

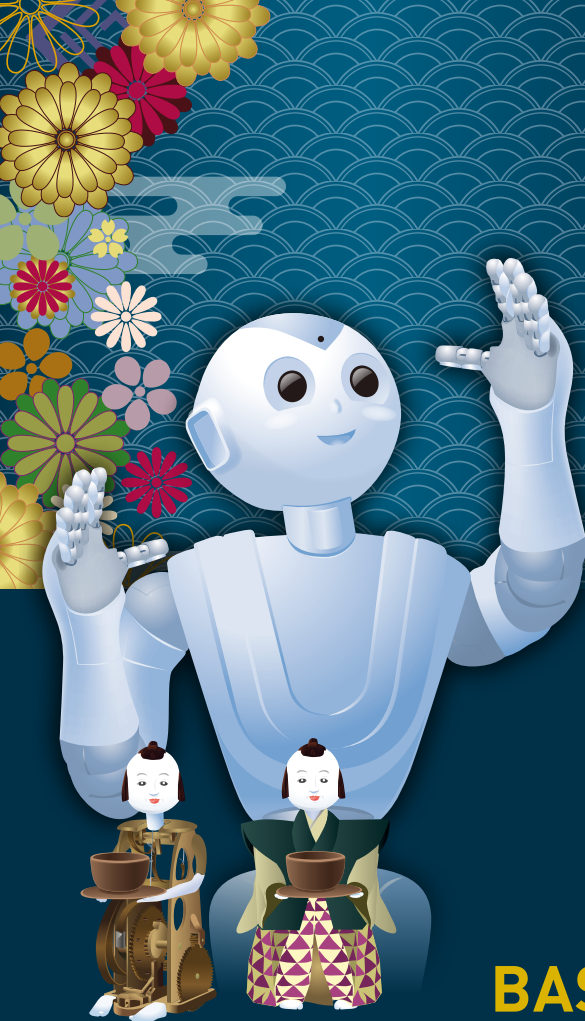


2019  
JAPAN

**ISPO**

**17<sup>th</sup> WORLD CONGRESS**  
**Kobe, Hyogo, Japan**

**5 - 8 Oct 2019**



**BASICS TO BIONICS**

# FIRST ANNOUNCEMENT



INTERNATIONAL  
SOCIETY FOR PROSTHETICS  
AND ORTHOTICS

[www.ispo-congress.com](http://www.ispo-congress.com)



# ISPO 17<sup>TH</sup> WORLD CONGRESS

## Organisers

ISPO – INTERNATIONAL  
SOCIETY FOR PROSTHETICS  
AND ORTHOTICS



In collaboration with:

ISPO JAPAN



In co-organisation with:

SCIENCE COUNCIL OF JAPAN



Supported by:

JSPO – JAPANESE SOCIETY OF  
PROSTHETICS AND ORTHOTICS



JAPO – JAPANESE ACADEMY OF  
PROSTHETISTS AND ORTHOTISTS



JOPA – JAPAN ORTHOTICS  
PROSTHETICS ASSOCIATION



As ISPO's flagship meeting, the ISPO 17<sup>th</sup> World Congress, 5-8 October 2019, Kobe, Hyogo, Japan, is a unique interactive event where professionals involved in the care of persons in need of prosthetic, orthotic, mobility, and assistive devices come together to learn about the latest scientific and clinical advances, products, innovative technologies, designs, and materials in prosthetic and orthotic care.

Participants include orthotists, prosthetists, physiatrists, orthopaedic surgeons, physical and occupational therapists, rehabilitation engineers, caregivers, clinical psychologists, social institutions, and many others.

The broad interdisciplinary programme features symposia, instructional courses, exhibitor workshops, free paper and poster presentations, offering professionals involved in prosthetics and orthotics rehabilitation a unique opportunity for continued development through discussion and exchange as well as for promoting innovation in this field.

The exhibition provides a platform for equipment manufacturers from across the globe to showcase their products, to exchange ideas, network, and get closer to their customers.

Educational institutions, systems and service providers, rehabilitation centres, financial institutions, etc. also have an opportunity to promote their activities to an international audience while learning, sharing, initiating new projects, and building partnerships.

#ISPO2019





# Invitation

## ISPO President

On behalf of ISPO, I would like to personally invite you to the 17<sup>th</sup> World Congress in Kobe in 2019. This biennial World Congress is a highlight for all who deal with rehabilitation, in particular prosthetics and orthotics. The Congress in Kobe will certainly be an exciting time for all, as we continue to develop everything from new service models to new technological solutions while we remain focused on the people who benefit from our services. Significant progress has taken place since our last meeting to assist individuals with disabilities at a global level as well as in many places at a local and individual level and many of these developments will be highlighted in the numerous sessions.

**'Basics to Bionics'** captures the breadth of the Congress in every aspect and the scientific sessions as well as the exhibition will expand this theme. The exhibition will also highlight new technological developments and robotics in use in rehabilitation.

The Congress will have something for everyone: for service users, for the ISPO community and the broader rehabilitation community as well as industry. I would encourage all of you to make the effort to be in Kobe and I look forward to seeing you there.

Friedbert Kohler

ISPO President

Chair, ISPO 17<sup>th</sup> World Congress Committee



## Congress Topics

- Orthotics: Lower Limb Neurological
- Orthotics: Lower Limb Orthopaedic
- Orthotics: Spinal
- Orthotics: Upper Limb
- Prosthetics: Lower Limb Transfemoral
- Prosthetics: Lower Limb Transtibial
- Prosthetics: Lower Limb Ankle & Foot
- Prosthetics: Upper Limb
- Seating & Wheelchair
- Footwear
- Geriatrics
- Paediatrics
- Psychosocial Issues / Quality of Life
- Outcome Measurements
- Developing Countries
- Education
- Rehabilitation Medicine & Surgery
- Sports & Physical Activity
- Other Topics





# Invitations

## Congress Scientific Committee Chair

**'Basics to Bionics'**, the theme of the ISPO 17<sup>th</sup> World Congress, perfectly stretches the breadth of ISPO, and underlines the unique multidisciplinary nature of ISPO World Congresses.

The World Congress brings together all disciplines involved in rehabilitation. Its scientific programme draws attention to each of these disciplines, as well as to their collaboration. The programme includes podia for keynote speakers, symposia, instructional courses, free papers, posters, and case study presentations. It highlights the cutting edge state of the art in prosthetics and orthotics and tries to look beyond current horizons, with the aim to inspire delegates to work together to create a world where individual rehabilitation needs can be met. The scientific programme offers a unique platform to interact with experts from around the world, and to learn from different professional perspectives.

It is my pleasure to invite you all to the ISPO 17<sup>th</sup> World Congress!

Join the ISPO World Congress.  
Get informed! Get inspired! Get involved!

Dick Plettenburg  
Scientific Committee Chair  
ISPO 17<sup>th</sup> World Congress

## Local Organising Committee Chair

At the ISPO 17<sup>th</sup> World Congress in Kobe, discussions will be held on the application of P&O, rehabilitation engineering and assistive technology with the goal of improving the quality of life for people with disabilities. We are honoured to organise this event as its Japanese host. Of particular interest should be the Robotics Technology and Devices Exhibition, which is held parallel to the Congress. I am confident that the 2019 World Congress in Kobe will not only help make Asia's efforts and initiatives in the area of P&O, rehabilitation engineering, and assistive technology widely known in Japan but also provide a golden opportunity to call the attention of stakeholders worldwide to the excellent technology and devices developed in Japan.

Kobe is one of Japan's leading tourist cities and famous for such gourmet delicacies as Kobe beef and sushi. Numerous World Heritage sites are easily accessible nearby. I'm confident that this Congress will afford you a fantastic opportunity to see Japan firsthand and gain an insight into its timeless appeal.

I invite you to join us and look forward to welcoming you to Kobe in October 2019.

Takaaki Chin  
President, ISPO Japan  
Chair, Local Organising Committee  
Vice-chair, ISPO 17<sup>th</sup> World Congress





# Keynote Speakers

## Dr. Deirdre Desmond

Deirdre Desmond, PhD, is a Senior Lecturer in the Department of Psychology and member of the Assisting Living & Learning (ALL) Institute at Maynooth University in Maynooth, Ireland. She is also co-director of the Dublin Psychoprosthetics Group.

Deirdre is currently a member of the ISPO Scientific Committee and was formerly an associate editor for the *Prosthetics and Orthotics International (POI)* journal. Her research focuses on psychological adjustment to illness, injury, and disability as well as rehabilitation, self-management, and psychosocial aspects of assistive technology. She completed BA and PhD degrees in psychology at Trinity College Dublin before joining the academic staff at Maynooth University.

## Dr. Max Ortiz Catalán

Dr. Max Ortiz Catalán, PhD, led the development of the first bionic arm that could be directly connected to a patient's bone, nerves, and muscles. In addition, he developed a novel treatment for phantom limb pain that has helped chronic sufferers for whom no other treatments were effective.

Dr. Ortiz Catalán is an Associate Professor at the Department of Electrical Engineering, Chalmers University of Technology, Sweden, where he founded and currently leads the Biomechanics and Neurorehabilitation Laboratory. He works in close collaboration with Sahlgrenska University Hospital, and serves as a Research Director of Integrum AB, both in Gothenburg, Sweden.

His research, for which he received several prestigious awards, includes bioelectric signals acquisition electronics (analog and digital), bioelectric signal processing and machine learning algorithms for decoding motor volition and control, neuromuscular interfaces, neurostimulation for sensory feedback, bone-anchored prostheses and osseointegration as well as virtual and augmented reality for neuromuscular rehabilitation and the treatment of phantom limb pain.

## Prof. Eiichi Saitoh

Professor Eiichi Saitoh (MD, DMSc) is a certified physiatrist, Executive Vice President of Fujita Health University, and Professor and Chairman of the Department of Rehabilitation Medicine I at the Fujita Health University School of Medicine in Aichi, Japan. He graduated from Keio University in 1980 and received his DMSc (PhD) from Keio University in 1991.

Professor Saitoh is also currently Adjunct or Visiting Professor at Johns Hopkins University (Baltimore, USA), China Medical University (Shenyang, China), Shanghai University of Medicine and Health Science (Shanghai, China), Sun Yat-Sen University (Guangzhou, China), Kyoto Prefectural University of Medicine, Tokyo Medical and Dental University as well as Executive Board Member of the National Center for Geriatrics and Gerontology (Japan).

Professor Saitoh is specifically interested in dysphagia, robotics, orthosis, motion analysis, locomotion, exercise science and psychology. He serves different roles in rehabilitation medicine in Japan, and has been awarded several prizes for his research.

# Congress Programme



## Overview

Saturday, 5 October		Sunday, 6 October	
Exhibition open	Opening Ceremony and Exhibition Opening	Exhibition open	Concurrent Instructional Courses, Symposia, Free Paper Sessions, Poster Sessions, Exhibitor Workshops
			Break, Exhibition and Poster Viewing
	Break, Exhibition and Poster Viewing		Keynote Lecture
	Concurrent Instructional Courses, Symposia, Free Paper Sessions, Poster Sessions, Exhibitor Workshops		Break, Exhibition and Poster Viewing
	Break, Exhibition and Poster Viewing		Concurrent Instructional Courses, Symposia, Free Paper Sessions, Poster Sessions, Exhibitor Workshops
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	Break, Exhibition and Poster Viewing		Concurrent Instructional Courses, Symposia, Free Paper Sessions, Poster Sessions, Exhibitor Workshops
	Concurrent Instructional Courses, Symposia, Free Paper Sessions, Poster Sessions, Exhibitor Workshops		Break, Exhibition and Poster Viewing
	Welcome Reception		Concurrent Instructional Courses, Symposia, Free Paper Sessions, Poster Sessions, Exhibitor Workshops

## Session Formats

### Symposia (SYMP)

Symposia present thematically related research addressing significant problems or controversies in prosthetics, orthotics, mobility, and assistive devices. Symposia present differing perspectives on a particular topic. They bring together two or more respected researchers to present current developments and planned research directions. Symposia should be strongly evidence-based.

### Instructional Courses (IC)

Instructional courses present information on specific topics at a level suited to the practitioner. These might be topics that receive limited coverage in undergraduate curricula or may be suited to experienced clinicians who have already specialised or who are entering a specialised area of practice or research.

### Free Paper Sessions (FP)

A free paper is a professional communication describing a technique, case study, case series,



Monday, 7 October		Tuesday, 8 October	
Exhibition open	Concurrent Instructional Courses, Symposia, Free Paper Sessions, Poster Sessions, Exhibitor Workshops	Exhibition open	Concurrent Instructional Courses, Symposia, Free Paper Sessions, Poster Sessions, Exhibitor Workshops
	Break, Exhibition and Poster Viewing		Break, Exhibition and Poster Viewing
	Keynote Lecture		Keynote Lecture
	Break, Exhibition and Poster Viewing		Break, Exhibition and Poster Viewing
	Concurrent Instructional Courses, Symposia, Free Paper Sessions, Poster Sessions, Exhibitor Workshops		Concurrent Instructional Courses, Symposia, Free Paper Sessions, Poster Sessions, Exhibitor Workshops
	Break, Exhibition and Poster Viewing		Break, Exhibition and Poster Viewing
	Concurrent Instructional Courses, Symposia, Free Paper Sessions, Poster Sessions, Exhibitor Workshops		Concurrent Instructional Courses, Symposia, Free Paper Sessions, Poster Sessions, Exhibitor Workshops
	Break, Exhibition and Poster Viewing		Break, Exhibition and Poster Viewing
	Concurrent Instructional Courses, Symposia, Free Paper Sessions, Poster Sessions, Exhibitor Workshops		Closing Ceremony
Congress Party			

Programme is subject to change.

clinical trial, systematic review, experiment or qualitative research delivered as a podium presentation during the congress. Abstracts of free papers are reviewed by a panel of experts to verify relevance, quality and innovation.

### Posters

A poster may describe a technique, case study, case series, clinical trial, systematic review, experiment or qualitative research. By comparison with free papers, a poster may present preliminary results or works in progress. Abstracts of poster

presentations are reviewed by a panel of experts to verify relevance for delegates.

### Exhibitor Workshops

Exhibitor workshops provide an opportunity for industry representatives to instruct delegates about design features, prescription criteria and application of new products and devices. Workshops are used primarily as an educational opportunity. Where possible, presenters provide evidence for claims about the merits of particular products or devices.

# Congress Information



## Prizes and Awards

### Forchheimer Prize

At every ISPO World Congress, the International Society for Prosthetics and Orthotics recognizes the most outstanding paper on objective clinical assessment, clinical evaluation, or clinical measurement published in Prosthetics and Orthotics International during the years prior to the congress with the Forchheimer Prize. The prize has been established by the Forchheimer family to honour the memory of Sylvia and Alfred Forchheimer.

### Brian & Joyce Blatchford Team Prize for Innovation

Established by the Blatchford Family in memory of Mr. Brian Blatchford and Mrs. Joyce Blatchford, this prestigious prize is awarded to a team who has an outstanding record of innovative achievement in the field of prosthetics and/or orthotics, and will be presented at the ISPO World Congress.

The prize of 15,000 EUR will be awarded to a team who has an outstanding record of innovative achievement in the field of prosthetics and/or orthotics. The project should be related to prosthetic and/or orthotic hardware, or scientifically-based new techniques which result in better prosthetic or orthotic service provision.

### World Congress Best Paper and Poster Prizes

The Scientific Committee awards the following Best Paper and Poster Prizes to five authors presenting free papers/posters at the ISPO World Congress:

- **Advancing Clinical Treatment**  
greatest contribution to advancing the clinical management of clients
- **Advancing Technology**  
greatest contribution to advancing technical capabilities in prosthetics and orthotics
- **Advancing Psychosocial/ Social-economic Science**  
the greatest contribution to advancing our understanding of the psychosocial aspects of client care
- **Advancing Education**  
greatest contribution to advancing prosthetics and orthotics education
- **Best Poster**  
paper presented in poster format that makes the most substantial contribution to advancing knowledge in prosthetics and orthotics





## Social Programme

The Congress will feature a social and spouse programme, which will showcase the vibrant culture of Japan and Kobe.

### Welcome Reception

**SATURDAY, 5 OCTOBER 2019**

Held in the exhibition halls, the Welcome Reception offers an opportunity to re-connect with old friends and make new contacts while visiting the exhibitors.

### Congress Party

**MONDAY, 7 OCTOBER 2019**

One of the highlights of each World Congress, the Congress Party celebrates our achievements with great food, drinks, and entertainment lasting well into the night.

## Exhibition

Integrated with the congress, international exhibitors from all continents will showcase the latest in products and techniques at the exhibition. For information on exhibition and sponsorship opportunities, please check the congress website or contact:

ISPO World Congress Team

Tel.: +49 341 678 8238

E-mail: [info@ispo-congress.com](mailto:info@ispo-congress.com)

## Registration

Registration fees and applicable conditions will be published on [www.ispo-congress.com](http://www.ispo-congress.com). Online registration will be available as of February 2019.

## Accommodation

The congress will offer accommodation ranging from budget to 5-star hotels. Most hotels will be located within walking distance to the congress venue.





# Important Dates

DEADLINE FOR SUBMISSION  
OF INSTRUCTIONAL COURSES  
AND SYMPOSIA

JANUARY 2019

REGISTRATION OPENS

FEBRUARY 2019

DEADLINE FOR SUBMISSION  
OF FREE PAPERS

MARCH 2019

EARLY REGISTRATION AND  
HOTEL ACCOMMODATION  
BOOKING DEADLINE

AUGUST 2019

# International Society for Prosthetics and Orthotics



## Background

The International Society for Prosthetics and Orthotics (ISPO) is a global multidisciplinary non-governmental organisation providing an effective platform for exchange and communication on all aspects of the science, practice, and education associated with the provision of prosthetic and orthotic care, rehabilitation engineering, and related areas.

## Congress Committees

### World Congress Committee

Friedbert Kohler, Chair  
Takaaki Chin, Vice-chair  
Rajiv Hanspal  
Edward Lemaire  
Dick Plettenburg, Scientific Committee Chair  
Shin Sasaki  
Terry Supan, Treasurer

### Scientific Committee

Dick Plettenburg, Chair  
Mariette Deist  
Stefania Fatone  
Pamela Gallagher  
Kerstin Hagberg  
Jacqueline Hebert  
Toshiki Kobayashi  
Sumiko Yamamoto

### Local Organising Committee

Takaaki Chin, Chair  
Shin Sasaki, Vice-chair  
Seishi Sawamura  
Eiji Tazawa  
Futoshi Wada  
Masao Watanabe  
Sumiko Yamamoto

## Purpose and Function

ISPO aims to improve the quality of life for persons who may benefit from prosthetic, orthotic, mobility, and assistive devices. For this purpose, ISPO promotes the provision of quality services, innovative technology, clinically relevant research, and education in the field of rehabilitation for persons with physical disabilities. ISPO further advises on and advocates for best practices to governments and non-governmental organisations on key issues.

#ISPOWER

Empowering people with impaired  
mobility to reach their full potential







## Membership

ISPO has approximately 3,500 members in 100 countries. Members of ISPO are individual professionals, including prosthetists and orthotists, orthopaedic surgeons, physiotherapists, occupational therapists, shoemakers, technicians, nurses, podiatrists, chiropodists, biomechanical/rehabilitation engineers, and paediatricians.

## Advocacy

In cooperation with the WHO and other partners, ISPO undertakes advocacy and awareness raising activities to call for increased access to quality and affordable assistive health technologies for people with disabilities worldwide.

## Education

Through international collaboration, ISPO has developed and published internationally recognised educational and training guidelines, and evaluates and accredits P&O training programmes worldwide against those standards. Furthermore, ISPO provides teaching and training to professionals in the field of prosthetics and orthotics and related areas.

## Innovation

Through its World Congresses and Consensus Conferences, ISPO promotes research and evidence-based practice, and facilitates innovative and appropriate technology development, thereby contributing to building the most advanced and interdisciplinary knowledge in prosthetics and orthotics science and practice.



# Prosthetics and Orthotics International (POI)

Prosthetics and Orthotics International (POI) is the official journal of the International Society for Prosthetics and Orthotics (ISPO). POI is a multidisciplinary journal for all professionals who have an interest in the medical, clinical, rehabilitation, technical, educational, and research aspects of prosthetics, orthotics, and rehabilitation engineering, as well as their related topics.

The journal welcomes submissions based on reviews, clinical and experimental research reports, clinical and technical notes, and case studies. POI publishes 6 issues per year ahead of print. For further information, please visit [poi.sagepub.com](http://poi.sagepub.com).

With over 3,700 orthotics and prosthetics international professionals receiving this journal, advertising in this title will give you the opportunity to reach a highly valuable and targeted audience while associating your products and company name with the most prestigious and active society in the prosthetics and orthotics area.





# Japan and Kobe



Japan, often called the “Land of the Rising Sun”, is a stratovolcanic archipelago consisting of about 6,852 islands. The four largest are Honshu, Hokkaido, Kyushu, and Shikoku, which make up about ninety-seven percent of Japan’s land area and often are referred to as home islands.

Kobe is located in the very centre of Japan on Honshu Island. This mild port city, with its wealth of natural surroundings, commands a view of the calm blue Seto Inland Sea against the backdrop of the breathtaking Rokko mountain range. The city has prospered as a port for overseas trade in East Asia since ancient times, and has adopted various western cultures since its opening to their commerce in 1868.

Since the modernisation of Japan, Kobe has become a cosmopolitan city with a population of about 1.53 million and home to people from more than 130 countries.

As a tourist destination, Kobe offers such attractions as its night view of the city (designated one of the three best night views in Japan), Seto Inland Sea cruising, and nearby Arima Onsen, a historic hot spring town with origins dating back

as far as the 1600s.

Kobe is also famous for its diverse food culture, which includes such specialties as world famous Kobe beef, Nada sake as well as western confectioneries. Optional tours will be available.

## Kobe Convention Center

Japan’s first international convention center opened in Kobe in 1981 and consists of fully equipped conference rooms, exhibition halls, hotel function rooms and a multi-purpose arena. All venues are within walking distance to one another.



Source: © Kobe Tourism Bureau, Piet van Wyk Photography / AdobeStock: eyetronic, Rawpixel.com, beebbox



**ISPO**

International Society for Prosthetics and Orthotics  
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[www.ispoint.org](http://www.ispoint.org)

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