Séminaire ISIR

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Jeudi 12 Juillet 2012 à 14h00

Campus Jussieu, 4 place Jussieu, Paris
Salle de réunion 304, Tour 65 3ème étage

Titre : Assistive and rehabilitation robotics

Abstract : In an aging society it is extremely important to develop devices, which can support and aid the elderly in their daily life, as well as individuals with reduced functional capabilities. This demands means and tools that extend independent living and promote improved health.

Future robotic systems will need to exhibit sophisticated assistive capabilities, highly tuned and responsive to the needs of human users. This requires special capabilities from robotic systems such that they are able to aware human intentions and requirements. Further, if robotic systems are expected to move autonomously in uncontrolled, dynamical environments, several other problems have to be considered. This requires to tackle several challenging tasks, ranging from sensing to learning and actuation. In this seminar I'll present examples of recent advances and describe our group’s research in service and rehabilitation robotics.

Short Bio : Cristina P Santos received the B.S. degree in Industrial Electronics, the M.Sc degree in Robotics, and the Ph.D. degree in Robotics in the field of Nonlinear dynamics, all from University of Minho, Guimaraes, Portugal, in 1994, 1998 and 2003 respectively. The PhD was also in collaboration with the CNRS-CNRC Marseille, France.

She is working since 1996 as an Auxiliar Professor at the University of Minho, Industrial Electronics Department, Portugal. Her research focus on the extension of the use of the dynamical systems theory to the achievement of more complex behavior for robots; generate locomotion for multi-dof robots; achieve cooperativity among multi-robots and learning. Recently her research interests focus on methods to characterize human motion, and designing robots and robot controllers for rehabilitation of patients suffering from motor problems.