

# Technical Program

## Keynote Lectures

Karl Friston, UCL, UK

***Tuesday, Sep 20<sup>th</sup> 09:15 - 10:15***

Tamim Asfour, KIT, Germany

***Tuesday, Sep 20<sup>th</sup> 14:00 -***

***15:00***

***“Engineering humanoids that grasp, learn and perceive time”***

Julie Grezes, ENS, France

***Wednesday, Sep 21<sup>th</sup> 09:00 -***

***10:00***

***“Cognitive and neural mechanisms underlying the communicative function of emotional displays.”***

Daniella Corbetta, U. Tenes.

***Wednesday, Sep 21<sup>th</sup> 13:45 -***

***14:45***

***“Visual attention, goal formation, and action selection in infant”***

***Tony Prescott, U. Sheffield,***

***Thursday, Sep 22<sup>nd</sup> 09:00 - 10:00***

***“The development of the self: a robotics perspective”***

Program at a Glance

Program : Monday, Sep 19<sup>th</sup>

Location: University of Cergy-Pontoise, **Site “Saint-Martin”**  
**Building A, 5<sup>th</sup> floor, rooms**

**08:30 - 09:00** *Early Registration (all the day)*

09:00 - 10:30 Workshops Session I

**10:30 - 10:45** *Coffee Break / Posters*

10:45 - 12:00 Workshops Session II

**12:00 - 14:00** *Lunch Break*

14:00 - 15:30 Workshops Session III

**15:30 - 15:45** *Coffee Break / Posters*

15:45 - 17:00 Workshops Session IV

**17:00 - 18:30** *Informal lab tour and welcome drink*

Program : Tuesday, Sep 20<sup>th</sup>

Location: University of Cergy-Pontoise, **Site “Les Chênes”  
Conference Room**

**08:30 – 09:00** *Early Registration (all the day)*

**09:00 – 09:15** ***Welcome announcement***

09:15 – 10:15 Keynote Speaker : Karl Friston, UCL, UK

10:15– 11:05 Talks Session I

*11:05 – 11:20 Coffee Break*

11:20 – 12:35 Talks Session II

*12:35 – 14:00 Lunch Break*

14:00 – 15:00 Keynote Speaker : Tamim Asfour, KIT,  
Germany

***“Engineering humanoids that grasp, learn and perceive  
time”***

15:00 – 16:00 Poster Highlights Session I

**16:00 – 17:00** ***Poster Session and Coffee Break***

17:00 – 18:40 Talks Session III

Program : Wednesday, Sep 21<sup>st</sup>

Location: University of Cergy-Pontoise, **Site “Les Chênes”  
Conference Room**

**08:30 – 09:00** *Early Registration (all the day)*

09:00 – 10:00 Keynote Speaker : Julie Grezes, ENS, France  
**“Cognitive and neural mechanisms underlying the  
communicative function of emotional displays.”**

10:00 – 10:50 Talks Session IV

*10:50 – 11:10 Coffee Break*

11:10 – 12:25 Talks Session V

12:25 – 13:45 *Lunch Break*

13:45 – 14:45 Keynote Speaker : Daniella Corbetta, U.  
Tennessee, USA

**“Visual attention, goal formation, and action selection in infant reaching”**

14:45 – 16:00 Babybot Challenge / **Talks Session VI**

*16:00 – 16:20 Coffee Break*

16:20 – 17:00 Poster Highlights Session II

**17:00 – 18:00 Poster Session**

**18:00 – 23:00 Social Event**

## Program : Thursday, Sep 22<sup>nd</sup>

Location: University of Cergy-Pontoise, **Site “Les Chênes”  
Conference Room**

**08:30 - 09:00** *Early Registration (all the day)*

09:00 - 10:00 Keynote Speaker : Tony Prescott, U Sheffield,  
UK

***“The development of the self: a robotics perspective”***

10:00 - 10:50 Talks Session VII

10:50 - 11:10 *Coffee Break*

11:10 - 12:25 Talks Session VIII

12:25 - 13:45 *Lunch Break*

13:45 - 14:10 Awards announcement

14:10 - 15:25 Talks Session IX

15:25 - 15:45 *Coffee Break*

15:45 - 17:00 Talks Session X

17:00 - 17:15 *Farewell and thanks*

Program : Tuesday, Sep 20<sup>th</sup>

Location: University of Cergy-Pontoise, **Site “Les Chênes”**  
**Conference Room**

**09:15 - 10:15 Karl Friston, UCL, UK**

10:15 - 11:05 Talks Session I : Sensorimotor Prediction

10:15 - 10:40      *Overlapping Waves in Tool Use Development: A  
Curiosity-Driven Computational Model*

*Forestier Sébastien; Oudeyer Pierre-Yves*

10:40 - 11:05      *Motor Development Facilitates the Prediction of Others'  
Actions through Sensorimotor Predictive Learning*

*Copete Vasco Jorge Luis; Nagai Yukie; Asada Minoru*

11:05 - 11:20 Coffee Break

11:20 - 12:35 Talks Session II : Goal-Babbling & Prediction

11:20 - 11h45      *Context Discovery for Model Learning in Partially  
Observable Environments*

*Hemion Nikolas*

11h45 - 12h10      *Goal Babbling of Acoustic-Articulatory Models with  
Adaptive Exploration Noise*

*Philippesen Anja Kristina; Reinhart Rene Felix; Wrede Britta*

12:10 - 12:35      *Robot Learns the Concept of Direction through Motion  
Activity*

*Luo Dingsheng; Hu Fan; Liu Wentao; Wu Xihong*

**14:00 - 15:00 Tamim Asfour, KIT, Germany**

***“Engineering humanoids that grasp, learn and perceive time”***

15:00 - 16:00 Poster Highlights Session I

**16:00 - 17:00 Poster Session and Coffee Break**

17:00 - 18:40 Talks Session III :  
Robot Cognition, Grounding Problem I

17:00 - 17:25 *Strategic and Interactive Learning of a Hierarchical Set of Tasks by the Poppy Humanoid Robot*

*Duminy Nicolas; Nguyen Sao Mai; Duhaut Dominique*

17:25 - 17:50 *An Experimental Comparison between NMF and LDA for Active Cross-Situational Object-Word Learning*

*ChenYuxin; Bordes Jean-Baptiste; Filliat David*

17:50 - 18:15 *Should I Do That? Using Relational Reinforcement Learning and Declarative Programming to Discover Domain Axioms*

*Sridharan Mohan; Meadows Ben*

18:15 - 18:40 *Multisensory Object Discovery via Self-detection and Artificial Attention*

*Lanillos Pablo; Dean-Leon Emmanuel; Cheng Gordon*

Program : Wednesday, Sep 21<sup>st</sup>

Location: University of Cergy-Pontoise, **Site “Les Chênes”**  
**Conference Room**

**09:00 - 10:00 Julie Grezes, ENS, France**

**“Cognitive and neural mechanisms underlying the communicative function of emotional displays.”**

10:00 - 10:50 Talks Session IV :

Robot Cognition, Grounding Problem II

10:00 - 10:25 *A Developmental Bayesian Model of Trust in Artificial Cognitive Systems*

*Patacchiola Massimiliano; Cangelosi Angelo*

10:25 - 10:50 *The “Language Filter” Hypothesis: A Feasibility Study of Language Separation in Infancy using Unsupervised Clustering of I-vectors*

*Carbajal M. Julia; Dawud Ahmad; Thiolliere Roland; Dupoux, Emmanuel*

**10:50 - 11:10 Coffee Break**

11:10 - 12:25 Talks Session V :

Joint Attention & Social Interactions

11:10 - 11:35 *Gaze Contingent Joint Attention with an Avatar in Children with and without ASD*

*Little Gillian; Bonnar Lizann; Kelly Steve; Lohan Katrin Solveig; Rajendran Gnanathusharan*

11:35 - 12:00 *Dynamical Self-Consistency Leads to Behavioral Development and Emergent Social Interactions in Robots*

*Der Ralf; Martius Georg*

12:00 - 12:25 *The Complexity of Biological Motion A Temporal Multi-Resolution Motion Descriptor for Human Detection in Videos*

*Vignolo Alessia; Noceti Nicoletta; Sciutti Alessandra; Rea Francesco; Odone Francesca; Sandini Giulio*



**13:45 - 14:45 Daniella Corbetta, U. Tennessee, USA**

**“Visual attention, goal formation,  
and action selection in infant reaching”**

14:45 - 16:00 Babybot Challenge / **Talks Session VI** :  
Developmental Approaches to Reaching

14:45 - 15:10 *Neurally Plausible Motor Babbling in Robot Reaching (ID 3)*  
*Mahoor Zahra; MacLennan Bruce; McBride Allen*

15:10 – 15:35 *An Infant-inspired Model for Robot Developing Its Reaching Ability (ID 77)*  
*Luo, Dingsheng; Hu, Fan; Deng, Yian; Liu, Wentao; Wu, Xihong*

15:35 – 16:00 *A neural process model of learning to sequentially organize and activate pre-reaches*  
*Tekülve, Jan\*; Zibner, Stephan Klaus Ulrich; Schoner, Gregor*

16:00 - 16:20 **Coffee Break**

16:20 - 17:00 **Poster Highlights Session II**

**17:00 - 18:00 Poster Session**

Program : Thursday, Sep 22<sup>nd</sup>

Location: University of Cergy-Pontoise, **Site “Les Chênes”**  
**Conference Room**

**09:00 - 10:00 Tony Prescott, Univ. Sheffield UK**

**“The development of the self: a robotics perspective”**

10:00 - 10:50 Talks Session VII

Biological Computation

10:00 - 10:25 *Modeling the Sensory Roles of Noradrenaline  
in Action Selection*

*Carrere Maxime; Alexandre Frederic*

10:25 - 10:50 *Tonic Dopamine Effects in a Bio-inspired Robot  
Controller Enhance Expected Lifetime*

*Nettle, Cristóbal; Escobar, María-José; Leblois, Arthur*

10:50 - 11:10 Coffee Break

11:10 - 12:25 Talks Session VIII

Visual Attention

11:10 - 11:35 *Autonomous Grounding of Visual Field Experience through  
Sensorimotor Prediction*

*Laflaquière Alban*

11:35 - 12:00 *On the Use of Intrinsic Motivation for Visual Saliency  
Learning*

*Craye Céline; Filliat David; Goudou Jean-François*

12:00 - 12:25 *How Everyday Visual Experience Prepares the Way for  
Learning Object Names*

*Clerkin, Elizabeth M.; Hart, Elizabeth; Rehg, James; Yu, Chen; Linda, Smith*

14:10 - 15:25 Talks Session IX:

Language & Social Interactions I

14:10 - 14:35 *Referential Uncertainty and Word Learning in High-Dimensional, Continuous Meaning Spaces*

*Spranger Michael; Beuls Katrien*

14:35 - 15:00 *Vocal Interactions at the Dawn of Communication: The Emergence of Mutuality and Complementarity in Mother-Infant Interaction*

*Leonardi, Giuseppe; Nomikou, Iris; Rohlfing, Katharina; Raczaszek-Leonardi, Joanna*

15:00 - 15:25 *Emergence of Interactive Behaviors between Two Robots by Prediction Error Minimization Mechanism*

*Chen, Yiwen; Murata, Shingo; Arie, Hiroaki; Ogata, Tetsuya; Tani, Jun; Sugano, Shigeki*

15:25 - 15:45 Coffee Break

15:45 - 17:00 Talks Session X:

Language & Social Interactions II

15:45 - 16:10 *13-Year-Olds Approach Human-Robot Interaction Like Adults*

*Rea, Francesco; Muratore, Paola; Sciutti, Alessandra*

16:10 - 16:35 *Preschoolers' Engagement in Social Interaction with an Autonomous Robotic System*

*Lücking, Phillip; Rohlfing, Katharina; Wrede, Britta; Schilling, Malte*

16:35 - 17:00 *Objects in the Center: How the Infant's Body Constrains Infant Scenes*

*Bambach, Sven; Linda, Smith; Crandall, David; Yu, Chen*