

# IWR-Colloquium Winter Term 2016 / 2017

**December 6, 2016, 16:15h**

**Mathematikon, Building B, Berliner Str. 43, 69120 Heidelberg  
Seminar Room 3.B128 / 3rd Floor**

**Speaker:**

Prof. Dana Kulić, University of Waterloo, Canada

**Title:**

“Learning from Human Motion”

**Abstract:**

Human motion measurement and analysis is a challenging problem, due to issues such as sensor and measurement system limitations, high dimensionality, and spatial and temporal variability. Accurate and timely motion measurement and analysis enables many applications, including imitation learning for robotics, new input and interaction mechanisms for interactive environments, and automated rehabilitation monitoring and assessment. In this talk we will describe recent work in the Adaptive Systems Laboratory at the University of Waterloo developing techniques for automated human motion measurement and analysis. We will overview techniques for motion measurement, segmentation, individualized model learning and analysis, with a focus on two application areas: rehabilitation and interactive environments.

**Biography:**

Dana Kulić received the combined B.A.Sc. and M.Eng. degrees in electromechanical engineering, and the Ph.D. degree in mechanical engineering from the University of British Columbia, Canada, in 1998 and 2005, respectively. From 2006 to 2009, she was a JSPS Postdoctoral Fellow and a Project Assistant Professor at the Nakamura Laboratory at the University of Tokyo. She is currently an Associate Professor at the Electrical and Computer Engineering Department at the University of Waterloo, Canada. She is a founding co-chair of the IEEE RAS Technical Committee on Human Movement Understanding and an Associate Editor with the IEEE Transactions on Robotics. In 2014, she was awarded Ontario's Early Researcher award for her work on rehabilitation and human-robot interaction. Her research interests include human motion analysis, robot learning, humanoid robots, and human-machine interaction.

**Website IWR-Colloquium:**

[www.iwr.uni-heidelberg.de/iwr-colloquium](http://www.iwr.uni-heidelberg.de/iwr-colloquium)