48th ISCoS
ANNUAL SCIENTIFIC MEETING

21-24 October 2009

Congress Center
Piazza Adua,1 - Firenze (Italy)

UNDER THE HIGH PATRONAGE OF
The President of the Italian Republic

PATRONAGES
University of Florence
Tuscany Region
Province of Florence
Municipality of Florence

IN COLLABORATION WITH
Società Medica Italiana Paraplegia (SoMIPar)
Azienda Ospedaliero-Universitaria Careggi
Agenzia Regionale per la cura dei Medullolesi
Unità Spinale Firenze
Neuro-Urologia Firenze
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<th>Wednesday 21/10/09</th>
<th>Thursday 22/10/09</th>
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<tbody>
<tr>
<td>07:00</td>
<td>Registration</td>
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<td>08:00</td>
<td>Functional Outcome Measures</td>
<td>Presentation Authorities</td>
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<tr>
<td></td>
<td>Susie Charlifue</td>
<td>Residential Lecture Waghi El-Masry</td>
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<tr>
<td>09:00</td>
<td>Autonomic evaluations: up to date</td>
<td>ISRT Lecture Peter Ellaway</td>
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<td>Andrei Krassioukov</td>
<td>Management of SCI in Children</td>
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<td>09:30</td>
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<td>10:30</td>
<td>Functional Outcome Measures</td>
<td>Hollister Symposium</td>
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<td></td>
<td>Susie Charlifue</td>
<td>Bladder Management and Sexuality</td>
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<tr>
<td>11:00</td>
<td>Spasticity: Measurement and Management</td>
<td>IPSCI-ISCOS P.M. von Groote</td>
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<td></td>
<td>Anand Nene</td>
<td>Symposium Neuropathic Pain Following SCI</td>
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<tr>
<td>11:30</td>
<td>Management of SCI in Children</td>
<td>Using the ICF in clinical practice and research</td>
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<tr>
<td>12:00</td>
<td>Coffee break</td>
<td>Free Papers Session 1</td>
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<tr>
<td>12:30</td>
<td>Lunch</td>
<td>Free Papers Session 2</td>
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<tr>
<td>13:00</td>
<td>Lunch</td>
<td>Free Papers Session 1</td>
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<td>13:30</td>
<td>Lunch</td>
<td>Free Papers Session 2</td>
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<td>14:00</td>
<td>Neurogenic detrusor overactivity in SCI: a journey from the bladder wall to the brain</td>
<td>Free Papers Session 3</td>
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<td>Multiprofessional Working Team</td>
<td>Predicting Outcomes</td>
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<td>CNOPUS</td>
<td>Free Papers Session 5</td>
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<tr>
<td>14:30</td>
<td>Management of SCI in Children</td>
<td>Free Papers Session 4</td>
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<tr>
<td></td>
<td>Lawrence Vogel</td>
<td>Free Papers Session 6</td>
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<tr>
<td>15:00</td>
<td>Management of secondary complications</td>
<td>Coffee break</td>
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<tr>
<td></td>
<td>Andrei Krassioukov</td>
<td>Coloplast Symposium</td>
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<tr>
<td>15:30</td>
<td>Management of SCI in Children</td>
<td>Free Papers Session 4</td>
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<tr>
<td>16:00</td>
<td>Coffee break</td>
<td>Neurogenic Bladder, Bowel Management and Quality of Life</td>
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<td>Free Papers Session 6</td>
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<td>17:00</td>
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<td>Free Papers Session 6</td>
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<tr>
<td>18:00</td>
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<td>Free Papers Session 6</td>
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<td>18:30</td>
<td>OPENING CEREMONY</td>
<td>SoMiPar Annual Meeting</td>
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<td>Piazza della Signoria (Palazzo Vecchio, Salone dei 500)</td>
<td>SoMiPar Annual Meeting</td>
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<tr>
<td>19:00</td>
<td>LUDWIG GUTTMANN LECTURE</td>
<td>Outcome Measures: Evolution in Clinical Trials</td>
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<td></td>
<td>Outcome Measures: Evolution in Clinical Trials</td>
<td>John F. Ditunno</td>
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<tr>
<td>19:30</td>
<td>WELCOME COCKTAIL</td>
<td>WELCOME COCKTAIL</td>
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<tr>
<td>20:00</td>
<td>MEETING</td>
<td>WORKSHOP</td>
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| **FRIDAY**  
| **23/10/09** |
| **SATURDAY**  
| **24/10/09** |
| **Registration** | **Registration** |
| Auditorium | Sala Verde 2° Floor | Sala Onice Ground Floor |
| Symposium Update on Experimental Pharmacological, Cell Transplant, Rehabilitation Interventions for the Treatment of SCI | Free Papers Session 7 | Free Papers Session 9 |
| Coffee break | Symposium Imaging the Complications | Prevention Symposium in collaboration with WING FOR LIFE |
| Symposium Astra Tech Symposium Philosophical counselling and Neurogenic Bladder Management | Free Papers Session 8 | Standards for Neurological Classification of SCI 2009 William P.Waring |
| Lunch | Coffee break | Prevention Symposium in collaboration with WING FOR LIFE |
| Opening Lecture Anand Nene | Opening Lecture Lawrence Vogel | Symposium KCI Pressure Ulcers |
| Spasticity Management | Spinal Cord Lesions in Children | New Treatments for Pressure Ulcers |
| Coffee break | | Closing ceremony Presentation 2010 |
| SoMIPar Guidelines | ISCOS Annual General Meeting | |
| **GALA DINNER** | | Fortezza da Basso- Arsenale |
| | | 20:00 |
Bladder and bowel management

Let’s have fun while we show you our new, exciting products for bladder and bowel management

Stop by the Coloplast booth to learn more about;

- SpeediCath Control – the new male catheter engineered for increased control
- SpeediBag Compact – the new discreet urine bag for women using SpeediCath Compact catheter
- Peristeen Anal Irrigation – the unique bowel management system for children and adults

Join our symposium
“Neurogenic Bladder and Bowel Management and Quality of Life” Thursday 22 October, 16:30 – 18:30, Palazzo dei Congressi
PROGRAMME
COMMITTEE & COUNCIL MEETING

TUESDAY
20 OCTOBER

COMMITTEE MEETINGS

<table>
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<tr>
<th>Time</th>
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<tr>
<td>07.00-18.00</td>
<td>Registration</td>
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<tr>
<td>08.00-10.30</td>
<td>Executive Committee</td>
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<td>10.30-11.00</td>
<td>Nominations Committee</td>
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<td>11.00-13.00</td>
<td>Scientific Committee</td>
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<td>13.00-14.00</td>
<td>Lunch</td>
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<tr>
<td>14.00-15.00</td>
<td>Prevention Committee</td>
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<tr>
<td>15.00-16.30</td>
<td>Editorial Board</td>
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<tr>
<td>16.30-18.00</td>
<td>Education Committee</td>
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LIMONAIA

WEDNESDAY
21 OCTOBER

COUNCIL MEETING

<table>
<thead>
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<tr>
<td>13.00-14.00</td>
<td>Council Lunch</td>
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<tr>
<td>14.00-17.00</td>
<td>Council Meeting</td>
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PALAFFARI Floor 4
**WEDNESDAY 21 OCTOBER**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>07.00</td>
<td><strong>Registration</strong></td>
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<tr>
<td>08.00-13.00</td>
<td><strong>WORKSHOP</strong>&lt;br&gt;New Developments in Functional Outcome Measures for People With SCI&lt;br&gt;<em>Chair: Susan Charlifue</em></td>
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<tr>
<td>08.00-08.15</td>
<td><strong>General Overview</strong>&lt;br&gt;W0&lt;br&gt;Introduction of the workshop faculty and a general overview of the ASIA/ISCoS/NIDRR&lt;br&gt;<em>Susan Charlifue</em></td>
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<tr>
<td>08.15-10.00</td>
<td><strong>Medical outcomes in daily clinical practice: review, recommendations and update from new research</strong>&lt;br&gt;W1&lt;br&gt;Use of the International Standards for the Neurological Classification of SCI&lt;br&gt;<em>Ralph Marino, Mary Jane Mulcahey, Armin Curt, Amie Jackson</em></td>
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<tr>
<td>10.00-10.30</td>
<td><strong>Coffee Break</strong></td>
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<tr>
<td>10.30-13.00</td>
<td><strong>Functional Outcomes in daily clinical practice: review, recommendations and update from new research</strong>&lt;br&gt;W2&lt;br&gt;Update on the Functional Independence Measure (FIM), the Quadriplegia Index of Function (QIF), and the Spinal Cord Independence Measure (SCIM III)&lt;br&gt;<em>Gordana Savic, Amiram Catz</em>&lt;br&gt;W3&lt;br&gt;The 5AML (Five Additional Mobility And Locomotor Items)&lt;br&gt;<em>Lisa Harvey</em>&lt;br&gt;W4&lt;br&gt;The VFM (Valutazione Funzionale Mielolesi)&lt;br&gt;<em>Mariangela Taricco</em>&lt;br&gt;W5&lt;br&gt;Update of walking capacity measures, the ten meter walking test (10MWT), Walking Index for Spinal Cord Injury (WISCI II) and the six minute walk test&lt;br&gt;<em>Gordana Savic, John F. Ditunno, Giorgio Scivoletto, Marco Molinari</em></td>
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</table>
### WEDNESDAY 21 OCTOBER

| W6  | Recommendations from the Functional Recovery Measures Work Group and updates from new research on functional outcome measures  
|     | Kim Anderson  
|     | Wrap-up, open discussion with audience  
|     | Amie Jackson, Eric Weerts, Ralph Marino  

| 13.00-14.00 | Lunch  

| 14.00-17.30 | WORKSHOP S.I.U.D.  
|            | Understanding neurogenic detrusor overactivity in S.C.I.: a journey from the bladder wall to the brain  
|            | Chair: Sandro Sandri - Enrico Finazzi Agrò  

| W7  | Pathophysiology of NDO: what happens in the central nervous system?  
|     | Antonella Giannantoni  
| W8  | Pathophysiology of NDO: what happens in the bladder wall?  
|     | William C. de Groat  
| W9  | Antimuscarinics and NDO  
|     | Enrico Finazzi Agrò  
| W10 | Vanilloids and NDO  
|     | Massimo Lazzeri  
|     | DISCUSSION  
| W11 | Botulinum Toxin A in Spinal Cord Injury Patients  
|     | Giulio Del Popolo  
| W12 | Neuromodulation in Neurogenic Detrusor Overactivity  
|     | Michele Spinelli  
| W13 | Surgery for NDO  
|     | Antonio Carbone  
|     | DISCUSSION  
|     | Take Home Messages  
|     | Francesco Pesce  


WEDNESDAY 21 OCTOBER

08.00-10.00 WORKSHOP
Autonomic evaluations of patients with SCI: up to date
Chair: Andrei Krassioukov

W14 Developing international standards for the assessment of autonomic dysfunctions following spinal cord injury. 
Andrei Krassioukov

W15 Documentation of Sexual Capabilities after SCI 
Marcalee Alexander Sipski

W16 Autonomic Standards for SCI Patients: Bladder Dysfunction: Up to Date 
Michael Kennelly

W17 Autonomic Data Sets 
Fin Biering-Sørensen

W18 Bowel dysfunctions 
Klaus Krogh

10.00-10.30 Coffee Break

10.30-13.00 WORKSHOP
Spasticity: measurement and management
Chair: Anand Nene

Introduction
Anand Nene

W19 Pathophysiology of Spastic Paresis - Rationale For Focal Interventions 
Jean-Michel Gracies

W20 Assessment of spasticity - A Review 
Gerlienke Voerman

W21 New Measurement Approaches 
Judith Fleuren

W22 Treatment algorithm for spasticity in adults 
Govert Snoek

W23 Spinal Spasticity; Patients Perspective 
Bakul M. Soni

Conclusions and closure of workshop 
Anand Nene
WEDNESDAY 21 OCTOBER

13.00-14.00  Lunch

14.00-15.30 WORKSHOP
The workings of the multi-professional team in SCI unit
Chair: Laura Valsecchi

W24  Introduction to Multi-professional Team in Spinal Unit and review of basilar rules for Working in Team
Laura Valsecchi

W25  The role of the Nurse serving on the Team. Organizational models for better quality assistance (Primary nursing, Case manager, Goal planning)
Paola Pignotti

W26  Schedule for Working in Multi-professional Team
Lucia Bambagioni

W27  The role of social-worker and psychologist in Spinal Unit
Gabriella Rossi

W28  Network among health-care and social practitioners working in Spinal Unit
Alberto Nobile

W29  Main objectives of Occupational Therapist in Multi-professional Team in Spinal Unit
Maru Marquez

15.30 – 17.30 WORKSHOP
Evidence based management of secondary complications after SCI: what, when, and how?
Chair: Andrei Krassioukov

W30  What do we know, and what don't we know, about blood pressure management in patients with spinal cord injury?
Andrei Krassioukov

W31  Evidence based management of spasticity secondary to spinal cord injury
Andrea F. Townson

W32  Sexual Health SCIRE Case Study
Stacy Elliott
WEDNESDAY 21 OCTOBER

08.00-17.00  WORKSHOP
Management Of SCI in Children
Chair: Lawrence Vogel

W33 Introduction/overview of pediatric SCI including medical complications/bowel
Lawrence Vogel

W34 Urological management of SCI in children and adolescents
Mario De Gennaro

W35 Epidemiology of pediatric SCI
Michael J. DeVivo

10.00-10.30  Coffee Break

W36 Pediatric Spinal Cord Injury in Europe
Marika Augutis

W37 Orthopaedic considerations in pediatric SCI (acute management of spine fractures, hips and spine disorders, HO, pathological fractures)
Randal R Betz

W38 Use of the International Standards for Neurological Classification of Spinal Cord Injury in Pediatrics
Mary Jane Mulcahey

W39 Rehabilitation of the child with a SCI (general principles, ambulation, mobility, SCI education)
Allison Graham

13.00-14.00  Lunch

W40 Innovative rehabilitative strategies (activity based rehab, body weight supported ambulation, and FES cycling, ambulation and UE function)
Randal R Betz

W41 Evaluation and Management of the Hand in Children with Tetraplegia
Mary Jane Mulcahey

W42 Discharge planning of pediatric ventilator dependent Spinal Cord Injury patients
Tiziana Redaelli

W43 Psychosocial/sexuality/transition and innovative recreation and leisure time programming for the child and adolescent with a SCI
Marika Augutis, Lawrence Vogel
THURSDAY 22 OCTOBER

07.00 Registration

08.00-08.30 PRESENTATION
48th Annual Scientific Meeting

08.30-09.15 PRESIDENTIAL LECTURE
L2 Past, present and future of ISCoS
"da piccola ghianda a grande quercia"
Wagih El Masry

09.15-10.00 ISRT LECTURE
L3 Physiological tools for monitoring outcome of interventive measures in spinal cord injury: a Clinical Initiative
Peter Ellaway

10.00-10.30 Coffee Break

10.30-11.45 SYMPOSIUM
Syponsored by Hollister
Bladder Management and Sexuality in Spinal Cord Injury
Chair: Manfred Stöhrer

20 min S1 The development and assessment of a vaprophilic catheter
Pierre Denys

20 min S2 Intermittent catheterization and urinary tract infection
David Castro-Diaz

20 min S3 Sexuality and Incontinence: Uncharted Urogenital Systems
Marcalee Alexander Sipski

Discussion

11.45-13.00 FREE PAPERS Session 1
Chair: Gordana Savic - Giorgio Scivoletto

15min O1 Assessing orgasm in men with spinal cord injury
Frédérique Courtois

15 min O2 Hollywood to Hospital
Allison Graham

15 min O3 SCIRehab: Documenting the Amount and Type of Interventions in Spinal Cord Injury Rehabilitation and their Variation among Patients
Gale Whiteneck
### Sensory options for a brief screening SCI examination
*William P. Waring*

### Conversion in ASIA impairment scale during the first year after traumatic Spinal Cord Injury
*Hubertus van Hedel*

#### Lunch

#### 14.00-16.30 PREDICTING OUTCOMES
*Chair: Mariangela Taricco - Amiram Catz*

##### 14.00-14.30 OPENING LECTURE
OL1  Functioning outcome measures, their combination, and the concept of ability realization, for the care and research of spinal cord injuries
*Amiram Catz*

##### 15 min O6 One year follow-up of mon-traumatic vs. poly-traumatic paraplegic patients - Is polytrauma a confounding factor of the functional outcome?
*Cornelia Putz*

##### 15 min O7 Is determination between complete and incomplete traumatic spinal cord injury clinically relevant?
*Joost J. van Middendorp*

##### 15 min O8 Comparable predictive value for walking ability of early tibialis motor evoked potentials and total motor score in incomplete cervical SCI
*Martin Schubert*

##### 15 min O9 Falls in ambulatory patients with spinal cord injury: validity and reliability of the Berg-Balance scale
*Markus Wirz*

##### 15 min O10 Responsiveness of dermatomal somatosensory evoked potentials (dSSEPs) and electrical perception thresholds (EPTs) in cervical spinal cord injury (SCI)
*Kip J. Kramer*

##### 15 min O11 Appraisals, coping and psychological outcome measures in a European sample
*Paul Kennedy*

#### 16.00-16.30 Coffee Break
THURSDAY 22 OCTOBER

16.30-18.30 SYMPOSIUM
Sponsored by Coloplast

Neurogenic Bladder and Bowel Management and Quality of Life
Chair: Fin Biering Sørensen

15 min S4 Generic introduction on neurogenic bladder problems and management
Jean-Jacques Wyndaele

15 min S5 Colorectal Dysfunction In Spinal Cord Injury: Pathophysiological And Clinical Considerations
Gabriele Bazzocchi

20 min S6 Quality of life instruments for people with disabilities
Susie Charlifue

20 min S7 Qualiveen: A QoL scale designed for spinal cord injured individuals
Jürgen Pannek

20 min S8 How bladder and bowel problems can influence the life of a disabled person
Michael Cogswell

Round Table and Discussion

18.30-19.30 SoMIPar GENERAL MEETING
### Thursday 22 October

#### 10.30-11.00

**ISCoS-IPSCI Presentation**  
L4  
Chair: Wagih El-Masry  
International Perspectives on Spinal Cord Injury (IPSCI)  
A collaborative ISCoS-WHO project  
Per Maximilian von Groote

#### 11.00-12.00

**Pain Symposium**  
Neuropathic pain following SCI: Classification, Mechanism and Treatment  
Chair: Nanna Brix Finnerup

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<tr>
<td>11.00</td>
<td>Classification and epidemiology of neuropathic pain following SCI</td>
<td>Nanna Brix Finnerup</td>
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<tr>
<td>12.00</td>
<td>Pathophysiological mechanisms of neuropathic pain after SCI</td>
<td>Julian Scott Taylor</td>
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<tr>
<td>13.00</td>
<td>Treatment of neuropathic pain following SCI</td>
<td>Cecilia Norrbrink</td>
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#### 12.00-12.45

**Free Papers Session 2**  
Chair: Nanna Brix Finnerup - Cecilia Norrbrink

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<tr>
<td>12.00</td>
<td>Screening tools for assessing and diagnosing neuropathic pain: can they be of use in the diagnostic work-up in individuals with spinal cord injury</td>
<td>Helene Hallstroem</td>
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<tr>
<td>13.00</td>
<td>Effects of intrathecal ziconotide and baclofen on pain and spasticity in subjects affected by spinal cord injury</td>
<td>Giulia Stampacchia</td>
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<td>14.00</td>
<td>Functional surgery for foot deformities in SCI patients</td>
<td>Maria Grazia Benedetti</td>
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#### 13.00-14.00

Lunch

#### 14.00-16.00

**Free Papers Session 3**  
Chair: Amie Jackson - Harvinder S. Chhabra

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<tr>
<td>14.00</td>
<td>What do people with spinal cord injury value most: priorities as a function of self efficacy</td>
<td>James Middleton</td>
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<td>15.00</td>
<td>Changes in need for assistance in long-standing spinal cord injury</td>
<td>Gordana Savic</td>
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<tr>
<td>16.00</td>
<td>Physical Activity Recall Assessment and Metabolic Syndrome symptoms in men with Spinal Cord Injury</td>
<td>Laurent Ballaz</td>
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### THURSDAY 22 OCTOBER

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<tr>
<td>15 min</td>
<td>O18</td>
<td>Training people with chronic spinal cord injuries to sit unsupported: a randomised controlled trial.</td>
<td>Claire Boswell-Ruys</td>
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<tr>
<td>15 min</td>
<td>O19</td>
<td>Modular rehabilitation: a client-centred task-oriented training to improve arm-hand-skilled-performance in cervical spinal cord injured persons</td>
<td>Annemie If Spooren</td>
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<tr>
<td>15 min</td>
<td>O20</td>
<td>Efficacy of balance rehabilitation in spinal cord lesion patients</td>
<td>Valentina Di Donna</td>
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<tr>
<td>15 min</td>
<td>O21</td>
<td>Are passive movements effective for the treatment and prevention of contractures? A randomised controlled trial</td>
<td>Lisa Harvey</td>
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<tr>
<td>15 min</td>
<td>O22</td>
<td>Effect of intensive exercise therapy with and without gravity compensation on upper extremity function in subjects with chronic cervical SCI</td>
<td>Mirjam Kouwenhoven</td>
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**16.00-16.30**  
**Coffee Break**

**16.30-18.30**  
**FREE PAPERS Session 4**  
*Chair: Claes Hultling - William Donovan*

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<tr>
<td>15 min</td>
<td>O23</td>
<td>Development of international data sets for activities and participation in people with SCI</td>
<td>Marcel Post</td>
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<tr>
<td>15 min</td>
<td>O24</td>
<td>It takes two to tango revisited: the meaning of integration and participation for people with SCI in Europe - a comparison of Switzerland and Norway</td>
<td>Jan D. Reinhardt</td>
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<td>15 min</td>
<td>O25</td>
<td>Comparison of the demographic characteristics and outcomes for patients admitted into specialist and non-specialist SCI rehabilitation units</td>
<td>Peter New</td>
</tr>
<tr>
<td>15 min</td>
<td>O26</td>
<td>Predicting individual patterns of bone loss from baseline bone scans taken in the early stages of spinal cord injury</td>
<td>Sylvie Coupaud</td>
</tr>
<tr>
<td>15 min</td>
<td>O27</td>
<td>Weight matter: physical and psychosocial health of persons with spinal cord injury in relation to body mass index</td>
<td>Yuying Chen</td>
</tr>
<tr>
<td>15 min</td>
<td>O28</td>
<td>Severe degeneration of peripheral nerves after SCI: a European multicenter study in 345 patients.</td>
<td>Hendrik Van de Meent</td>
</tr>
<tr>
<td>15 min</td>
<td>O29</td>
<td>Critical illness polyneuromyopathy in patients with spinal cord injury.</td>
<td>Giuseppe De Scisciolo</td>
</tr>
<tr>
<td>15 min</td>
<td>O30</td>
<td>Dysphagia in spinal cord injury patients</td>
<td>Margarita Vallès</td>
</tr>
</tbody>
</table>
THURSDAY 22 OCTOBER

10.30-13.00 WORKSHOP

Using the ICF (International Classification of Functioning, Disability and Health) in clinical practice and research
Chair: Inge Eriks-Hoogland

15 min W45 Using the ICF (International Classification of Functioning, Disability and Health) in clinical practice and research
Inge Eriks-Hoogland, Regula Spreyermann, Alexandra Rauch

13.00-14.00 Lunch

14.00-16.00 FREE PAPERS Session 5
Chair: Stella Engel - Mauro Menarini

15 min O31 Expectations about work: young adult’s experiences of work after spinal cord injury
Lisa Bergmark

15 min O32 Level of stress: A study on caregivers of traumatic tetraplegic patients with Spinal Cord Injury in a rehabilitation centre in Bangladesh
Shariful Islam

15 min O33 Sexual dysfunction in Cauda Equina Syndrome
Amrithlal A Mascarenhas

15 min O34 Sexual-urological dysfunction and psychological distress in female patients with spinal cord lesions (SCL)
Lina Di Lucente

15 min O35 The Stockholm Thessaloniki Acute Traumatic Spinal Cord Injury Study (STATSCIS): Conditions and outcomes at one year post-trauma
Anestis Divanoglou

15 min O36 Annual follow up after SCI with a new ICF-based tool
Regula Spreyermann

15 min O37 Long term follow up (mean 24 years) of post-traumatic lumbar syringomyelia
Niknam Hussain

15 min O38 Physical therapy, occupational therapy and sports therapy in 3 Dutch SCI rehabilitation centers.
Sacha van Langeveld
### THURSDAY 22 OCTOBER

<table>
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<th>Time</th>
<th>Session</th>
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<th>Speaker</th>
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<tbody>
<tr>
<td>16.00-16.30</td>
<td>Coffee Break</td>
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<tr>
<td>16.30-18.15</td>
<td><strong>FREE PAPERS Session 6</strong></td>
<td><em>Chair: Shinsuke Katoh - Giorgio Scivoletto</em></td>
<td></td>
</tr>
<tr>
<td>15 min</td>
<td>O39</td>
<td>Traumatic and non traumatic spinal cord lesions: comparison of</td>
<td>Giorgio Scivoletto</td>
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<tr>
<td></td>
<td></td>
<td>neurological and functional outcomes</td>
<td></td>
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<tr>
<td>15 min</td>
<td>O40</td>
<td>Motor unit number estimation in cervical or thoracic SCI persons and</td>
<td>Hua Guan</td>
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<td>rats</td>
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<tr>
<td>15 min</td>
<td>O41</td>
<td>Experimental spinal cord repair by CNS PNS connection</td>
<td>Giorgio Brunelli</td>
</tr>
<tr>
<td>15 min</td>
<td>O42</td>
<td>New Insights into the Pathophysiology of Cervical Spondylotic</td>
<td>Erin MacMillan</td>
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<td>Myelopathy from MRI Measurements of Cerebrospinal Fluid Flow and</td>
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<td></td>
<td></td>
<td>Spinal Cord Motion</td>
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<tr>
<td>15 min</td>
<td>O43</td>
<td>Minimally invasive expansive laminoplasty</td>
<td>Yasunobu Itoh</td>
</tr>
<tr>
<td>15 min</td>
<td>O44</td>
<td>The influence of the neurological level of injury in bone’s mineral</td>
<td>Yannis Dionyssiotis</td>
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<td></td>
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<td>content and mechanical properties, lean mass and fat mass in</td>
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<td>paraplegia</td>
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<tr>
<td>15 min</td>
<td>O45</td>
<td>Clinical trial of Myoelectrically controlled FES (MeCFES) for assisting</td>
<td>Davide Dalla Costa</td>
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<td></td>
<td></td>
<td>hand function in subjects with tetraplegia –A study of usersatisfaction</td>
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</table>
### SYMPOSIUM

**Update on experimental pharmacological, cell transplant and rehabilitation interventions for the treatment of spinal cord injury**

*Chairs: Sergio Aito, John Steeves*

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<th>Presenter</th>
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</thead>
<tbody>
<tr>
<td>08:00</td>
<td>S12</td>
<td>General guidelines for the conduct of SCI clinical trials and factors influencing the interpretation of human study data</td>
<td>John Steeves</td>
</tr>
<tr>
<td>08:00</td>
<td>S13</td>
<td>Clinical trials for spinal cord injuries</td>
<td>Wise Young</td>
</tr>
<tr>
<td>08:00</td>
<td>S14</td>
<td>Stem cell transplants after SCI: What is the preclinical evidence for benefit and what are the sources of transplant materials?</td>
<td>Alain Privat</td>
</tr>
</tbody>
</table>

### Coffee Break

#### 10.00-10.30

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Topic</th>
<th>Presenter</th>
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</thead>
<tbody>
<tr>
<td>10:00</td>
<td>S15</td>
<td>Active rehabilitation strategies to promote neural plasticity and functional recovery after SCI</td>
<td>Hubertus van Hedel</td>
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<tr>
<td>10:00</td>
<td></td>
<td>Panel discussion with audience</td>
<td>Sergio Aito</td>
</tr>
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### SYMPOSIUM

**Sponsored by Astra Tech**

**Philosophical counselling and Neurogenic Bladder Management - What’s next?**

*Chair: Giulio Del Popolo*

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<th>Topic</th>
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<tbody>
<tr>
<td>11:30</td>
<td>S16</td>
<td>History of bladder catheter</td>
<td>Francesco Pesce</td>
</tr>
<tr>
<td>11:30</td>
<td>S17</td>
<td>How to optimise the outcome of CIC?</td>
<td>Jean-Jacques Wyndaele</td>
</tr>
<tr>
<td>11:30</td>
<td>S18</td>
<td>Bladder and mind - Even Wittgenstein needed to pee</td>
<td>Claes Hultling</td>
</tr>
<tr>
<td>11:30</td>
<td>S19</td>
<td>Understanding the neurogenic bladder</td>
<td>William C. de Groat</td>
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<tr>
<td>11:30</td>
<td></td>
<td>Plenary Session: Evolution of bladder management</td>
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</table>
# FRIDAY 23 OCTOBER

## 13.30-14.30  
Lunch

## 14.30-16.30  
**SPASTICITY MANAGEMENT**
*Chair: Anand Nene - Giuseppe De Scisciolo*

### 14.30-15.00  
**OPENING LECTURE**

**OL2**  
Spasticity – What’s the Catch?  
*Anand Nene*

15 min  
**O46**  
Inertial sensing in pendulum test of spasticity  
*Rajmond Šavrin*

15 min  
**O47**  
Chronic Pudendal Nerve Stimulation in incomplete spinal cord injury is able to reduce lower limb spasticity while treating neurogenic detrusor overact  
*Silvia Malaguti*

15 min  
**O48**  
Reduction of spasticity with repetitive transcranial magnetic stimulation in patients with incomplete spinal cord injury  
*Hatice Kumru*

15 min  
**O49**  
Intrinsic hand stiffness - underdiagnosed phenomenon in tetraplegia and spasticity  
*Carina Reinholdt*

15 min  
**O50**  
Improved activity performance after surgical treatment of spasticity in the hand  
*Johanna Wangdell*

15 min  
**O51**  
Identification of motor point for neuro-block in spasticity management  
*Jianan Li*

## 16.30-17.00  
Coffee Break

## 17.00-17.30  
**SoMIPar LECTURE**

**L5**  
Italian Multidisciplinary Guidelines for the Acute Management of Spinal Cord Injury  
*Jacopo Bonavita*

## 17.30-18.30  
**ISCoS ANNUAL GENERAL MEETING**
### FRIDAY 23 OCTOBER

#### 08.15-10.00
**FREE PAPERS Session 7**  
*Chair: Cristina Pagliacci - Fazlul Hoque*

<table>
<thead>
<tr>
<th>Time</th>
<th>Number</th>
<th>Title</th>
<th>Presenter</th>
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<tbody>
<tr>
<td>30 min</td>
<td>O52</td>
<td>Orthostatic hypotension among elite wheelchair athletes</td>
<td>David Mikhail</td>
</tr>
<tr>
<td>15 min</td>
<td>O53</td>
<td>A new approach to improve fecal occult blood test (fobt) for colonic cancer screening in patients with sci</td>
<td>Gabriele Bazzocchi</td>
</tr>
<tr>
<td>15 min</td>
<td>O54</td>
<td>A prospective examination of the menopause transition in women with sci</td>
<td>Claire Kalpakjian</td>
</tr>
<tr>
<td>15 min</td>
<td>O55</td>
<td>Computational 3d modeling of cerebrospinal fluid dynamics for simulation of drug delivery and distribution</td>
<td>Luca A. Finelli</td>
</tr>
<tr>
<td>15 min</td>
<td>O56</td>
<td>The effect of radiotherapy on the prophylaxis of heterotopic ossification in patients with spinal cord injury</td>
<td>Julia Maria D'Andréa Greve</td>
</tr>
<tr>
<td>15 min</td>
<td>O57</td>
<td>Cortical Plasticity: effects of a BWSTT and FES training in spinal cord injured patients.</td>
<td>Emiliana Bizzarini</td>
</tr>
<tr>
<td>15 min</td>
<td>O58</td>
<td>A Decade of Experience with Laparoscopic Intramuscular Diaphragm Pacing at a Single Institution: Replacing Ventilators in Tetraplegics</td>
<td>Raymond Onders</td>
</tr>
</tbody>
</table>

#### 11.30-13.30
**FREE PAPERS Session 8**  
*Chair: Susie Charlifue - Michael Craggs*

<table>
<thead>
<tr>
<th>Time</th>
<th>Number</th>
<th>Title</th>
<th>Presenter</th>
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</thead>
<tbody>
<tr>
<td>15 min</td>
<td>O59</td>
<td>High frequency spinal cord stimulation (hf-scs): a new method of inspiratory muscle activation in an animal model of spinal cord injury</td>
<td>Anthony F. DiMarco</td>
</tr>
<tr>
<td>15 min</td>
<td>O60</td>
<td>The effect of motor imaginary on cortical activation during robot assisted gait in normal subject</td>
<td>Futoshi Wada</td>
</tr>
<tr>
<td>15 min</td>
<td>O61</td>
<td>Visual and motor related activity in sci and normal subjects: a magnetoencephalography study of plastic changes in the brain.</td>
<td>Roger Bodley</td>
</tr>
</tbody>
</table>
### FRIDAY 23 OCTOBER

<table>
<thead>
<tr>
<th>Time</th>
<th>Duration</th>
<th>Session</th>
<th>Title</th>
<th>Speaker</th>
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</thead>
<tbody>
<tr>
<td>15 min</td>
<td></td>
<td>O62</td>
<td>Autologous incubated macrophage treatment in complete spinal cord injury: results of the multicenter trial</td>
<td>Daniel Lammertse</td>
</tr>
<tr>
<td>15 min</td>
<td></td>
<td>O63</td>
<td>Development of criteria for unexpected neurological change in a phase 1 sub-acute, complete spinal cord injury study</td>
<td>Linda Jones</td>
</tr>
<tr>
<td>15 min</td>
<td></td>
<td>O64</td>
<td>Therapeutic anti-nogo-a antibodies in acute spinal cord injury - first information on safety and pharmacokinetics</td>
<td>Rüdiger Rupp</td>
</tr>
<tr>
<td>15 min</td>
<td></td>
<td>O65</td>
<td>Preclinical and phase 1 development of oligodendrocyte progenitor cells derived from human embryonic stem cells for the treatment of spinal cord injury</td>
<td>Edward Wirth</td>
</tr>
<tr>
<td>15 min</td>
<td></td>
<td>O66</td>
<td>Resistance to the physiological activities of fibroblast growth factor 23 (FGF23) following spinal cord injury (SCI)</td>
<td>Ruth Marshall</td>
</tr>
</tbody>
</table>

### 13.30-14.30 Lunch

### 14.30-16.30 SPINAL CORD LESIONS IN CHILDREN

**Chair: Tiziana Radaelli - Lawrence Vogel**

### 14.30-15.00 OPENING LECTURE

**OL3** Participation and quality of life among youth with spinal cord injury | Lawrence Vogel |

<table>
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<tr>
<th>Time</th>
<th>Duration</th>
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<th>Title</th>
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<tbody>
<tr>
<td>15 min</td>
<td></td>
<td>O67</td>
<td>Comparison of child and parent reported activity performance and participation in children and youth with spinal cord injury</td>
<td>Stephen M. Haley</td>
</tr>
<tr>
<td>15 min</td>
<td></td>
<td>O68</td>
<td>International standards for neurological classification of spinal cord injury: utility of motor, sensory and anorectal exams with children</td>
<td>Mary Jane Mulcahey</td>
</tr>
<tr>
<td>15 min</td>
<td></td>
<td>O69</td>
<td>A review of the musculoskeletal, urologic and pulmonary complications in 118 patients with pediatric spinal cord injury</td>
<td>Thomas Meiners</td>
</tr>
<tr>
<td>15 min</td>
<td></td>
<td>O70</td>
<td>Spinal tumours in childhood. A single institution experience of ninety-seven cases</td>
<td>Barbara Spacca</td>
</tr>
<tr>
<td>15 min</td>
<td></td>
<td>O71</td>
<td>Scoliosis development following childhood spinal cord injury</td>
<td>Ebba Bergström</td>
</tr>
<tr>
<td>15 min</td>
<td></td>
<td>O72</td>
<td>Ischemic spinal cord lesion in children</td>
<td>Maria Letizia Salsano</td>
</tr>
</tbody>
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### FRIDAY 23 OCTOBER

**08.00-10.00**

**FREE PAPERS Session 9**  
*Chair: Hans Frankel - Martin McClelland*

<table>
<thead>
<tr>
<th>Time</th>
<th>Paper</th>
<th>Title</th>
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</table>
| 15 min | O73 | Threshold currents at the electrode-nerve interface of phrenic nerve stimulators are stable during patient survival time  
*Gerhard Baer* |
| 15 min | O74 | Respiratory dysfunction of spinal cord injury (SCI) patients. Optoelectronic plethysmography (OEP) evaluation  
*Maria Luisa Lapenna* |
| 15 min | O75 | Spirometric values importance in a decannulation protocol for quadriplegic tracheostomized patients  
*Libero Bianchi* |
| 15 min | O76 | Effects of lower thoracic spinal cord stimulation (SCS) on expiratory muscle function in subjects with spinal cord injury (SCI)  
*Krzysztof E. Kowalski* |
| 15 min | O77 | Intrathecal baclophen may improve breathing as well as walking  
*Ann-Katrin Karlsson* |
| 15 min | O78 | Quantification of spasticity in incomplete SCI subjects during a pedaling movement and influence of training with FES  
*Margit Gföhler* |
| 15 min | O79 | Extracorporeal shockwave therapy (ESWT) for the spasticity management in children with cerebral palsy – preliminary results  
*Gelu Onose* |
| 15 min | O80 | Treatment of HIP ARTHRITIS in SCI patients  
*Joanna Rome-Saulnier* |

**10.00-10.30**  
**Coffee Break**

**10.30-12.00**

**SYMPOSIUM**  
*Imaging the Complications of SCI: What Can XXI Century Radiology Offer?*  
*Chair: Roger Bodley*

*Introduction*  
*Roger Bodley*

S20 Imaging the Injured Cord in the Sub-Acute and Chronic Phase  
*Richard Hughes*

S21 Imaging the Bony Spine in the Late Phase Post Injury  
*Rowena Warwick*
S22 The role of Interventional Radiology in the management of patients with spinal cord injury
Wei Chuen Liong

S23 Imaging of the Renal Tract in Spinal Cord Injury
Tom Meagher

S24 SCI including respiratory, Bowel and Cardi ovascular Issues
Roger Bodley

S25 Clinical Perspectives on Imaging Strategies in Chronic Spinal Injury
Ali Jamous

General Discussion - Questions

12.00-13.30 WORKSHOP
Exporting research and best practices to the bedside: standards for the neurological classification of spine cord injuries - 2009
Chair: William P. Waring

W46 Understand how the International Standards Training e-Learning Program (InSTeP) performs

- Understand recent revisions in the International Standards for the Neurological Classification of Spinal Cord Injuries utilizing the revised InSTeP program

- Understand the controversies with revising the AIS classification definitions and the use of non key muscle function

- Understand the potential and limitations of a web based training course including the current pyschometrics for InSTeP and proposed research for InSTeP

- Understand the proposed additions to InSTeP for examination of children (WeeSTeP) and the Autonomic Standards (ASTeP)

- Understand the proposed process for future review and revision off the international standards an in step

William P. Waring, Andrei Krassioukov, Ronald K. Reeves, Ralph J. Marino, Stephen Burns

13.30-14.30 Lunch
FRIDAY 23 OCTOBER

14.30-16.30  WORKSHOP
Therapeutic Intervention of Psychologists in Spinal Unit: Coping Effectiveness Training
Chair: Paul Kennedy

- Introduction  
  Silvia Lapini

- W47 Coping effectiveness training in SCI  
  Paul Kennedy

- W48 Discussion on experiences in psychoeducational group activity  
  Marina Manera

- W49 The experience of SU Niguarda  
  Gabriella Rossi

- W50 The experience of the psychological treatment with the groups at the Montecatone Rehabilitation Institute  
  Daniela Rossetti
## SATURDAY 24 OCTOBER

### 08.00-10.00  **URINARY INCONTINENCE**  
*Chair: Manfred Stöhrer - Sauro Biscotto*

#### 08.00-08.30  **OPENING LECTURE**  
OL4  
Neurogenic Bladder and Urinary Incontinence  
*Manfred Stöhrer*

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<tbody>
<tr>
<td>30 min</td>
<td>O81</td>
<td>A technically reduced urodynamic measuring method compared with a conventional urodynamic study</td>
<td><em>Christian Niedworok</em></td>
</tr>
<tr>
<td>15 min</td>
<td>O82</td>
<td>Effective treatment of neurogenic detrusor overactivity (NDO) by combined low dosed antimuscarinics</td>
<td><em>Michele Spinelli</em></td>
</tr>
<tr>
<td>15 min</td>
<td>O83</td>
<td>A novel wearable device for controlling urinary incontinence by conditional neuromodulation</td>
<td><em>Michael Craggs</em></td>
</tr>
<tr>
<td>15 min</td>
<td>O84</td>
<td>Continent cutaneous urinary diversion and neurogenic bladder. About 21 patients.</td>
<td><em>Brigitte Perrouin-Verbe</em></td>
</tr>
<tr>
<td>15 min</td>
<td>O85</td>
<td>Sacral neuromodulation in children with neurogenic bladder</td>
<td><em>Giovanni Mosiello</em></td>
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</table>

#### 10:00-10:30  **Coffee Break**

### 10:30-11:00  **SYMPOSIUM**  
*Sponsored by KCI*

**Pressure Ulcers in SCI: From Prevention to Advanced Treatment**  
*Chair: Claudio Pilati*

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<tbody>
<tr>
<td>S26</td>
<td>Use of Special surfaces in the prevention of pressure ulcers</td>
<td><em>Andrea Cavicchioli</em></td>
</tr>
<tr>
<td>S27</td>
<td>Histological evidences of the effectiveness of negative pressure therapy</td>
<td><em>Franco Bassetto</em></td>
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# NEW TREATMENTS FOR PRESSURE ULCERS

**Chair:** Maria Julia D'Andrea Greve - Manlio Ottonello

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<tbody>
<tr>
<td>15 min</td>
<td>Application of Skin Traction for the Treatment of Grade-IV Pressure Sore: A Clinical Report of 160 Cases</td>
<td>Xi Chen</td>
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<tr>
<td>15 min</td>
<td>New treatments for pressure ulcers - Don’t forget the maggot therapy</td>
<td>Yorck B. Kalke</td>
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<tr>
<td>15 min</td>
<td>The joint venture between a dermal substitute and platelet growth factors: a novel approach to cutaneous ulcer repair</td>
<td>Giulia Lo Russo</td>
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<tr>
<td>15 min</td>
<td>Electrical stimulation-Induced Gluteal and Hamstring Muscle Activation Can Reduce Sitting Pressure In individuals With Spinal Cord injury</td>
<td>Christof A.J. Smit</td>
</tr>
<tr>
<td>15 min</td>
<td>Evaluation of a new treatment and rehabilitation programme for patients with spinal cord injury and pressure sores</td>
<td>Anders Ljung</td>
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<tr>
<td>15 min</td>
<td>VAC Therapy: Critical analysis between clinical and Histological results</td>
<td>Manlio Ottonello</td>
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</table>
## SATURDAY 24 OCTOBER

### 08.00 - 12.30 SYMPOSIUM

**Overview of Prevention of SCI due to Road Traffic Crashes**
*Michale Fitzharris*

**Biomechanics of the Pediatric Spine**
*Marcus Pandy*

**Spinal Cord Injury Epidemiology: In which cases a prevention device could be used**
*Michael J. Devivo*

**Spinal Cord Injury incidence in Europe**
*Rupert Kisser*

**Spinal Cord Injury incidence in Sport**
*Andrei Krassioukov*

**Neurosurgical perspective on prevention: what are the spinal cord weak points?**
*Florian Roser*

**Biomechanics of SCI and example of a marketable device: Leatt Brace**
*Cornel de Jongh*

### 10:00 - 10:30 Coffee Break

### 10 min S35 Report of Sub-Committee on Global Mapping of SCI
*Peter Wing*

### 20 min S36 YIPES! An education and prevention program for young people: Youth Injury Prevention Education @ Shepherd.org
*Herndon Murray*

### 20 min S37 Report of Sub-Committee on Prevention of SCI in Water Activities. Diving Injuries: Are they really preventable? A Sisyphean challenge?
*Herndon Murray*

### 10 min S38 Catastrophic rugby injuries in Italy: Prevention measures that are taken and their success
*Vincenzo Ieracitano, Claudio Pilati*
SATURDAY 24 OCTOBER

20 min  S39  Prevention of SCI due to high falls
         Tancredi Moscato, Mario Carletti

20 min  S40  Prevention of SCI due to low falls in older fallers
         Clemens Becker

20 min  S41  Natural disasters and building construction. The Sichuan Earthquake
         Eric Weerts

12.30 - 13.30  CLOSING CEREMONY

BEST PAPER AND BEST POSTER AWARD

PRESENTATION 2010