'S Behaviour During Treadmill Walking With Varying Uphill And Downhill Slopes.

C Amorim, T Freitas, C Amorim, A Campos, L Amorim, N Serrão, H Macau, P Galhanone

Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Motion Analysis

Abstract Schedules

459 - Ground Reaction Force'S Vertical Component Behaviour During Walking In Various Uphill And Downhill Slopes.

C Amorim, T Freitas, C Amorim, A Campos, L Amorim, H Macau, N Serrão, P Galhanone

Saturday, June 19, 2004, 4:00 PM - 5:00 PM, Motion Analysis

462 - Generalizability Of Stabilogram Diffusion Analysis

R Doyle, B Ragan, L Melnyk, E Hsiao-Wecksler, K Rosengren

Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Posture

464 - Seats Padded With Gel Reduce The Activity Of Back Muscles During Sitting

C De Luca, M Cheng

Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Occupational Medicine

465 - Influences To Human Posture Control In Cooling And Stimulation Conditions Of Foot Soles

K Takayanagi, A Nakayama, M Hosoda

Monday, June 21, 2004, 11:30 AM - 1:00 PM, Posture

466 - Musculoskeletal Adaptations After Spinal Cord Injury Are Prevented With A Minimal Dose Of Daily Electrical Stimulation Exercise.

R Shields, S Dudley-Javoroski

Saturday, June 19, 2004, 3:00 PM - 4:00 PM, Muscle Fatigue

467 - Assessment Of The Accuracy Of Extraction Of The Motor Command Through The Pulse Density Demodulation Processing Utilizing Synthetic Electromyogram

K Imaizumi, S Hiki

Monday, June 21, 2004, 9:00 AM - 10:30 AM, EMG Modeling & Signal Processing

468 - Application Of The Pulse Density Demodulation Processing To Observed Electromyographic Waveform

S Hiki, K Imaizumi

Monday, June 21, 2004, 3:30 PM - 4:30 PM, EMG Modeling & Signal Processing

469 - Relations Between Force And Surface Mechanomyogram In Isometrically Contracted Calf Muscles

E Gallasch, D Rafolt

Saturday, June 19, 2004, 9:00 AM - 10:30 AM, Mechanomyogram

473 - Effects Of Ageing And Degeneration On Regional Coupled Motion In The Cervical Spine.

P Van Roy, F Van Den Bogaerde, E Cattrysse, J Baeyens, L Verbruggen, J Clarijs

Sunday, June 20, 2004, 9:00 AM - 10:30 AM, Posture

474 - Orofacial Contraction Does Not Affect Neck Muscle Activity In A Clinical Test

C Skaggs, J Gray, S McGill

Monday, June 21, 2004, 3:30 PM - 4:30 PM, Temporomandibular Dysfunction

475 - A Wearable Functional Activity Monitor For Stroke Patients

S Roy, M Cheng, C De Luca

Sunday, June 20, 2004, 9:00 AM - 10:30 AM, Ambulatory Recordings

476 - Vibrotactile Display Of Body Tilt: Progression From Standing To Walking Experiments

C Wall, L Oddsson, K Sienko, H Kubert

Monday, June 21, 2004, 5:30 PM - 6:30 PM, Posture

477 - Surface Electrode-Array Electromyogram Decomposition Algorithm Based On Independent Component Analysis (Ica) And Template Matching

G García, R Okuno, K Akazawa

Saturday, June 19, 2004, 5:00 PM - 6:30 PM, Electrode Arrays

478 - Automated Activity Profiling For Use In Continuous Dynamic Human Motion.

C Baten, R Was, J Smeding, P Veltink

Sunday, June 20, 2004, 9:00 AM - 10:30 AM, Ambulatory Recordings

479 - Field Calibration Of An Emg Assisted Model To Predict Spinal Forces, Without Use Of Mvc

W De Vries, J Visser, C Baten, J Van Dieen

Saturday, June 19, 2004, 9:00 AM - 10:30 AM, Symposium - Back Assessment

481 - Evaluation Of A Cart For The Transportinon Of Meals In A Hospital

M Caicoya, J Sutil

Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Occupational Medicine

Abstract Schedules

- 483 - Evaluation Of The Ergonomic Features Of The Comercial Chairs For Office Work
J Sutil, M Caicoya
Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Occupational Medicine
- 484 - Vibrating Insoles Improve Balance In Patients With Stroke
A Priplata, B Patriitti, R Hughes, J Stein, P Bonato, J Collins
Monday, June 21, 2004, 5:30 PM - 6:30 PM, Posture
- 485 - Accurate Estimation Of Body Segment Kinematics From Inertial Sensor Kinematics
C Baten, M Horsman, W De Vries, B Koopman, F Van Der Helm, P Veltink
Saturday, June 19, 2004, 9:00 AM - 10:30 AM, Motion Analysis
- 486 - Sweat Test For Electro-Mechanical Stability Of The Emg Electrode-Skin Interface
G De Luca, A Johansson, S Roy, M Cheng, L Gilmore, P Bergman, C De Luca
Monday, June 21, 2004, 10:30 AM - 11:30 AM, Innovation in EMG
- 487 - Electrophysiology And Kinesiology For Health And Disease
T Moritani
Saturday, June 19, 2004, 8:00 AM - 9:00 AM, Keynote Basmajian Lecture
- 488 - Monitoring Motor Fluctuations In Parkinson'S Disease: A Data Mining Approach
D Sherrill, P Bonato, D Standaert, S Salles
Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Ambulatory Recordings
- 489 - Objective Field Assessment Of Exercise Capacity In Chronic Obstructive Pulmonary Disease
D Sherrill, M Moy, J Reilly, P Bonato
Sunday, June 20, 2004, 9:00 AM - 10:30 AM, Ambulatory Recordings
- 490 - Functional Electrical Stimulation (Fes) Of Gastrocnemius-Soleus (G-S) Improves Gait Patterns By Addressing The Changed Dynamic Resources Of Children With Spastic Cerebral Palsy (Cp)
C Ho, K Holt, E Saltzman, R Wagenaar
Monday, June 21, 2004, 11:30 AM - 1:00 PM, Physical Medicine & Rehabilitation
- 492 - Gait Risk Factors For Falls In Older Adults: A Dynamic Perspective
Y Barak, R Wagenaar, K Holt
Saturday, June 19, 2004, 11:30 AM - 1:00 PM, Motion Analysis
- 493 - Lumbar Load For Flight Attendants During Trolley Handling Aboard Aircraft
M Jaeger, K Sawatzki, U Glitsch, H Ottersbach, R Ellegast, K Schaub, G Franz
Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Occupational Medicine
- 494 - Electromyographical Investigation On Muscular Strain And Fatigue At Office Work
A Luttmann, H Kylian, K Schmidt, M Jaeger
Saturday, June 19, 2004, 11:30 AM - 1:00 PM, Occupational Medicine
- 495 - The Role Of The Primary Motor Cortex During Skill Acquisition In A Two Degree-Of-Freedom Movement Task
J Shemmell, J Tresilian, S Riek, R Carson
Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Motor Control
- 496 - Modulation Of Cortical And Spinal Excitability During Stretching Of The Rectus Femoris Muscle
L Tremblay, M Noël, M Nadeau, M Préfontaine, F Tremblay
Sunday, June 20, 2004, 11:30 AM - 1:00 PM, Physical Medicine & Rehabilitation
- 498 - Evaluation Of Masticatory Muscles In Deaf Subjects During Mastication
A Oliveira, T Chaves, D Bevilacqua-Grossi, S Regalo, M Vitti, V Teixeira
Monday, June 21, 2004, 3:30 PM - 4:30 PM, Temporomandibular Dysfunction
- 499 - Reliability And Validity Of A One-Leg Stance Protocol Using The Biodex Balance System
M Perron, L Hebert, B Mcfadyen
Sunday, June 20, 2004, 10:30 AM - 11:30 AM, Posture
- 500 - Effect Of Walking Aids On Muscle Activation In Stroke Patients
J Burke, H Hermens, C Erren-Wolters, A Nene
Saturday, June 19, 2004, 11:30 AM - 1:00 PM, Motion Analysis
- 501 - Lower Leg Activity Monitor For Deep Vein Thrombosis Applications
D O'Keeffe, K O'Donovan, G Lyons
Sunday, June 20, 2004, 11:30 AM - 1:00 PM, Rehabilitation Engineering

Abstract Schedules

502 - The Potential Of Dermal Fibroblasts As A Cell Source For The Repair Of Ligamentous Tissues
S Nicoll

Sunday, June 20, 2004, 3:00 PM - 4:30 PM, Whitaker Symposium

503 - A Telemetry System For Monitoring Physiological Parameters In Cyclists

W Veneziano, T Dantas, A Da Rocha, J Do Carmo, M De Andrade, F De Oliveira Nascimento, K Pires

Monday, June 21, 2004, 10:30 AM - 11:30 AM, Innovation in EMG

504 - Dynamic Stability And The Acl Injured Knee: Differential Neuromuscular Responses Reflect Functional Compensation (Implications For Bioengineering)

L Snyder-Mackler

Sunday, June 20, 2004, 3:00 PM - 4:30 PM, Whitaker Symposium

505 - Mechanomyographic Responses To Postactivation Potentiation In Triceps Surae Muscles

K Akataki, K Mita

Saturday, June 19, 2004, 10:30 AM - 11:30 AM, Mechanomyogram

506 - Strategies For Anterior Cruciate Ligament Tissue Engineering

M Spector, L Louie, H Hsu, C Guo, I Yannas

Sunday, June 20, 2004, 3:00 PM - 4:30 PM, Whitaker Symposium

507 - The Extremity Constraint Induced Therapy Evaluation (Excite) Trial For Upper Extremity Stroke Rehabilitation: Potential Linkages To Isek

S Wolf, A Butler, J Alberts

Monday, June 21, 2004, 2:30 PM - 3:30 PM, Keynote Lecture

508 - Smart Scaffolds For Stimulation Of Anterior Cruciate Ligament Healing

M Murray

Sunday, June 20, 2004, 3:00 PM - 4:30 PM, Whitaker Symposium