Katja Mombaur

Canada Excellence Research Chair in Human-Centred Robotics and Machine Intelligence Systems Design Engineering & Mechanical and Mechatronics Engineering, Faculty of Engineering, University of Waterloo

Prof. Dr. Katja Mombaur joined the University Waterloo in March 2020 as Full Professor and Canada Excellence Research Chair (CERC) for Human-Centred Robotics & Machine Intelligence. Her research focuses on understanding human movement by a combined approach of model-based optimization and experiments and using this knowledge to improve motions of humanoid robots and the interactions of humans with exoskeletons, prostheses and external assistive devices. Her goal is to endow humanoid and wearable robots with motion intelligence that allow them to operate safely in a complex human world. Her research interests also model-based and model-free methods for motion analysis, generation and control with a focus on optimal control and inverse optimal control.

Prior to coming to Canada, she has been a Full Professor at the Institute of Computer Engineering of Heidelberg University and head of the Optimization, Robotics & Biomechanics Chair, as well as coordinator of the Heidelberg Center for Motion Research. She holds a diploma degree in Aerospace Engineering from the University of Stuttgart and a Ph.D. degree in Mathematics from Heidelberg University and has worked as a researcher at Seoul National University, and at LAAS-CNRS in Toulouse. She has directed the European project KoroiBot and has been part of several other European projects such as Spexor , MOBOT, ECHORD and Agilis, and still is a partner in the ongoing EU project Eurobench. She is one of the directors of the HeiAge project on digital technology for aging in Heidelberg.