Call for contributions
(DEVL-HR-AmI) ALIFE'2018 Workshop

Cognitive Development, learning and representation building in human-robots and ambient intelligence systems

This workshop is organized as a joint event with ALIFE'2018 Conference to be held in Tokyo, Japan, July 23-27, 2018.

The aim of the workshop is to bring together researchers interested in developmental learning and bio-inspired approaches for artificial cognitive systems and practitioners from digital industries, robotics and Ambient Intelligence systems, to exchange their knowledge and experiences regarding the question of building representations in human-robots and Ambient Intelligence Systems. The workshop's aim is also to cross fertilize the exchanges between participants from different disciplines and sectors, around the progress of the state of the art in foundational theories and their potential transfer and deployment in applications in real world settings, with robots and Ambient Intelligence Systems. A particular attention will be given to steer the program towards bridging the gap between theory and practice. This event will be backed by the ANR Labcom project Behaviors.ai (Project of a joint laboratory between the LIRIS-CNRS laboratory and the Hoomano company). The aim of Behaviors.ai is to investigate new approaches of artificial intelligence, and more precisely developmental learning, to create new ways to interact with social robots to make them more empathetic and able to continuously learn as they interact in "real life" environments

Submission Guidelines

Submissions from both academia and Industry are welcome as far as the submitted content is relevant to the topic of the workshop. Research papers, experience reporting, position papers or demonstrations will all be considered by the scientific committee. Submission format follows the

guidelines of ALIFE 2018 Conference (http://2018.alife.org/submission/). Please note that submission link for the workshop is : https://easychair.org/conferences/?conf=devl-hr-ai-2018

For each category of the above mentioned submissions, it is possible to either submit an abstract (2-page length limit) or a more detailed version (8-page length limit).

- ***Research, application or position papers,*** related to one of the mentioned topics or other topics related to the general theme of the workshop and reporting either ongoing research or more advanced

research. Position papers aims to contribute to discussions on the challenges of the workshop topic.

- ***Industrial papers*** reporting successful experiences or challenging ongoing developments related to the workshop topic are particularly welcome and could be in either short format (2-page length limit) or long format (8-page length limit).
- ***Demonstrations*** related to one of the mentioned topics or other topics related to the general theme of the workshop, are also very welcome. A demonstration submission is limited to 6-page length, with a description of the addressed problem and the objectives of the demonstration, the demonstrated scenario and the main observations or results shown by the demonstration. A link to a video of the demo is appreciated.

Each submission should be uploaded as a single file, in PDF format only, to the Easychair system: https://easychair.org/conferences/?conf=devl-hr-ai-2018. All submissions will undergo a peer review process.

NOTE: At least one author of every accepted paper must be registered to the conference.

List of Topics

- Artificial Cognitive Development
- Artificial Intelligence and Social Robots
- Developmental Learning / Developmental robotics
- Autonomous Adaptive Systems;
- Representation co-construction between human and artificial agents (robots/ambient system)
- Multi-modal Human-Robots interactions
- Bio-Inspired mechanisms for cognitive self-development;
- Potential applications of developmental theories in robotics and ambient artificial intelligent systems
- Knowledge transfer, transfer learning, representation sharing ..
- Evolutionary approaches and mechanisms for cognitive development in artificial systems
- ...

Important Dates

- Deadline for abstract submission: June 1, 2018
- Deadline for paper submission (research or application paper, position paper, demo, industrial paper): June 6, 2018
- Notification: June 15, 2018
- Workshop date (half-day): July, 25th, 2018

Committees

Organizing committee

- Salima Hassas, LIRIS-CNRS University of Lyon 1, France **(Contact: salima dot hassas at univ-lyon1 dot fr)**
- *Xavier Basset, Hoomano, France*
- Amélie Cordier, Hoomano, France
- Stephane Doncieux, ESIR-UPMC, FranceX
- Amal El Fallah Seghrouchni, LIP6, UPMC, France
- Frank Guerin, University of Aberdeen, Scotland (UK)
- Bipin Indurkhya, AGH University, Poland
- Leonardo Lana De Carvalho, FIH / UFVJM, Brazil
- Mathieu Lefort, LIRIS-CNRS University of Lyon 1, France
- Georgi Stojanov, American University of Paris, France

Preliminary Program and Invited Speakers

- Invited Talk by : Prof. Miniru Asada
- Invited Talk by: Prof. Kasu Takashio
- Presentation of Hoomano in Japan.
- Presentation of Behaviors.ai Project
- Panel involving Academic and industrial participants / discussion of potential international collaborations.

Venue

The conference will be held in Tokyo, Japan (see ***ALIFE'2018*** website for more information).

Contact

All questions about submissions should be emailed to *salima dot hassas at univ-lyon1 dot fr*