Deutsche Sporthochschule Köln
German Sport University Cologne

Announcement – online invitation

Colloquium on Sports Science and Engineering

Current developments in orthopaedics and robotics

Monday, June 24th, 2024, 12:30 – 15:15 h

Institute of Biomechanics and Orthopaedics

As part of our TSM teaching courses in combination with our research colloquium, we have the honour to host two external visitors who offered to present an overview about their current research. As we expect this to be of interest to a wider audience, we would like to share this invitation to dial in online – it will be run as a hybrid session due to limited space in our seminar room. We hope that this announcement catches the attention of students, colleagues, clinicians and anyone who is interested in sports science, engineering and rehabilitation.

Program:

12.30	**Welcome and introduction.** by Dr. Cynthia Fantini & Prof. Uwe Kersting
12:35	**Biomimetic non-invasive artificial sensory feedback for upper limb prostheses** by Prof. Strahinja Dosen. Department of Health Science and Technology, The Faculty of Medicine, Neurorehabilitation Systems, Aalborg University, Denmark
13:55	**break**
14:05	**Sports engineering for paralympic sprinters at Padova universiy** by Prof. Nicola Petrone, Professorship of Machine Design, Dept. of Industrial Design, University of Padova, Italy
15:15	**Closing of the session**, no later than 15:30 (Uwe Kersting)

Please send a short registration e-mail to Mrs Tanja Reitz: t.reitz@dshs-koeln.de
We will run the online session using webex – invitation by mail.

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Short CVs of our guest speakers

Prof. Strahinja Dosen

Strahinja Dosen (M'06) is a Full Professor in Rehab Robotics at the Department of Health Science and Technology (HST), Aalborg University (AAU), Denmark, where he leads a research group on Neurorehabilitation Systems. He received the Diploma of Engineering in Electrical Engineering and the M.Sc. degree in Biomedical Engineering in 2000 and 2004, respectively, from the Faculty of Technical Sciences, University of Novi Sad, Serbia, and the Ph.D. degree in Biomedical Engineering from the Center for Sensory-Motor Interaction (SMI), Aalborg University, Aalborg, Denmark, in 2009. Until 2017, he was working as a Research Scientist at the Institute for Neurorehabilitation Systems, University Medical Center Gottingen, Germany, and then as an Associate Professor at the Department of Health Science and Technology (HST), Aalborg University (AAU), Denmark. Since 2023, he has been a Full Professor in the same Dept. and a principal investigator for AAU and HST in several EU (Tactility, Wearplex, Sixthsense, and SimBionics) and nationally (Robin, Remap and Climb) funded projects. He has published more than 100 manuscripts in peer-reviewed journals. His main research interests are the closed-loop control of movements and assistive systems, the development of methods and technologies for human-machine interfacing, control of bionic limbs and rehabilitation robots, artificial sensory feedback, haptics, and functional electrical stimulation.

Prof. Nicola Petrone

Nicola Petrone was born in Padova in 1966. He is an Associate Professor in Machine Design at the University of Padova, Department of Industrial Engineering. Holding a M.Sc in Mechanical Engineering and a Ph.D. in Multiaxial Fatigue, he teaches Machine Design and Sports and Rehabilitation Engineering to Mechanical Engineers & Bioengineers. He coordinates the Sport & Rehabilitation Engineering Lab where sport equipment and rehabilitation devices are analysed with motion capture systems and wearable technologies. In parallel, he coordinates several activities in the Machine Design Laboratory focused on the mechanical characterization of sport equipment like footwear, helmets and active/passive protections, as well as bicycles, wheelchairs, exoskeletons and running prosthetic feet. Fields of research are the assistive technologies for mobility, paralympic sports, winter sports and cycling engineering. His experience regards also the development of ISO standards in bicycles, wheelchairs, ergonomics and airbag technologies and the active participation to the ISEA (International Sports Engineering Association) community and ISSS (International Society for Skiing Safety).