PsychoComputational Models of Human Language Acquisition (PsychoCompLA-2009)

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Workshop Topic
The workshop is devoted to psychologically-motivated computational models of language acquisition. That is, models which are compatible with research in psycholinguistics, developmental psychology and linguistics.

Invited Speakers
* Tom Griffiths, University of California, Berkeley
* Hinrich Schütze, University of Stuttgart

Workshop History
This is the fifth meeting of the Psychocomputational Models of Human Language Acquisition workshop following PsychoCompLA-2004, held in Geneva, Switzerland as part of the 20th International Conference on Computational Linguistics (COLING-2004), PsychoCompLA-2005 as part of the 43rd Annual Meeting of the Association for Computational Linguistics (ACL-2005) held in Ann Arbor, Michigan where the workshop shared a joint session with the Ninth Conference on Computational Natural Language Learning (CoNLL-2005), PsychoCompLA-2007 held in Nashville, Tennessee as part of the 29th meeting of the Cognitive Science Society (CogSci-2007), and PsychoCompLA-2008 held in Washington D.C., as part of the 30th meeting of the Cognitive Science Society (CogSci-2008). Given the increasing interest, this year the workshop will be spread over two days directly before the main conference of the 31st meeting of the Cognitive Science Society (CogSci-2009) which begins on July 30th, 2009.

Workshop Description
The workshop will present research and foster discussion centered around psychologically-motivated computational models of language acquisition, with an emphasis on the acquisition of syntax. In recent decades there has been a thriving research agenda that applies computational learning techniques to emerging natural language technologies and many meetings, conferences and workshops in which to present such research. However, there have been only a few (but growing number of) venues in which psycho-computational models of how humans acquire their native language(s) are the primary focus. Psychocomputational models of language acquisition are of particular interest in light of recent results in developmental psychology that suggest that very young infants are adept at detecting statistical patterns in an audible input stream. Though, how children might plausibly apply statistical 'machinery' to the task of grammar acquisition, with or without an innate language component, remains an open and important question. One effective line of investigation is to computationally model the acquisition process and determine interrelationships between a model and linguistic or psycholinguistic theory, and/or correlations between a model's performance and data from linguistic environments that children are exposed to.

Topics and Goals
Short papers that present research on (but not necessarily limited to) the following topics are welcome:
* Models that address the acquisition of word-order;
* Models that combine parsing and learning;
* Formal learning-theoretic and grammar induction models that incorporate psychologically plausible constraints;
* Comparative surveys that critique previously reported studies;
* Models that have a cross-linguistic or bilingual perspective;
* Models that address learning bias in terms of innate linguistic knowledge versus statistical regularity in the input;
* Models that employ language modeling techniques from corpus linguistics;
* Models that employ techniques from machine learning;
* Models of language change and its effect on language acquisition or vice versa;
* Models that employ statistical/probabilistic grammars;
* Computational models that can be used to evaluate existing linguistic or developmental theories (e.g., principles & parameters, optimality theory, construction grammar, etc.)
* Empirical models that make use of child-directed corpora such as CHILDES.
This workshop intends to bring together researchers from cognitive psychology, computational linguistics, other computer/mathematical sciences, linguistics and psycholinguistics working on all areas of language acquisition. Diversity and cross-fertilization of ideas is the central goal.

**Submission details**

Authors are invited to submit short papers of (maximally) 2 pages of narrative plus 2 pages for data, references and other supplementary materials. Papers should be anonymous, clearly titled and the narrative section should be no more than 1400 words in length. Either PDF, or MS Word formats are acceptable. Please include a cover sheet (as a separate attachment) containing the title of your submission, your name, contact details and affiliation. Send your submission electronically to:

Email: Psycho.Comp@hunter.cuny.edu
with PsychoCompLA-2009 Submission somewhere in the subject line.

**Publication**

The accepted papers will appear in the online workshop proceedings. Full papers of accepted short papers will be considered in Fall 2009 for inclusion in an issue of the new Cognitive Science Society Journal - topiCS - whose focus will be psychocomputational modeling of human language acquisition.

Submission deadline: May 15, 2009

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**Workshop Organizers**

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**Workshop Co-Organizer**

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