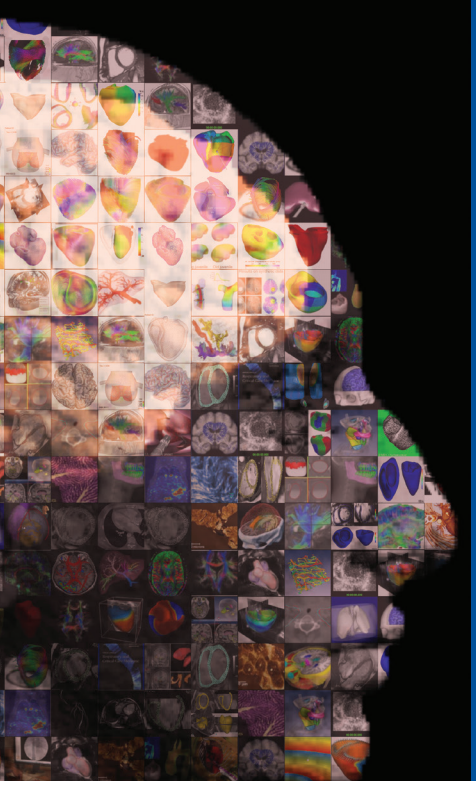

COLLÈGE DE FRANCE
1530

CHAIRE D'INFORMATIQUE ET SCIENCES NUMÉRIQUES

Année académique 2013-2014

Pr Nicholas AYACHE

From Medical Images to Computational Medicine

Mardi 24 juin 2014

This international symposium presents some of the most advanced research activities in medical image computing and organ modeling for a better understanding of the human anatomy and physiology, and for a more preventive, predictive and precise personalized medicine.

It concludes a series of 8 courses and 16 seminars entitled **"The Personalized Digital Patient: Images, Medicine and Informatics"** which presented the algorithmic, mathematical and biophysical foundations of medical image computing for computer assisted diagnosis, prognosis and therapy.

Nicholas Ayache is a Research Director at Inria (Institut national de recherche en informatique et automatique) in Sophia Antipolis (France), where he leads the Asclepios project-team dedicated to medical image analysis and simulation.

Tuesday 24 June 2014

09h00 Introduction
Nicholas Ayache, *Collège de France*

09h10 Biophysical Models for Cancer Imaging
Michael Brady, *University of Oxford, United Kingdom*

09h50 Learning Clinical information from Medical Images
Daniel Rueckert, *Imperial College London, United Kingdom*

10h30 Spatiotemporal Analysis of Brain Development and Disease Progression
Guido Gerig, *University of Utah, United States*

11h10 Break

11h20 Decision Forests in Medical Image Analysis
Antonio Criminisi, *Microsoft Research, United Kingdom*

12h00 Computational Physiology: Connecting Molecular Systems Biology with Clinical Medicine
Peter Hunter, *University of Auckland, New Zealand*

12h40 Lunch Break

14h00 Introduction
Nicholas Ayache, *Collège de France*

14h10 Toward a Statistical Neuroscience
Olivier Faugeras, *Inria, Université de Nice Sophia Antipolis*

14h50 Model-Based Biomedical Image Analysis
James Duncan, *Yale University, United States*

15h30 Multi-Scale Image-Guided Interventions
David Hawkes, *University College London, United Kingdom*

16h10 Break

16h20 Augmented Reality in the Operating Room
Nassir Navab, *Tech. Univ. Munich, Germany & J. Hopkins Univ., United States*

17h00 Towards Image-Based Personalized Medicine
Dorin Comaniciu, *Siemens Corporate Technology, United States*

17h40 Conclusion
Nicholas Ayache, *Collège de France*

18h00 Closing

Chaire créée avec le soutien de

Inria

Colloque en anglais. Symposium in English.
Traduction simultanée

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