

Call for Papers

Second International Workshop on
Epigenetic Robotics:
Modeling Cognitive Development in Robotic Systems
<http://www.epigenetic-robotics.org>

August 10-11, 2002
Edinburgh, Scotland
(held in conjunction with [SAB 2002](#))

Deadline for Submission of Papers: 28 February 2002

This workshop focuses on the mutual rapprochement of developmental psychology and robotics, and on three properties of natural and artificial systems:

- (a) the embodiment of the system;
- (b) its situatedness in a physical and social environment;
- (c) a prolonged *epigenetic developmental process* through which increasingly more complex cognitive structures emerge in the system as a result of interactions with the physical and social environment.

In addition to basic research goals in cognitive science, epigenetic robotics research includes practical goals of: (1) enabling robots and other artificial systems to better adapt to their environments, and to better adapt to changes in these environments, and (2) easing the problem of programming robots—by programming the robots to develop skills for any particular environment instead of programming robots for specific environments.

Subject Areas include, but are not limited to:

- The role of motivation, emotions, and value systems in development;
- The development of: concepts, consciousness and self-awareness, emotion, imitation, intentionality, intersubjectivity, joint attention, learning, motivation, non-verbal and verbal communication, self, sensorimotor schemata, shared meaning and symbolic reference, social learning, social relationships, social understanding (“mind reading”, “theory of mind”), value systems;
- Interaction between innate structure, ongoing developing structure, and experience;
- Related issues in algorithms, robotics, simulated robots, and embodied systems;
- Strong AI (true intelligence and autonomy) versus weak AI;
- Related issues from human and nonhuman empirical studies.

For a summary of the papers from the first workshop see Zlatev and Balkenius (2001).

Sponsors

Communications Research Laboratory, Japan

Location

The workshop is being held in Edinburgh, Scotland, at the University of Edinburgh. The workshop follows the 2002 Simulation of Adaptive Behavior Conference (SAB 2002).

Invited Speakers

Luc Steels (AI Laboratory, VUB, Brussels; Sony Computer Science Lab, Paris)

Colwyn Trevarthen (Dept. of Psychology, University of Edinburgh, UK)

John Weng (Computer Science and Engineering, Michigan State U., USA)

Submissions

Papers not exceeding eight (8) pages should be submitted electronically (PDF or Postscript) as attachment files to [Yiannis Demiris](mailto:y.demiris@ic.ac.uk) (y.demiris@ic.ac.uk). Further instructions to authors will be posted on the workshop home page:

<http://www.epigenetic-robotics.org>

Important Dates

February 28, 2002: Deadline for submission of papers

April 19, 2002: Notification of acceptance

June 5, 2002: Deadline for camera ready-papers

August 10-11, 2002: Workshop

Organizing Committee

Christian Balkenius (Cognitive Science, Lund University, Sweden)

Yiannis Demiris (Intelligent and Interactive Systems, Imperial College, UK)

Hideki Kozima (Communications Research Laboratory, Japan)

Yuval Marom (Division of Informatics, University of Edinburgh, UK)

Christopher Prince (Computer Science, University of Minnesota Duluth, USA)

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Deb Roy (Media Laboratory, MIT, USA)
Stefan Schaal (Computer Science Department, USC, USA)
Georgi Stojanov (Computer Science Institute, SS Cyril and Methodius University, Macedonia)
Gert Westermann (CBCD, Birkbeck, University of London, UK)
Jordan Zlatev (Linguistics, Lund University, Sweden)

Publication of Papers

Papers will be published in a proceedings, and archived at [CogPrints](#). Authors of selected papers will be offered the opportunity to prepare extended versions of their papers for submission to a dedicated issue of the journal *Adaptive Behavior*.

REFERENCES

- Zlatev, J. & Balkenius, C. (2001). Introduction: Why “epigenetic robotics”? *Proceedings of the First International Workshop on Epigenetic Robotics: Modeling Cognitive Development in Robotic Systems* (pp. 1-4). Lund University Cognitive Studies, Volume 85. Available at:
<http://www.lucs.lu.se/Epigenetic-robotics/Papers/Zlatev.Balkenius.2001.pdf>