
Continuing Advances in Cognitive Systems

Pat Langley

PATRICK.W.LANGLEY@GMAIL.COM

Silicon Valley Campus, Carnegie Mellon University, Moffett Field, CA 94305 USA

Department of Computer Science, University of Auckland, Private Bag 92019, Auckland 1142 NZ

This is the third volume of *Advances in Cognitive Systems*, a journal that publishes reports on progress toward the original aim of artificial intelligence: understanding the computational nature of the mind. Articles typically focus on high-level aspects of cognition, structured representations of knowledge and experience, and system-level accounts of intelligent behavior, and they often draw on insights from psychology, including the role of heuristics to manage complexity. Research addresses a wide range of problems and draws on a rich variety of computational techniques.

The journal differs from most periodicals by its association with an annual conference of the same name, and the previous volume served as the online proceedings for the first such meeting. In slight contrast, this one includes expanded and revised versions of selected papers from the *Second Conference on Advances in Cognitive Systems* (<http://www.cogsys.org/conference/2013/>), which was held in Baltimore, Maryland, from December 12 to 14, 2013, approximately one year after its predecessor took place in California.

The Baltimore meeting comprised 25 oral presentations, including four invited talks by senior researchers, and some additional 17 poster presentations at an evening reception. There were also two affiliated workshops on the final day, one on goal reasoning and another on metacognition. The event was well attended, attracting over 70 registered participants, the majority from North America but many of them from across the Atlantic and Pacific Oceans. Attendees ranged from established scientists to graduate students who shared a commitment to the cognitive systems paradigm.

The conference received 55 submissions, from which 19 papers were selected for inclusion in the online proceedings (<http://www.cogsys.org/proceedings/2013/>) by the program chairs, Matthew Klenk and John Laird, based on reviews from a seven-person organizing committee and a 32-member program committee. From this set, the chairs invited 11 sets of authors to include updated versions of their papers in the journal. These underwent a round of copyediting and revision before their publication, so that the articles appearing here, although clearly descended from the conference papers, are considerably more complete and polished.

The contents of this volume reflect the typical range of research on cognitive systems. Papers address domains as diverse as everyday activities, biology, diagnosis, and game playing, and they focus on cognitive abilities that include memory storage and retrieval, plan understanding, explanatory reasoning, sentence and dialogue processing, social interaction, and metacognition. Within this breadth, they share a concern with high-level aspects of cognition that appear central to understanding the nature of intelligence. We encourage other researchers who are active in the area to submit papers either to the next conference or directly to the journal.