

Cognition and AI

Capturing Cognitive Plausibility and Informing Psychological Processes

Special track at
the 23rd International FLAIRS Conference
in cooperation with the American Association for Artificial Intelligence

[Daytona Beach, Florida, USA](#)

May 19th - 21st, 2010

Paper submission deadline: November 23rd, 2009

Notifications: January 22nd, 2010

Camera ready version due: February 22nd, 2010

Expanded submission for publication in JETAI: April 23rd, 2010

All accepted papers will be published as FLAIRS proceedings by the AAI

**A small number of submissions to this special track will be selected for
publication in the Journal of Experimental and Theoretical Artificial
Intelligence (JETAI)**

Call for Papers

What is the motivation for the C&AI special track?

There is little doubt that cognitive psychology and AI have had an immense impact on each other's theoretical development. AI has explored and incorporated psychologically plausible models of human thought and behavior for a myriad of purposes, ranging from algorithmic fine-tuning to robotics and intelligent systems. In turn, cognitive psychology has made new discoveries and gained greater understanding by capitalizing on the processing capacities of computational techniques. The C&AI special track is motivated by this partnership of cognition and AI. The track will cover a wide-range of issues that pertain to the influence of cognitive psychology in AI and how insights obtained from computational principles can benefit the study of human cognition.

What are the goals?

The goal of this special track is to spotlight theoretical and experimental research that explains, integrates, and models human cognition with various computational approaches.

Who might be interested?

This special track is an open forum for interdisciplinary research that spans the domains of cognitive psychology, computer science, philosophy, and the learning sciences. If you use computational techniques to better understand cognitive phenomena, or are developing AI that instantiates cognitive processes, then this track is for you.

What are some example topics?

Given the scope of the C&AI special track, the following should be considered a list of possible areas of interest; however, all studies as they relate to cognition and AI are welcome.

1. Bases for evaluating AI and cognitive psychology
2. Knowledge representations (e.g., symbolic, statistical, embodied, etc.)
3. Reasoning e.g., monotonic and non-monotonic logic, etc.)
4. Inference
5. Learning
6. Planning
7. Problem solving

8. Language and communication
9. Perception
10. Affect
11. Game theory
12. Goal-directed behaviors
13. Constraint satisfaction problems
14. Cognitive architectures
15. Intelligent systems
16. Models of agency
17. Neural networks
18. Autonomous systems
19. Robotics
20. Dynamical cognition
21. Situated cognition
22. Statistical and probabilistic techniques (e.g., Bayesian, co-occurrence, etc.)
23. Novel methodologies (e.g., eye-tracking, body sensors, arm movements, etc.)

Submission Guidelines for the C&AI track

Interested authors should format their papers according to AAAI formatting guidelines. Please download the AAAI author kit [HERE](#). The papers should be original work (i.e., not submitted, in submission, or submitted to another conference while in review). Papers should not exceed 6 pages (2 pages for a poster) and are due by November 23rd, 2009. For FLAIRS-23, the 2010 conference, the reviewing is a double blind process. Fake author names and affiliations must be used on submitted papers to provide double-blind reviewing. Papers must be submitted as PDF through the EasyChair conference system, which can be accessed through the main conference web site (<http://www.FLAIRS-23.info>). Note, do not use a fake name for your EasyChair login - your EasyChair account information is hidden from reviewers. Authors should indicate the special track of C&AI for submissions. **The proceedings of FLAIRS will be published by the AAAI.** Authors of accepted papers will be required to sign a form transferring copyright of their contribution to AAAI. An author of each accepted paper is required to register, attend, and present the paper at FLAIRS.

Please, check the website <http://www.flairs-23.info/> for further information.

Conference Proceedings

Papers will be refereed and all accepted papers will appear in the conference proceedings, which will be published by AAAI Press.

Full Journal Publication to JETAI

Based on the quality of submissions, the program committee will select a small number of C&AI special track papers for publication in the [Journal of Experimental and Theoretical Artificial Intelligence](#) (JETAI). To be eligible for selection, authors will be required to submit an expanded version of the original conference proceeding that contains significant theoretical or experimental additions. The expanded version will be peer-reviewed by program committee members and final decisions for acceptance will be made by the organizing committee. Because the organizing committee has secured special arrangements with the journal, questions about submission content should be referred to the organizing committee. However, authors can visit the JETAI “[Instruction to Authors](#)” site for basic formatting inquiries. Expanded papers must be submitted to Nicholas Duran (nduran@memphis.edu) by April 23rd, 2010.

Organizing Committee

[Nicholas Duran](#), Department of Psychology, University of Memphis, nduran@memphis.edu

[Sidney D’Mello](#), Department of Computer Science, University of Memphis, sdmello@memphis.edu

[Rick Dale](#), Department of Psychology, University of Memphis, radale@memphis.edu

Current Program Committee

Eric Dietrich

Steven Gutstein

Art Graesser

Anne Warlaumont

Danielle McNamara

Jon Willits

Stan Franklin

Stephen Briner

Christopher Kurby

Kristy Snyder-Tapp

Patrick Jeuniaux

Jenny Roche

Further Information

Questions regarding the C&AI special track should be addressed to the track co-chairs:

Nicholas Duran, nduran@memphis.edu

Sidney D'Mello, sdmello@memphis.edu

Rick Dale, radale@memphis.edu

Questions regarding any other FLAIRS special tracks should be addressed to the special track co-ordinator: Philip McCarthy, philmccarthy1@gmail.com

Conference Chair: [David C. Wilson](#), University of North Carolina at Charlotte, USA

Program Co-Chairs: [Chas Murray](#), Carnegie Learning, USA

[Hans Guesgen](#), Massey University, New Zealand

Special Tracks Coordinator: [Philip McCarthy](#), University of Memphis, USA

Invited Speakers

[Janet Kolodner](#), Professor in the College of Computing at the Georgia Institute of Technology

[Eugene Charniak](#), Professor of Computer Science at Brown University

[Herb Clark](#), Professor of Psychology at Stanford University

Conference Web Sites

Paper submission site: follow the link for submissions at <http://www.FLAIRS-23.info>

C&AI special track web page: http://academic.nickduran.com/FLAIRS_C&AI.html

FLAIRS-2010 conference web page: <http://www.flairs-23.info/>

Florida AI Research Society (FLAIRS): <http://www.flairs.com>

Alternative Special Tracks

For researchers submitting to C&AI, there are also 12 other special tracks that are open to new submissions. Please feel free to submit an additional research report to one (or more) of the following tracks:

1. Data Mining
2. Case-Based Reasoning
3. Artificial Intelligence Education
4. AI, Cognitive Semantics and Computational Linguistics: New Perspectives
5. Uncertain Reasoning
6. Applied Natural Language Processing
7. Games & Entertainment
8. AI Planning and Scheduling
9. AI and Second Language Learning
10. Learning in Intelligent Systems
11. Computational Biology and Bioinformatics
12. Intelligent Tutoring Systems

For more information, please consult the main conference web page: <http://www.flairs-23.info/>