

Second Annual IEEE ICDL and EpiRob 2012: Conference Summary and Report

OUR community is represented by two organizations that for several years hosted separate annual meetings. The International Conference on Development and Learning (ICDL) first met in 2000, while the International Conference on Epigenetic Robotics (EpiRob) had its first meeting a year later. In 2011, the two communities explored the process of merging by organizing the first joint international meeting. The 2012 ICDL-EpiRob meeting in San Diego, CA, USA, was the second annual gathering of these two closely related organizations, both devoted to the study and understanding of development in natural and artificial systems. In particular, the San Diego conference helped to consolidate the enthusiasm, collegiality, and innovative research discoveries that were established during the previous year in Frankfurt, Germany. In addition, the members of both communities not only reflected their unique styles of thought, analysis, and discourse, but at the same time, they also continued to build a pathway toward greater collaboration and shared vision for the field.

The conference was situated in the Gaslamp District of downtown San Diego, and provided the 112 conference attendees with spectacular weather, an impressive range of meal options, and many cultural and recreational attractions. Despite these temptations, the nearly 3-day meeting maintained a high energy level and consistently full attendance at the research talks, special sessions and tutorials, and poster sessions. This was facilitated, in part, by maintaining a single-track format for the entire meeting. In addition, Program Chairs Clayton Morrison (University of Arizona) and Yukie Nagai (Osaka University) diligently supervised the review process, which included 112 submissions. They then created a balanced, high-quality program by carefully assigning the accepted submissions as oral or poster presentations (i.e., 22 and 90, respectively).

In contrast to the 2011 meeting, which hosted the special sessions and tutorials during a single preconference day, this year these events were integrated into the 3-day conference schedule. The first presentation of the conference was provided by invited keynote speaker Minoru Asada (Osaka University), while the remaining three invited keynote speakers gave presentations over the next few days: Andrea Chiba (UC San Diego), Jochen Triesch (Frankfurt Institute for Advanced Studies), and Piotr Winkielman (UC San Diego). As in previous years, the invited speakers represented a wide spectrum of disciplines and research methods, including neuroscience, psychology, robotics, and machine learning. Each of the invited talks provided a high point for the meeting, and in particular, each was engaging, accessible, stimulating, and thought-provoking.

Several conference participants received travel grants, which were generously provided by the IEEE Computational Intelligence Society and the NSF Temporal Dynamics of Learning Center. During the awards banquet, John Weng (Michigan State University) and Zhengyou Zhang (Microsoft) were honored for their outstanding leadership and contributions to our research community. In recognition of the highest-quality submissions, the top 20% of the accepted papers were named as “Papers of Excellence.” In addition, six outstanding papers received the “Best Paper” award.

Experiment + Computational Model:

- Kachergis *et al.*, “Cross-situational word learning is better modeled by associations than hypotheses.”
- Bonawitz *et al.*, “Sticking to the evidence? A computational and behavioral case study of micro-theory change in the domain of magnetism.”

Computational Model of Development:

- Moulin-Frier and Oudeyer, “Curiosity-driven phonetic learning.”

Computational Model of Perception:

- Talbot and Movellan, “An expected motion Information Model of Saliency for Active Cameras.”

Methodology:

- Raudies *et al.*, “Understanding the Development of Motion Processing by Characterizing Optic Flow Experienced by Infants and their Mothers.”

Neuroscience:

- Chelian *et al.*, “Model of the interactions between neuromodulation and prefrontal cortex during a resource allocation task.”

We offer our sincerest thanks to all of the people who provided their time and expertise to the 2012 meeting, as well all of the attendees who helped make it a successful event. During the conference business meeting, proposals were submitted and approved for the next two annual meetings: Osaka, Japan, in 2013 and Genoa, Italy, in 2014. So, we look forward to seeing you in Japan next year!

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