

## Neurocuriosity 2016

Thursday 6<sup>th</sup> October - Saturday 8<sup>th</sup> October

BMA House, Tavistock Square, London, WC1H 9JP

Thursday 6<sup>th</sup> October 9:00-17:45

### Paget Room

#### Behavioral and Cognitive Neuroscience

Chair: Pierre-Yves Oudeyer

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|-------------|---|
| 9.00-9.30   | <i>Coffee and Registration</i>  |
| 9.30-10.00  | Opening Remarks (Teodora Gliga, Jacqueline Gottlieb, Pierre-Yves Oudeyer)                             |
| 10.00-10.45 | Jonathan Nelson: "The Mathematics, Psychology, and Neuroscience of Information."                      |
| 10.45-11.30 | Doug Markant: "Constructing rules through active exploration: Evidence from human category learning." |
| 11.30-12.15 | Romain Ligneul: "The neural valuation of knowledge: from curiosity relief to epistemic surprise."     |
| 12:15-13:30 | <i>Lunch break</i>  |
| 13.30-14.15 | Sid Kouider: "Neural dynamics of prediction, surprise and consciousness in infants."                  |
| 14.15-15.00 | Matthias Gruber: "The neurocognitive mechanisms of curiosity states on learning."                     |
| 15.00-15.30 | <i>Coffee/Tea</i>   |
| 15.30-16.15 | Kou Murayama: "Curiosity as a complementary reward for extrinsic incentives."                         |
| 16.15-17.00 | Jill O-Reilly: "Control of entropy in internal models."   |
| 17.00-17.45 | <b>GENERAL DISCUSSION (Denis Mareschal)</b>   |

**Friday 7<sup>th</sup> October 8:30-18.00**

**Great Hall**

**Computation and Electrophysiology**

Chair: Jacqueline Gottlieb

- 8.30-9.00 *Coffee and Registration*
- 9.00-9.45 Karl Friston: “Active inference and artificial curiosity.”
- 9.45-10.30 Gianluca Baldassarre: “Bio-inspired computational models of the development of attention skills: intrinsic motivations, goals, and learning.”
- 10.30-11.15 Peter Dayan: “Exploration bonuses: Bayes and Beyond.”
- 11.15-12.00 Pierre-Yves Oudeyer: “Diversity of forms and developmental functions of curiosity-driven learning”.
- 12.00-13.15 *Lunch*
- 13.15-14.00 Kenji Doya: “Design, inference and evolution of reward functions for robots.”
- 14.00-14.30 **GENERAL DISCUSSION (Pierre-Yves Oudeyer)**
- 14.30-15.00 *Coffee/Tea*
- 15.00-15.45 Wolfram Schultz: “Risky Neurones.”
- 15.45-16.30 Andrew Bell: “How Face Neurons contribute to Perceptual Decision-Making”
- 16.30-16.45 *Coffee/Tea*
- 16.45-17.30 Laurence Hunt: “Reward-guided information search and choice in prefrontal cortex.”
- 17.30-18.00 **GENERAL DISCUSSION (Jacqueline Gottlieb)**
- 18:30- late SPEAKERS DINNER – VENUE TBC**

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**Saturday 8<sup>th</sup> October 8:30-15.15 followed by lab tours**

**Paget Room**

**Developmental Psychology**

Chair: Derek Bell

- 8.30-9.00 *Coffee and Registration*
- 9.00-9.30 Opening remarks (Derek Bell – Learnus): “So what do I do in my lessons next week?”
- 9.30-10.15 Katarina Begus: “Active learners: Behavioural and neural mechanisms of selective social learning in infancy.”
- 10.15-11.00 Louise Goupil: “Developing a reflective mind: uncertainty monitoring, decision confidence and error detection in human infants.”
- 11.00-11.30 *Coffee Break*
- 11.30-12.15 Lisa Feigenson: “How Core Knowledge Drives Learning.”
- 12.15-13.00 Daphne Bavelier: “Learning to Learn: Lessons from Action Video Game Play.”
- 13.00-14.00 *Lunch Break*
- 14.00-14.45 Alison Gopnik: “When (and why) children are more open-minded than adults: Childhood as simulated annealing.”
- 14.45-15.15 **GENERAL DISCUSSION (Teodora Gliga)**
- 15.30-16.30 **baby LAB tours**