Robotics: The 20th Century and Beyond

Chair/Moderator: Georges Giralt, LAAS-CNRS, France

Speakers:

T. Kanade, Carnegie Mellon University
J.C. Latombe, Stanford University
N. Nilsson, Stanford University
B. Roth, Stanford University

During the 20th century, Robotics has progressively emerged as a scientific body of concepts, methods, and algorithmic tools, in fact the most challenging field in machine intelligence.

Currently, it is confronted with paramount challenges both in theoretical aspects with seminal scientific and technical achievements, and practical aspects where Information Technologies and Micro and Nano Technologies appear to be decisive supporting factors.

The current stream of developments paves the way for a very large domain of novel applications ranging from outer space intervention to Assistive Robotics, Personal Robotics and Human Augmentation. These advances are cornerstone aspects for the domain of Human Centered Robotics where machines are among people and might be operated by non specialized users.

The speakers will address four key broad domains presenting their own views on past and current achievements, current trends, and future development they see for the next decade. They will entertain an ample debate with the audience at the end of the four presentations.

- *Computer Vision: Progress in the Last Three Decades*
  T. Kanade, Carnegie Mellon University
- *Robotics and Real-World Computing*
  J.C. Latombe, Stanford University
- *The Programming, Teaching, and Learning (PTL) Model of Robot Control*
  N. Nilsson, Stanford University
- *Kinematics, Dynamics and Control in Robotic Systems*
  B. Roth, Stanford University