SPORTING PROSTHETICS CONFERENCE 11/11/11
FRIDAY, 11 NOVEMBER 2011
Hampden National Stadium, Glasgow, UK

Hosted by The National Centre of Prosthetics and Orthotics

Acknowledgement to Getty Images and BT
Welcome

On behalf of the University of Strathclyde, I would like to welcome you to this sporting prosthetics conference hosted by the National Centre for Prosthetics and Orthotics.

As we approach the London Olympic and Paralympic Games in 2012, this conference provides a forum to consider the engineering and design challenges of sporting prostheses, and the mechanisms by which people affected by disability can become increasingly involved in physical activity, exercise and sport. It also includes inspirational presentations from some of the leading paralympians of our generation, which will motivate both able-bodied and less able members of the public to become more active. It is very appropriate that this sporting prosthetics conference is being held in Glasgow, host to the 2014 Commonwealth Games, and home of the National Centre for Prosthetics and Orthotics.

The University is proud to have as part of its Engineering Faculty the National Centre, which is widely regarded as the international leader in prosthetic and orthotic education. Its undergraduate BSc Honours programme, which combines engineering and medical technologies, is recognised at the highest level by ISPO, the International Society for Prosthetics and Orthotics. The Centre has a truly international reputation, with its staff contributing to the development of clinical guidelines and educational programmes, and its graduates working to improve healthcare for people with disabilities in many countries across the globe.

This Sporting Prosthetics Conference and the National Centre align with Strathclyde’s strategic objectives as a leading International Technological University, by bringing national and international organisations and speakers together to highlight elite goals, activity and achievements of athletes with prosthetic needs.

We are delighted to have as our keynote speaker the South African paralympic athlete Oscar Pistorius, the world record holder in the paralympic 100, 200 and 400 metres, who earlier this year made history by becoming the first athlete with an amputation to win a medal in the able-bodied World Championships in Daegu, South Korea.

On this Armistice Day, we are also happy to have contributions from those involved in the rehabilitation of our injured military personnel, some of whom will become the paralympic athletes of the future.

Thank you for attending. I hope you all enjoy what should prove to be an inspirational and informative day.

Prof Jim McDonald
Principal, University of Strathclyde, Glasgow
Jacqui Lunday  
Chief Health Professions Officer, Scottish Government

Jacqui was appointed as the Chief Health Professions Officer in April 2006 and before that was the first Allied Health Professions Officer in the Scottish Government Health Department from September 2002. She has a professional leadership and policy lead role for the 9 AHP Groups and the 51 Healthcare Science Professions. She provides advice to Ministers and the Government on professional matters affecting all 60 health professions as well as adult rehabilitation and the development and implementation of related policy areas. She is based within the Directorate of Nursing, Midwifery and Allied Health Professions and works closely with colleagues from a range of departments across health, education and social care. In 2007 she was appointed as Technical Advisor to the World Health Organisation and has led an international programme of work on virtual networks for health professionals to support interprofessional learning and collaboration. This includes the establishment of a “Global Community of Practice for Rehabilitation” and also “The Health Professions Global Network”, across 60 international Health Professional Bodies, which was launched at the end of June 2009. She previously led the introduction of Scotland’s Patient Experience programme ‘Better Together’ from 2006 to 2008. Jacqui is passionate about the Human Dynamic of Care and is currently leading work for Scottish Government, on person-centred and relationship based care in the context of professional practice for Nurses, Midwives, AHPs and other health professionals.

In July 2010 Jacqui was awarded an Honorary Degree of Doctor of the University from Queen Margaret University in recognition of her significant contribution to education and public service.

Councillor Archie Graham  
Executive Member for the Commonwealth Games, Glasgow City Council

Councillor Archie Graham has represented the Langside Ward on Glasgow City Council since the Council was formed in 1995. Councillor Graham is currently the Council’s Depute Leader and Executive Member for the Commonwealth Games and has responsibility for the delivery of the Commonwealth Games in 2014. He represents the Council on various Cultural and Sporting bodies including the Riverside Museum Appeal Trust and Glasgow 2014 Limited.

Councillor Graham has lived in Glasgow all his life. He left school at 16 with no qualifications and worked in the construction industry for the first 15 years of his working life. He entered higher education as a mature student, gaining a BA in 1995 and an MSc (Distinction) in 1999 from Glasgow Caledonian University. His dissertation was titled ‘The Involvement and Empowerment of the Voluntary Sector in Urban Regeneration’.

Councillor Graham is married and has two children. He is a keen footballer and runner. He has ran 5 marathons and dozens of half marathons in aid of various charities.
Sarah Deans
Prosthetist/Orthotist, University of Strathclyde

Sarah is a Teaching Fellow and State Registered Prosthetist/Orthotist with the Health Professions Council. She is based at the world-leading National Centre for Prosthetics and Orthotics, University of Strathclyde in Glasgow. Sarah has developed a research portfolio investigating motivations and barriers to participation in physical activity, exercise and sports in those who have limb absence, an area encompassing sporting prosthetics and disability sports. In helping to foster cross-faculty and cross-disciplinary links, the work is in collaboration with the Physical Activity for Health Research group based within the University’s School for Psychological Sciences and Health.

Sarah enjoys teaching clinical, professional and technical aspects of prosthetic care and rehabilitation of people with lower limb absence for both undergraduate and postgraduate students, and lecturing to national and international professional audiences. She has been delighted to be part of the National Centre organising team charged with hosting this unique event.

Ian Jones
Senior Prosthetist, Defence Medical Rehabilitation Centre Headley Court

Having part studied to be an Occupational therapist Ian changed direction to train in prosthetics at the London School of Prosthetics and Orthotics. He qualified in 1995 and took up a post in Preston working for Steepers, then later moved to Bristol to work with Orthopaedic Service. He spent 5 years in Bristol where he ran the upper extremity clinic treating over 150 patients along side his lower extremity clinic. He then relocated to Bournemouth and managed the service in 2000 for Orthopaedic Services, where he also managed the bespoke silicone department in Pool. After leaving in 2005 he setup Limb Solutions Limited ran a small private clinic and supplies business based in the New Forest. Alongside his private work, in 2006, he locumed with Blatchfords at DMRC Headley Court for the newly established MOD contract. In 2009 Ian became prosthetic manager at Headley Court to deal with the increasing demands on the service, which has seen the department increase from 2 part time prosthetists to 9 full time and 17 technicians.

Kate Sherman
Clinical Specialist Physiotherapist, Defence Medical Rehabilitation Centre, Headley Court

Kate trained in Bristol as a chartered physiotherapist, qualifying in 1999. After completing junior rotations and a static post in Southport Spinal Cord Injury Centre, she joined the Defence Medical Rehabilitation Centre, Headley Court in December 2002 and has worked as a clinical lead physiotherapist for the Complex Trauma team at Headley Court since 2005. She is now in the final year of her MSc in Rehabilitation Studies, at Strathclyde University in Glasgow, with a research project looking at step count of military amputees during in-patient and out-patient rehabilitation. Her special interests include traumatic amputee rehabilitation, spinal cord injuries, aquatic therapy, and sport as part of rehabilitation. She has been involved in the development of Exercise Snow Warrior (Adaptive skiing) with the Battle Back team at Headley Court and also works with Battle Back using climbing to achieve rehabilitation goals.
Mike Dickinson
Scottish Regional Coordinator, Help for Heroes

Mike is employed for Help for Heroes as the Regional Coordinator for Scotland. His responsibilities are to liaise with the volunteers throughout Scotland and raise the profile of the charity in the country. Before becoming an employee, Mike was a volunteer for 3 years in Perthshire.

Mike’s last full time employment prior to H4H was with a company who supplied a training simulator to the Police and Military around the world and he has travelled extensively in that role. This took him to many countries such as Singapore, Taiwan, Philippines, Indonesia, Brunei, Malaysia and latterly Libya, where he gave a presentation to Colonel Ghaddafi’s son who at that time was a captain in the Libyan Special Forces.

Mike’s link with the forces has always been strong and he has retained contact with many of his ex service pals.

Mike joined the army at 17 and did his training in Catterick, which was not far far from his home in Leeds. He joined his first regiment in 5 RTR in Germany and started his career as a tank driver. Mike served in two regiments, the first was 5 RTR and the second the Queen’s Own Hussars.

He had several postings around the world including Borneo in the mid sixties where he was working with the Ghurkhas and Australian Special Forces. On his return to the UK he volunteered for Aden but was refused.

Mike spent some time enjoying the hospitality of the Belfast Brigade in Northern Ireland. He also spent some time with the American Forces based in Fort Ord near Monterey, California and was part of a team testing a new anti tank device.

Chris Moon MBE
Achievement Consultant

Chris Moon is one of the most fortunate people to be alive that you are likely to meet. He’s a former army officer who left to work for a charity clearing landmines.

He’s survived kidnap by Khmer Rouge guerrillas in Cambodia and being blown up in a supposedly safe area of a minefield in remote East Africa losing an arm and a leg.

Within a year of leaving hospital he ran the London Marathon, worked to ban landmines, raised significant sums to help disabled people in the developing world, passed a Masters Degree and got married.

Chris is the first amputee to run the world’s toughest ultra marathons; his favourite is called the Badwater Death Valley Ultra 135 mile fun run.

Chris constantly challenges himself and now runs faster than at any time since he was injured. In September 2010 he became one of a handful of people in the world to run more than a marathon a day for 30 days continuously, covering over 1000 miles. Two days before he started this thousand-miler he returned from leading a group to climb Kilimanjaro. (Something he’s done often with a 100 per cent record of getting all the members of his trips to the top and down again safely).

Chris talks with passion, humour and authority on the process of achievement, overcoming challenges, mindset, motivation and leadership. He draws on his extraordinary experiences to help people and organisations do what they do, better. For more than ten years he’s been helping businesses go the extra mile. He has featured in many newspaper and magazine articles and on television and radio. His interviews include the Larry King Live show, Parkinson Show and his autobiography ‘One Step Beyond’ is published by Macmillan.
John Mortimer currently works for Otto Bock Scandinavia AB serving the four Nordic countries of Sweden, Norway, Denmark and Finland. His title is Product Specialist for Prosthetics and deals with both upper and lower extremity.

The work he does is varied and includes working closely with users and prosthetists as well as speaking to both large and small groups of people from all the rehabilitation field.

John has worked previously for Otto Bock in the UK for almost 16 years and started his career working for Dorset Orthopaedic in their NHS clinical contract after qualifying from Strathclyde University. Being an amputee himself he was persuaded to go to Glasgow by the then managing director of Otto Bock UK and was accepted as a mature student in 1986.

He travelled to the 2008 Beijing Paralympics after having attended various international meetings in the UK supporting all manner of athletes.

Jessica Crafoord
Clinical Specialist Prosthetist, Össur Nordic

“It has always been my dream to help physically challenged people to do sports. During my prosthetic education I got in touch with Lee Nolan who later supervised me during my master thesis. Together with Lee I started a sports clinic for amputees and it has now run for five years with more and more amputees coming each year. The sports clinic has generated a big interest for amputee sports in Scandinavia. For each athlete that I get to meet the more amazed and impressed I become by the will and power of these athletes. I have dedicated my work to ensure that these athletes get the best prosthetic solutions and opportunities to challenge themselves and peoples mind about what is possible in amputee sports.”.

Abstract “Introducing paratriathlon for lower limb amputees in Scandinavia”

In august 2011 the first triathlon race for lower limb amputees was held in Scandinavia. The race was a Half Ironman distance (1900m swimming, 90km biking, 21 km running) with an ocean swim. Athletes were offered to enter either individually or in a relay team. This year nine amputees raced in teams and one athlete with a partial foot amputation raced individually. They all crossed the finish line. Athletes with amputation raced side by side with non-amputated athletes. To introduce triathlon for lower limb amputees, training camps at the race site (Skärhamn, Tjörn) are held two times a year. At these camps amputees are being introduced to the different events of triathlon and its challenges for amputees. Our ambition is to create an arena where amputees can come out and try triathlon, set their own personal goals, challenge themselves and reach goals they never thought would be possible.
**Programme**

**MORNING**

<table>
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<tr>
<th>Time</th>
<th>Session</th>
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<tr>
<td>08.30 – 09.30</td>
<td>Registration and Breakfast <em>(breakfast is sponsored by Otto Bock)</em></td>
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<tr>
<td>09.30 – 09.40</td>
<td>Welcome</td>
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<td>Jacqui Lunday, Chief Health Professions Officer, Scottish Government</td>
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<td>09.40 – 09.50</td>
<td>The Opening Address</td>
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<td>Councillor Archie Graham, Executive Member for the Commonwealth Games, Glasgow City Council</td>
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<tr>
<td>09.50 – 10.05</td>
<td>Physical activity, exercise and sports in those with limb absence</td>
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<td>Sarah Deans, Prosthetist/Orthotist, University of Strathclyde</td>
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<tr>
<td>10.05 – 10.45</td>
<td>Prosthetic and physiotherapy rehabilitation in the military population <em>(sponsored by Northsea Plastics)</em></td>
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<td>Ian Jones, Senior Prosthetist, Defence Medical Rehabilitation Centre, Headley Court</td>
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<td>Kate Sherman, Clinical Specialist Physiotherapist, Defence Medical Rehabilitation Centre, Headley Court</td>
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<td>10.45 – 11.00</td>
<td>Help for Heroes</td>
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<td>Mike Dickinson, Scottish Regional Coordinator</td>
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<td><em>(A two minute Armistice Day silence will be held at 11.00)</em></td>
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<tr>
<td>11.02 – 11.30</td>
<td>Morning Coffee and Exhibition, held in the Lomond Suite</td>
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<td>11.30 – 12.00</td>
<td>One Step Beyond</td>
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<td>Chris Moon MBE, Achievement Consultant</td>
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<td>12.00 – 12.30</td>
<td>The Beijing Paralympics and prosthetic considerations for everyday and elite sport</td>
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<td>John Mortimer, Prosthetist/Orthotist</td>
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<td>12.30 – 12.50</td>
<td>Introducing paratriathlon for lower limb amputees in Scandinavia</td>
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<td>Jessica Crafoord, Clinical Specialist Prosthetian</td>
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<td>12.50 – 14.00</td>
<td>Lunch and Exhibition, held in the Millennium Suite</td>
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AFTERNOON

14.00 – 15.00  **Keynote Lecture**
*Blade Running: a life in sports*
**Oscar Pistorius**
The South African Paralympian, also known as the ‘Blade Runner’, is the double amputee world record holder in the 100, 200 and 400 metres events and runs with the aid of carbon fibre trans-tibial artificial limbs or ‘blades’.

He has made history by being the first amputee to win an able-bodied world track medal, being part of South Africa’s silver medal winning relay team in the 2011 World Championships. Oscar is determined to yet again make history next year by becoming the first disabled athlete to compete in both the Olympic and Paralympic Games.

15.00 – 15.30  **Design and technology within elite sport**
Bryce Dyer, Senior Lecturer in Product Design, University of Bournemouth

15.30 – 15.50  **Afternoon Tea and Exhibition – held in the Lomond Suite**

15.50 – 16.10  **Prosthetics for the Podium**
Howard Wooley, Prosthetist/Orthotist, PACE Rehabilitation
Colin Lynch, Paracyclist, Irish Paralympic Elite Mens Cycling Team

16.10 – 16.40  **London 2012 and Glasgow 2014 are just around the corner**
Victoria Aggar, Athlete Service Manager, British Paralympic Association
Gavin Mcleod, Chief Executive Officer, Scottish Disability Sport

16.40 – 16.50  **Summary and Closing Remarks**
Professor Jim McDonald, Principal and Vice Chancellor, University of Strathclyde

16.50 – 17.30  **Drinks Reception and Meet the Speakers – National Football Museum, Hampden National Stadium**
Oscar Pistorius
South African Paralympian, “Bladerunner”
Oscar Pistorius is a South African Paralympian, affectionately nicknamed “Bladerunner”. He was born in 1986 without the fibula in both his legs, and as a result had both legs amputated below the knee when he was 11 months old. Despite this, with the support and encouragement of his sports-mad family he took part in many sporting activities at school, including cricket, tennis, boxing, water polo and rugby. In 2003, he seriously injured one of his knees while playing rugby, and began running as part of his rehabilitation programme. By March 2004 he was taking part in athletics meetings, and within eight months was competing at the Athens Paralympic games, where he won the bronze medal in the T44 100 metres, and gold in the 200m, breaking the world record with a time of 21.91 seconds.

In 2006, he was conferred the Order of Ikhamanga in bronze by the president of South Africa for “inspiring achievements in the field of athletics and contributing to the well-being of people with disabilities in Africa”. In 2007, he was awarded the BBC Sports Personality of the Year Helen Rollason Award for “outstanding courage and achievement in the face of adversity”.

In 2007 he broke his own 200 metre and 400 metre world records. In the 2008 Summer Paralympics, he won gold medals in the 100, 200 and 400 metre (T44) sprints. He is the Paralympic world record holder in the 100, 200 and 400 metres, and was the first amputee to run the 100 metres in under 11 seconds.

Earlier this year his 400 metre time achieved the qualifying standard for the 2011 World Athletics Championships in Daegu, South Korea and the 2012 Olympic Games. At the World Championships in Korea he helped South Africa’s 4 x 400 metre relay team reach the final, where they won the silver medal.

Oscar’s sporting motto is:

“You’re not disabled by the disabilities you have, you are able by the abilities you have.”
Bryce Dyer
Senior Lecturer in Product Design, University of Bournemouth

Bryce Dyer is currently Senior Lecturer in Product Design at Bournemouth University and has been involved in design education for over 10 years. His research interest is with the use of technology within elite level sport and his current project addresses the use of lower-limb prosthesis used by runners within disability competition. This work takes an unusual, holistic approach which combines methods from both engineering science and ethical philosophy to determine how sports technology is both initially perceived and then practically evaluated. His research has engaged with prosthetists, manufacturers and the International Paralympic Committee as well as being recognised with national prizes and nominations.

Dyer’s general interest in sports technology continues to be published in books, peer reviewed journals and mainstream sports magazines. In his spare time he continues to compete internationally as a master's athlete in both cycling and triathlon.

Howard Wooley
Prosthetist/Orthotist, PACE Rehabilitation

Howard joined PACE Rehabilitation in February 2011, and is one of two Prosthetists at PACE in Cheadle, Manchester. He is a Partner with the Health Professions Council.

Howard graduated as a Prosthetist/Orthotist in 2001 and began his career with the NHS at Preston Disablement Services Centre, before moving to the Haywood Hospital, Stoke-on-Trent, as Senior Prosthetist. Before training in prosthetics Howard worked as a wooden boat builder and product designer, learning skills which serve him well in his very practical and thorough approach to prosthetics.

Colin Lynch
Paracyclist

Colin Lynch is a member of the Irish Paralympic Elite Men’s Cycling team. Colin has raced at the Elite International level for the past 2 years. An all-round cyclist, he competes in road and time trial events as well as on the track (velodrome). He specialises in the Time Trial on the road and the 3km Pursuit on the track.

2011 saw Colin win the Time Trial in the UCI Paracycling World Championships in Denmark as well as several World Cup medals. Colin is currently preparing to compete in the Paralympics in London 2012.
Victoria Aggar
Athlete Service Manager,
British Paralympic Association

Vicki’s long career as an elite athlete saw her represent GB at many major championships across both athletics and rowing, winning three World Championship medals (two gold, one silver) and setting two World Records in the latter. It gave her experience of what it is like to compete at a major home championships when she competed at the 2006 World Rowing Championships at Eton Dorney, the venue for Paralympic rowing in 2012, and won a gold medal in a world record breaking time. It also gave her experience of competing at the next summer Games city, Rio, when she won a medal at the World Games in 2005 in the T44 100m. She also has first-hand experience of the unique environment of a Paralympic Games when she represented Paralympics GB in the mixed adaptive coxed four in Beijing, winning a bronze medal. She retired from international rowing as reigning World Champion after the 2009 World Championships in Poznan.

Vicki is now working for the British Paralympic Association as Athlete Services Manager and will be heavily involved in preparing the team for next year’s Paralympic Games in London.

Gavin Mcleod
Chief Executive Officer, Scottish Disability Sport

Gavin is the Chief Executive Officer of Scottish Disability Sport (SDS), the governing and co-ordinating body for all sports for people of all ages and abilities with physical, sensory and learning disabilities in Scotland. In his previous role, Gavin was Youth Development Manager for Disability Sport with sportscotland. With over 20 years of sports development experience, Gavin held a variety of posts with local authorities south of the border before returning to Scotland to pursue a disability sport focus. Educational qualifications include a BA (Hons) Degree in Sport Studies from Sheffield Polytechnic, a PGCE (Further Education) from Notts Trent University and a Diploma in Community Education from Dundee College of Education.
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