



# Séminaire ISIR

Lundi 9 novembre à 10H

Alban Laflaquière

Campus Jussieu, 4 place Jussieu, Paris  
Salle de réunion H20

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## Grounding Perception: A Developmental Approach to Sensorimotor Contingencies

**Abstract :** Sensorimotor contingency theory offers a promising account of the nature of perception, a topic rarely addressed in the robotics community. We propose a developmental framework to address the problem of the autonomous acquisition of sensorimotor contingencies by a naive robot. While exploring the world, the robot internally encodes contingencies as predictive models that capture the structure they imply in its sensorimotor experience. Three preliminary applications are presented to illustrate our approach to the acquisition of perceptive abilities: discovering the environment, discovering objects, and discovering a visual field.

**Short bio :** Dr. Alban Laflaquière received his PhD in Robotics from the Pierre & Marie Curie University in 2013 and joined the AI-Lab (at Aldebaran) in April 2014. He worked on emergence of basic communication through artificial evolution at the Laboratory of Intelligent Systems (Lausanne) during one year. During his PhD, he applied the sensorimotor approach of perception proposed by J.K.O'Regan to the perception of external space by a naive agent. His research interests focus on emergence of perception, developmental robotics and sensorimotor grounding of intelligence.