Editorial to the Special Issue on "The Best of ICCM 2012"

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The International Conference on Cognitive Modeling (ICCM) is the premier international conference for research on computational models and computation-based theories of human behaviour. Since its inception in 1996, ICCM has developed to become a leading forum for presenting, discussing, and evaluating the complete spectrum of cognitive models, including connectionist, symbolic, and Bayesian models, dynamical systems, and cognitive architectures. ICCM invites basic and applied research across a wide variety of domains, ranging from low-level perception and attention to higher-level problem solving and learning.

The 11th ICCM, ICCM-2012 (http://www.iccm2012.com), was held at the Technical University of Berlin in Germany between 13th and 15th April and chaired by Uwe Drewitz, Nele Russwinkel and Hedderik van Rijn. The conference attracted a large number of high quality submissions resulting in a program of 20 talks, two symposia and 58 posters. The conference also featured keynote talks by three leading figures; Niels Taatgen, Klaus Oberauer, and Alex Kirlik, covering architecture-based modeling of cognitive skill, connectionist modeling of working memory, and the application of cognitive modeling to cognitive engineering respectively.

One of the aims of ICCM is to provide a supportive environment for students to present and discuss their work and to this end prizes are awarded for the best student paper and two best student posters. This year Krzysztof Andrelczyk was awarded the best student paper prize and Nate Derbinsky and Olivia Guest were awarded the best student poster prices. Updated versions of the papers by Andrelczyk and Derbinsky are included in this collection.

During the conference, it was decided to strengthen the organizational structure of ICCM and so a steering committee, consisting primarily of past conference chairs, was instated to act as an informal governing board. One of the first activities of the steering committee was to gather the websites of previous conferences together at a central location (http://iccm-conference.org), at which address all future conferences will also be announced.

The 13 papers in this special edition represent a selection of the research that received the highest evaluations during the original reviewing process, and the papers that we considered to be the most valuable contributions to the conference in terms of the quality of the research presented and the reception they received. We believe they provide an accurate reflection of the broad range of research questions and methods as well as the quality of cognitive modeling found at ICCM-2012. As such, these papers provide a clear illustration of the strong program of research presented at the conference that, in turn, reflects the growing, vibrant international cognitive modeling community.