

Title: Making Robots Adaptive and Preferable to Humans

Summary:

Robots would in the future be operating in closer interaction and collaboration with humans resulting in new technical and ethical research challenges to be addressed. Robots would have to be able to adapt to unseen environments and users with different preferences. At the *Robotics and Intelligent Systems* research group at the University of Oslo in Norway, we address the challenges through a number of different research projects including robot companions for elderly living at home and mechanically adaptive robots. Artificial intelligence (AI) and machine learning is a key enabler for progress in this work using methods within biologically inspired computing. This talk will introduce this work and how we address it both from a technical and human side.

Professor Jim Torresen, University of Oslo, Norway

Jim Torresen is a professor at University of Oslo where he leads the Robotics and Intelligent Systems research group. He received his M.Sc. and Dr.ing. (Ph.D) degrees in computer architecture and design from the Norwegian University of Science and Technology, University of Trondheim in 1991 and 1996, respectively. He has been employed as a senior hardware designer at NERA Telecommunications (1996-1998) and at Navia Aviation (1998-1999). Since 1999, he has been a professor at the Department of Informatics at the University of Oslo (associate professor 1999-2005). Jim Torresen has been a visiting researcher at Kyoto University, Japan for one year (1993-1994), four months at Electrotechnical laboratory, Tsukuba, Japan (1997 and 2000) and a visiting professor at Cornell University, USA for one year (2010-2011).



His research interests at the moment include artificial intelligence, machine learning, reconfigurable hardware, robotics and applying this to complex real-world applications. Several novel methods have been proposed. He has published approximately 150 scientific papers in international journals, books and conference proceedings. 10 tutorials and several invited talks have been given at international conferences. He is in the program committee of more than ten different international conferences, associate editor of three international scientific journals as well as a regular reviewer of a number of other international journals. He has also acted as an evaluator for proposals in EU FP7 and Horizon2020 and is currently project manager/principle investigator in six externally funded research projects/centres.

More information and a list of publications can be found here:

<http://www.ifi.uio.no/~jimtoer>