



COLLÈGE  
DE FRANCE  
— 1530 —

CHAIR IN TECHNOLOGICAL INNOVATION -  
LILIANE BETTENCOURT

PR JEAN-PAUL LAUMOND

RECIPIENT OF THE CHAIR, ACADEMIC YEAR 2011–2012

# Robotics: Science and Technology

Symposium June 12 & 13, 2012

Although the word «robot» was first heard early last century and has fueled our imagination ever since, the first industrial robot, Unimate, did not appear on General Motor's assembly line until 1961. 50 years after Unimate, the Chair in Technological Innovation - Liliane Bettencourt has turned its attention to robotics. Ten courses and nine seminars have served the mission of Collège de France to teach the "knowledge in progress": they have shown how Robotics lives within a tension between science and technology. They illustrated many successes beyond manufacturing. The final colloquium is a unique one: for the first time, in the same location, nine amongst the most influential researchers worldwide gather to give their account of a grand discipline.

## June 12

- 9:30 **Welcome address**  
**Jean-Paul LAUMOND**
- 10:00 **Science and Technology of Robot Companions**  
**Paolo DARIO, Professor, Scuola Superiore Sant'Anna, Pisa (Italy)**  
Chair: Alain BERTHOZ, *Professor Emeritus, Collège de France, Paris*
- 11:15 **Manipulative neuroscience: control of brain-robot-world loop**  
**Mitsuo KAWATO, Director of ATR BICR Laboratories, Kansai Science City (Japan)**  
Chair: Philippe SOUÈRES, *Research Director, LAAS-CNRS, Paris*
- 12:30 BREAK
- 14:00 **From Vision and Robotics to Cancer, and back again**  
**Sir Michael BRADY, Professor, University of Oxford (UK)**  
Chair: François CHAUMETTE, *Research Director, INRIA-IRISA, Rennes*
- 15:15 **Medical Robotics and Computer-Integrated Interventional Medicine**  
**Russell H. TAYLOR, Professor, The Johns Hopkins University, Baltimore (USA)**  
Chair: Jocelyne TROCCAZ, *Research Director, TIMC-UJF-CNRS, Grenoble*
- 16:30 BREAK
- 16:45 **Surprise**

## June 13

- 9:00 **A Lifelong Challenge to Create Intelligent Robots**  
**Hirochika INOUE, Professor Emeritus, University of Tokyo (Japan)**  
Chair: Abderrahmane KHEDDAR, *Research Director, CNRS-AIST JRL, Tsukuba (Japan)*
- 10:15 **Robotics, Manipulation, Uncertainty**  
**Matthew T. MASON, Professor, Carnegie Mellon University, Pittsburgh (USA)**  
Chair: Christian LAUGIER, *Research Director, INRIA, Grenoble*
- 11:30 BREAK
- 11:45 **From robotics research to large scale robotics applications**  
**Rodney BROOKS, Professor, MIT, Chairman of Heartland Robotics, Boston (USA)**  
Chair: Raja CHATILA, *Research Director, ISIR-CNRS, Paris*
- 13:00 BREAK
- 14:15 **Robot Technology and Human Science**  
**Yoshihiko NAKAMURA, Professor, University of Tokyo (Japan)**  
Chair: Philippe BIDAUD, *Professor, Pierre et Marie Curie University, Paris*
- 15:30 **Advanced robotics and mechatronics: From Space to terrestrial assistance, surgery and mobility**  
**Gerd HIRZINGER, Professor Dr. Ing., DLR, Munich (Germany)**  
Chair: Rachid ALAMI, *Research Director, LAAS-CNRS, Toulouse*

■ Amphithéâtre  
Maurice Halbwachs  
11, place Marcelin-Berthelot  
Paris 5<sup>e</sup>

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Free entrance