

**Information and Computation, special issue on "Hybrid Systems and Biology".
Submission deadline: February 15, 2013**

Guest Editors:

- Ezio Bartocci (Vienna University of Technology, Austria)
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Journal web site: <http://www.journals.elsevier.com/information-and-computation/>

Information and Computation calls for paper submissions for a peer-reviewed special issue on "Hybrid Systems and Biology". This Special Issue stems from the First International Workshop on Hybrid Systems and Biology held in Newcastle in September 2012 (<http://hsb2012.units.it/>) and now it invites additional papers with the aim to present cutting-edge research in the area of the meeting. Original papers are sought in all areas that relate to the relevance and potential of hybrid systems modeling and analysis in systems biology. Of special interest are contributions that discuss complex biological systems requiring the adoption of computational methods that have not been investigated so far in the context of hybrid systems, as well as extensions of already existing techniques. Topics of interest include, but are not limited to:

- Computational and mathematical analysis techniques for hybrid systems (i.e. reachability, model checking, abstract interpretation, bifurcation theory for hybrid dynamical systems, stability analysis, etc.)
- Hybrid system identification techniques (learning the model from the experimental data)
- Efficient simulation techniques for hybrid systems
- Hybrid modeling languages
- Hybrid systems coping with incomplete and uncertain information
- Hierarchical Hybrid Systems for multi scale analysis
- Stochastic Hybrid Systems
- Hybrid simulation (stochastic/deterministic) methods
- Abstraction and Approximation techniques
- Hybrid Systems modeling for Synthetic Biology
- Hybrid Control of biological systems
- Sensitivity analysis for hybrid systems
- Behaviour-driven parameters identification for hybrid systems
- Analysis and simulation tools

Papers should be submitted to luca@dmi.units.it and ezio.bartocci@tuwien.ac.at in the Elsevier format (see link below).

Manuscripts submitted to this special issue should have at most 25 pages, including figures, tables, and the list of references. Manuscripts should be *original papers*: manuscripts are accepted for review with the understanding that the same work has not been published, nor is presently submitted, elsewhere. However, papers previously presented in conference proceedings of limited circulation are usually eligible for publication in revised and extended form.

For queries about this special issue, please feel free to contact the special issue guest editors:

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Important dates:

- Paper submissions: February 15, 2013
- Acceptance notification: May 15, 2013
- Final papers: June 30, 2013

Submission guidelines:

- http://www.elsevier.com/wps/find/journaldescription.cws_home/622844/authorinstructions

