

## Thursday 31st, July, 2008 - cont.

<b>Session 7</b>	
Chair	novel <b>Finalists Award II</b> McPoil T, Department of Physical Therapy and Athletic Training, University of Arizona, USA
11:30 - 11:55	Dynamic plantar pressure parameters predictive of static arch height index <i>Teyhen D S, Stoltenberg B E, Collinsworth K M, Giesel C L, Williams D G, Kardouni C H, Molloy J M, Goffar S L, Christie D S, McPoil T</i>
11:55 - 12:20	Plantar pressure distribution in gait is not affected by targeted reduced plantar cutaneous sensation <i>Höhne A, Stark C, Brüggemann G</i>
12:20 - 12:45	Bulk compressive properties on the heel fat pad during walking: a pilot investigation in plantar heel pain <i>Wearing S C, Smeathers J E, Stevenson N J, Urry S R, Yates B</i>
12:45 - 14:00	Lunch & Poster
<b>Session 8</b>	
Chair	<b>Technology</b> Rosenbaum D, Movement Analysis Laboratory, University of Muenster, Germany
14:00 - 14:12	Assessing gait asymmetries using pedobarographic statistical parametric mapping <i>Pataky T C, Parker D, Goulermas J Y, Crompton R H</i>
14:12 - 14:24	Comparison of parameters produced by emed and pedar pressure measuring systems <i>Maliotou D, Theodorou D, Tsvetkova T</i>
14:24 - 14:36	The feasibility of intra-operative plantar pressure assessment <i>Ellis S, Cheng R, Aibinder W, Lipman J, Garrison G, Backus S, Hillstrom H, Deland J</i>
14:36 - 14:48	Combination of morphology and plantar pressure distribution in a single graphical presentation for clinical application <i>Hömme A, Hennig E M</i>
14:48 - 15:00	Dynamic plantar pressure parameters predictive of foot posture <i>Teyhen D S, Stoltenberg B E, Eckard T E, Doyle P M, Boland D M, Feldtmann J J, Molloy J M, Goffar S L, Christie D S, McPoil T</i>
<b>Keynote lecture 4</b>	
15:00 - 15:50	Woodburn J., Foot related impairment and disability in rheumatoid arthritis: plantar pressure measurement and gait analysis
15:50 - 16:20	Coffee break
<b>Session 9</b>	
Chair	<b>Rehabilitation</b> Bochdansky T, University Teaching Hospital, Feldkirch, Austria
16:20 - 16:32	Analysis of plantar pressures in a post-surgical walking boot with and without a contralateral limb length adjustment device <i>Song J, McDonald P, Kihm C, Heilman B, Zoltick E, Hillstrom H</i>
16:32 - 16:44	The efficacy of a removable vacuum cast replacement system in reducing plantar forefoot pressures in diabetic patients <i>Wajjman R, Arts M L J, Manning E A, Bus S A</i>
16:44 - 16:56	Plantar pressure results following non-operative treatment for clubfoot <i>Jeanes K A, Karol L A</i>
16:56 - 17:08	Vacuum cushioned removable cast walkers reduce foot loading in patients with diabetes mellitus <i>Nagel A, Rosenbaum D</i>
17:08 - 17:20	The effect of vibration on bone-cement interface in cemented hip arthroplasty to withstand load transferred between the bone and cement <i>Talih S, Drew T, Abboud R J</i>
17:20 - 17:30	Closing remarks: Mr Peter Seitz & Professor Rami J Abboud
<b>Evening event</b>	
19:00	Bus pick up from hotels Apex, Hilton, Travelodge and West Park for Invercarse Hotel
19:45 - 00:00	Conference dinner at Invercarse Hotel: Evening organized by Mr Douglas who will give the Selkirk Address at the beginning and address the Haggis. Additionally included a small presentation by Mr Brian Wilton, Director of the Scottish Tartan Authority, on Tartan and to round off the evening a Ceilidh (Scottish Dancing)
00:00	Bus depart from Invercarse Hotel for hotels Apex, Hilton, Travelodge and West Park



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## Meeting Overview

### Monday 28th, July, 2008

**Site: Institute of Motion Analysis & Research (IMAR)**  
novel workshops from 13:00

#### Site: Bonar Hall

Registration from 18:00  
Early Bird get together (wine + buffet) 18:00

### Tuesday 29th, July, 2008

**Site: Darcy Lecture Theatre and Bonar Hall**

Registration, coffee and pastries from 08:00  
Scientific Presentations from 09:00

#### Site: RRS Discovery Ship

Buffet dinner: civic reception from 18:30  
Tour of RRS Discovery ship  
Talk by Professor Charles McKean, Professor of history at the University of Dundee

### Wednesday 30th, July, 2008

**Site: Blair Castle, Edradour Distillery, Loch Morlich**

Activity day: sightseeing or sport activity from 09:00  
Dinner and evening event in the Cairngorm Mountain from 18:00

### Thursday 31st, July, 2008

**Site: Darcy Lecture Theatre and Bonar Hall**

Registration from 08:30  
Scientific Presentations from 09:00

#### Site: Invercarse Hotel

Scottish-theme Banquet dinner and Ceilidh from 19:45  
novel award ceremony

## Venue

Workshops  
Institute of Motion Analysis & Research  
University Dept. of Orthopaedic & Trauma Surgery  
TORT Centre at Ninewells Hospital & Medical School  
Dundee DD1 9SY  
Tel: +44 (0)1382-496276  
e-mail:imar@dundee.ac.uk

Conference / Presentations  
Darcy Lecture Theatre and Bonar Hall  
Tower Building, University of Dundee  
Dundee DD1 4HN

*Note: The University Campus and Ninewells Hospital are "smoking free" zones (as is all public places in Scotland)*

## Sponsor

Dundee & Angus Convention Bureau  
Lord Provost, Dundee City Council  
Institute of Motion Analysis & Research (IMAR)

www.novel.de

2008  
**ESM**

## Program



art in science



Dundee, Scotland, July 28 to 31, 2008

www.ESM2008.com

# ESM2008 Presentations

## Monday 28th, July, 2008 [www.ESM2008.com](http://www.ESM2008.com)

### Welcome to ESM 2008

13:00 - 17:15	novel Workshops (75 minutes each) at Institute of Motion Analysis & Research The workshops are consecutive sessions to provide attendees with the opportunity to participate in all three workshops.
13:00	Workshop I: Basics of Pressure Distribution Measurement and Pedography
14:30	Workshop II: Software for the evaluation of pedographic data in the daily clinical routine and in science
16:00	Workshop III: Implementation of Pedography in existing gait labs
18:00 - 20:00	Early Bird registration and wine/buffet reception, Bonar Hall, University of Dundee (transportation from IMAR to Bonar Hall after Workshop III, bus depart 17:45)

## Tuesday 29th, July, 2008 [www.ESM2008.com](http://www.ESM2008.com)

8:00 - 9:00	Registration (coffee & pastry) at Bonar Hall
9:00 - 9:10	Welcome, Sir Alan Langland - Principal & Vice Chancellor Professor Rami Abboud - Conference Chair
<b>Session 1</b> Chair	<b>Motion</b> Abboud R J, Institute of Motion Analysis & Research, University of Dundee, Scotland, UK
<b>Keynote lecture 1</b> 9:10 - 10:00	Black S. <i>The changing face of anatomy and its role in research and service provision</i>
10:00 - 10:12	An integrated approach to the assessment of diabetic patients gait - uncovering the pivotal role of muscle dysfunction in foot ulceration <i>Rajput B, Arnold G, Gibbs S, Wang W, Cochrane L, Leese G, Abboud R J</i>
10:12 - 10:24	Correlation between plantar pressure and Oxford foot model kinematics <i>Stebbins J, Giacomozzi C, Theologis T</i>
10:24 - 10:36	Relationship between ankle mobility and plantar pressure distribution during gait in diabetic neuropathic patients <i>Hamamoto A, Onodera A, Gomes A, Sacco I</i>
10:36 - 10:48	Changes in plantar contact area and gait after chemodeneration in acquired brain injury <i>Nolan K J, Savalia K K, Yarossi M, Elovic E P</i>
10:48 - 11:00	Can reductions in bra band pressure increase comfort during exercise in lumpectomy patients? <i>Gho S A, Steele J R, Munro B J</i>
11:00 - 11:30	Coffee break

### **Session 2** novel **Finalists Award I** Chair

11:30 - 11:55	From "first" to "last" steps in life - pressure patterns in three generations <i>Bosch K, Nagel A, Weigend L, Rosenbaum D</i>
11:55 - 12:20	Changes in lower extremity loading during cutting movements at controlled slipping velocities and amplitudes <i>Kersting U G, Bulsink V E</i>
12:20 - 12:45	Higher plantar pressures and foot pain: are they contributing to falls in older patients? <i>Mickle K J, Munro B J, Lord S R, Menz H B, Steele J R</i>
12:45 - 14:00	Lunch break

### **Session 3** **Disease** Chair

14:00 - 14:12	Pressure pattern alterations and foot deformities in diabetes and rheumatoid arthritis <i>Martelli F, Giacomozzi C, D'Ambrogio E, Uccioli L, Nagel A, Rosenbaum D</i>
14:12 - 14:24	Follow-up of multiple sclerosis patients with different neurological status <i>Tsvetkova T, Stoliarov I, Ivko O, Ilves A, Prakhova L, Nikiforova I, Lebedev V</i>
14:24 - 14:36	Pressure patterns in patients with rheumatoid arthritis: the relevance of a multi-centre experience <i>Giacomozzi C, Martelli F, Nagel A, Rosenbaum D, Turner D, Woodburn J</i>
14:36 - 14:48	The additional value of reporting pressure-time integral results in foot pressure studies on the diabetic foot <i>Bus S A, Waaijman R</i>
14:48 - 15:00	Morning stiffness influences foot loading patterns in patients with rheumatoid arthritis <i>Nagel A, Kiene B, Peikenkamp K, Hammer M, Rosenbaum D</i>

## Tuesday 29th, July, 2008 - cont.

### **Session 4** **Poster & Coffee**

15:00 - 16:00	The effect of the Additional Weight during Pregnancy on Plantar Pressure Distribution of the Female Foot <i>Hömmle A-K, Hennig E M, Hottinger J</i>
	Usage of Discrete Pressure Sensors to Determine Rearfoot Motion During Heel-to-Toe Running <i>Brauner T, Milani T L, Sterzing T, Oriwol D</i>
	The Influence of Orthotics on Pronation, Impact Loads and Plantar Pressure Distribution during Running <i>Althoff K, Hagen M, Schrooten J-H, Hennig E M</i>
	Method for assessing the gait energy cost by recording the vertical component of the ground reaction force <i>Miu S, Capris G, Constantin S, Bucur D</i>
	A preliminary investigation of plantar loads in feet with Hallux Valgus during bipedal and unipedal stance <i>Reed L F, Urry S R, Wearing S C</i>
	Time dependent characteristics of the "Kent" triaxial force transducer system for in-shoe load distribution measurement <i>Lau H C, Stansfield B, Solomonidis S, Wearing S, Pepper M</i>
	Analysis of the plantar pressure distribution in gait during pregnancy <i>Ribeiro A, de Souza F, Sacco I, João S</i>
	Loads imposed to the painful leg versus the pain free leg during stair descent in patellofemoral pain syndrome <i>Aliberti S, Costa M, Sacco I</i>
	Relationship between plantar pressure and patellofemoral pain syndrome during gait <i>Aliberti S, Costa M, Sacco I</i>
	Pedobarographic examination of three post operative shoes utilised in forefoot surgery <i>Bourke G</i>
	Asymmetry between left and right plantar loading during gait in non-diabetic and neuropathic-diabetic populations <i>Gurney J K, Kersting U G</i>
	An intermittent graduated pneumatic compression boot for the treatment of venous ulcers <i>Pronidis I, Browne T, Taylor M, Mootanah R</i>
	What is the effect of a physical activity program on foot structure & function in overweight & obese children? <i>Riddiford-Harland D L, Steele J R, Baur L A, Cliff D P, Okely A D, Morgan P J, Jones R A</i>
	Assessment of transtibial amputees' gait in clinical practice: semi-quantitative kinematics to integrate pedar gait analysis <i>Giacomozzi C, De Maiti G, Orlandini D, Raggi M, Rogante M</i>
	A comparative study between blades and studs in football boots <i>Ramanathan A K, Bentley J A, Arnold G P, Cochrane L A, Abboud R J</i>
	The relationship between inshoe foot pressure distribution and tibial shock-waves <i>Ramanathan A K, Leung J K, Arnold G P, Cochrane L A, Drew T S, Abboud R J</i>
	The effect of three simulated gait modes on plantar pressure distribution <i>Ramanathan A K, Komuravelli R, Wang W, Arnold G P, Abboud R J</i>
	The use of the fastrak and pedar systems for clinical evaluation of finger pressure during writing <i>Ramanathan A K, Hussain K S, Arnold G P, Cochrane L A, Abboud R J</i>
	Repeatability of the novel pliance <sup>®</sup> -x-32 expert system <i>Ramanathan A K, Garg R, Arnold G P, Cochrane L A, Abboud R J</i>
	Kraftsimulator intraoperative pedography (KIOP) - an experience of the clinical application <i>Dietze A, Mittlmeier T</i>
	Reliability and validity of in-shoe plantar pressure data measured in neuropathic diabetic patients <i>Arts M L J, Bus S A</i>
	Accuracy of the novel emed <sup>®</sup> -x and Tekscan matscan plantar pressure measurement systems <i>Hillstrom H, Giacomozzi C, Lenhoff M, Zifchock R, Vanadurungwan B, Gross D, McLennan C, Hannan M</i>
	A Preliminary Study of the Effects of Gel Liner Thickness on In-Socket Residual Limb Pressures in Trans-Tibial Prosthesis Users <i>Stine R, Hansen A, Tucker K, Boutwell E, Gard S</i>



## Tuesday 29th, July, 2008 - cont.

### **Session 5** **Biomechanics** Chair

<b>Keynote lecture 2</b> 16:00 - 16:50 <i>Taylor M, Finite element modeling of the foot: a review</i>	
16:50 - 17:02	Changes in foot loading from bipedal to unipedal stance are site specific and highlight the importance of toe function <i>Urry S R, Reed L F, Wearing S C</i>
17:02 - 17:14	Foot dimensions and plantar distribution parameters of soldiers before and after marching with load <i>Mayer T A, Mainvald C, Milani T L, Kunde S, Heidenfelder J, Augustijn J</i>
17:14 - 17:26	Effect of foot orthoses contour on pain perception in individuals with anterior knee pain <i>McPail T G, Vicenzino B, Cornwall M W</i>
<b>Evening event</b>	
18:15	Bus depart from Bonar Hall to the Civic Reception at Discovery Ship
18:30 - 22:30	Buffet dinner: civic reception, Tour of RRS Discovery ship Talk by Professor Charles McKean, Professor of history at the University of Dundee
22:30	Bus depart for hotels Apex, Hilton, Travelodge and West Park

## Wednesday 30th, July, 2008 [www.ESM2008.com](http://www.ESM2008.com)

<b>Activity day</b>	
9:00	Option 1: Blair Atholl Castle and Distillery - depart from Bonar Hall
9:00	Option 3: Loch Morlich Sport Activity Day - depart from Bonar Hall
10:00	Option 4: Golf, Burnside course Carnoustie - individual arrival (recommended 9:30)
19:00	Dinner and evening event in the Cairngorm Mountain Landscape and Ecology presentation by Dr. Morduant
22:30	Bus depart from Cairngorm for respective hotels and Bonar Hall



## Thursday 31st, July, 2008 [www.ESM2008.com](http://www.ESM2008.com)

08:30 - 09:00	Registration at Bonar Hall
<b>Session 6</b> Chair	<b>Sport</b> Steele J, Biomechanics Research Laboratory, University of Wollongong, Australia
<b>Keynote lecture 3</b> 09:00 - 09:50 <i>Cornwall M, Beyond the diabetic patient: using plantar pressure analysis to study mechanical foot dysfunction</i>	
09:50 - 10:02	Plantar pressure distribution in fencing shoes <i>Trautmann C, Rosenbaum D</i>
10:02 - 10:14	Metatarsal fracture prevention: can a more flexible boot reduce 5th metatarsal head pressures during sporting maneuvers <i>Orenduff M S, Rohr E S, Segal A D, Medley J W, Green J R, Kadel N J</i>
10:14 - 10:26	Plantar pressure experienced during tennis specific movements performed on the 3 grand slam court surfaces <i>Strauss D N, Messenger N, Utley A, Brooks P, Miller S</i>
10:26 - 10:38	Can 9 weeks of iyengar yoga alter dynamic plantar pressure? <i>Song J, Garfinkel M, Yun Ji Su, Heilman B, Zolnick E, Newton R, Hillstrom H</i>
10:38 - 10:50	Static and dynamic analysis of foot structure in athletes sustaining proximal fifth metatarsal stress fracture <i>Hetsroni I, Nyska M, Mann G, Segal O, Maoz G, Ben-Sira D, Lifshitz L, Ayalon M</i>
10:50 - 11:02	The influence of surface in the medial and lateral foot areas during running on the grass and asphalt <i>Tessutti V, Pereira C S, Sacco I</i>
11:02 - 11:30	Coffee break