Interdisciplinary Workshop on the Development of the Self
– from self-perception to interaction under uncertainty –

Full-day workshop at IEEE ICDL-EpiRob 2017
(Int. Conf. on Developmental Learning and Epigenetic Robotics)
September 18, 2017. Lisbon, Portugal.
www.selfception.eu/developmentselfws

***** Call for contributions *****

We cordially invite you to submit your contribution to the workshop entitled "**The Development of the Self** ", a full-day workshop at the IEEE Int. Conf. on Developmental Learning and Epigenetic Robotics (ICDL-EpiRob 2017), to be held in Lisbon, Portugal, on September 18, 2017.

Send your extended abstract (max 2 pages) or short paper (max 4 pages) to selfception.workshop@gmail.com before 10th August.

You can find more details here:
http://www.ics.ei.tum.de/en/selfception/developmentselfws/call-for-papers/

This is the first interdisciplinary workshop that brings together roboticists, psychologists and cognitive scientists to address self-construction from a sensorimotor point of view and to discuss the challenges and possibilities arising for building real life robots. The purpose is to: i) shed some light on the development and construction of the sensorimotor self; ii) discuss computational models that use self-perceptive learning as a basis for active interaction and agency inference; and iii) to propose the steps toward future interdisciplinary research regarding the active self concept.

*****Workshop URL*****

Website: www.selfception.eu/developmentselfws/
Contact email: selfception.workshop@gmail.com

***** Important Dates *****

Two pages extended abstracts or short papers to selfception.workshop@gmail.com
Paper submission deadline: 10th August 2017
Notification of acceptance: 28 August 2017
Workshop day: 18th September 2017

***** Topics of interest *****

- Development of the self
- Self-perception
- Self/other distinction
- Self-exploration and self-modelling
- Agency and causality
- Active perception and learning using the body-schema
- Multisensory contingency and non-contingent synthetic models.
- Intermodal and crossmodal learning for self-construction.
- Enactive models of cognition
- Self-aware humans and robots

***** Key note speakers *****

- **Philippe Rochat**. Emory University, USA (*Cognitive psychology*).
- **Katerina Fotopoulou**. University College London, UK (*Cognitive neuroscience*).
- **Yukie Nagai**. Osaka University, Japan. (*Developmental robotics*).
- **Verena Hafner**, Humboldt University of Berlin, Germany. (*Robotics*).

***** Invited speakers *****

- **Miriam Kyselo**, Technical University of Berlin, Germany. (*Cognitive Science*).
- **Justin W. Hart**, University of Texas, USA. (*Robotics*).
- **Serena Ivaldi**, INRIA Nancy Grand-Est, France. (*Social Robotics*).
- **Lorenzo Jamone**, Queen Mary University of London, UK. (*Robotics*)
- **Pablo Lanillos**, Technical University of Munich, Germany. (*Robotics*)

***** Call for contributions (detailed) *****

Participants are required to submit a 1-2 pages extended abstract or short paper (4 pages max) of relevant work. Publications to be presented at the main conference are also welcome.

Accepted contributions will be presented during the workshop as posters or to present their work/ideas in a poster session and up to 4 selective submissions will give a 15 min talk at the workshop. Please indicate in your email if you want to present your work as a poster or/and in an oral presentation.

Please submit your abstract to the workshop's official email address selfception.workshop@gmail.com indicating [ICDL 2017 Workshop]. The template for the extended abstracts is IEEE conference style (two-columns).

Latex: http://www.tech.plym.ac.uk/SoCCE/CRNS/icdl-epirob/2015/icdl-epirob-latex.zip

Word: http://www.tech.plym.ac.uk/SoCCE/CRNS/icdl-epirob/2015/icdl-epirob-word.zip

Furthermore, we are planning a special issue covering the topics addressed in the workshop, to which we invite all participants to contribute their novel work.

***** Workshop concept *****

The development of intelligent behaviour depends strongly on active exploration and sensorimotor interactions with the world. However, it is not clear how multimodal sensorimotor temporal and spatial associations could be integrated into a single representation of the self or an individual sense of agency or ownership.

What is a sensorimotor self? How can sensorimotor learning ground the development of the self? And what could be the benefits of having an integrated bodily self-model in order to support effective actions in an uncertain world (e.g., through prediction)?

This interdisciplinary workshop brings together cognitive scientists to address these questions and to discuss the challenges and possibilities arising for building real life robots. The purpose is to: i) shed some light on the development and construction of the sensorimotor self; ii) discuss computational models that use self-perceptive learning as a basis for active interaction and agency inference; and iii) propose the steps toward future interdisciplinary research regarding the active self concept.

***** Program committee *****

Verena Hafner, Adaptive Systeme. Humboldt University of Berlin, Germany.
Brian Scassellati, Social Robotics Lab. Yale, USA.
Yukie Nagai, National Institute of Information and Communications Technology, Japan.

***** Organizers *****

Pablo Lanillos, Technical University of Munich, Germany.
Miriam Kyselo, Technical University of Berlin, Germany.
Lorenzo Jamone, Queen Mary University of London, UK.

***** Supported by *****

IEEE ICDL-EpiRob, Cognitive and Developmental Systems Technical committee, and SELFCEPTION project