The Twentieth National Conference on Artificial Intelligence

Manuela Veloso and Subbarao Kambhampati

■ The Twentieth National Conference on Artificial Intelligence was held July 9–13, 2005, in Pittsburgh, Pennsylvania. The conference, which marked the twenty-fifth anniversary of the American Association for Artificial Intelligence (AAAI), received 803 submissions to the technical program. All papers were double-blind reviewed, and 150 papers were accepted for oral presentation, while 79 papers were accepted for poster presentation. The keynote address was delivered by Marvin Minsky.

The Twentieth National Conference on Artificial Intelligence was held during July 9-13 in Pittsburgh, Pennsylvania. The conference was attended by about 975 representatives from academe and industry. This was a special year for the conference because it was the twenty-fifth anniversary of the first AAAI conference held in 1980. The field of AI has grown and diversified in many directions since that first conference at Stanford University a quarter century ago. One of the aims of this year's conference was to recapture some of the heady unity of purpose from those early years. By all accounts, the conference succeeded in reaching that goal.

Our efforts to broaden the conference while retaining its high quality got off to a rousing start with a record number of 803 submissions to the technical program. This was an 80 percent increase in submissions from recent years. We had submissions from 40 countries, with 48 percent of the submitted papers from outside the United States. Since its inception AAAI has been justifiably proud of the high quality of reviewing and technical content. We tried to cement this reputation with several novel features. In keeping with AAAI tradition, each paper received a double-blind review by the three program committee (PC) members. The assigned senior PC member then facilitated the discussion among the reviewers. A novel feature this year was the opportunity for the authors to read the reviews and provide a response of limited length. The author feedback feature seems to be a success, judging from the number of authors who took advantage of it and the amount of PC discussion the responses generated. The PC discussions resulted in accept or reject decisions that were then reviewed in a "virtual" meeting between senior PC members and the program chairs. As a result of this rigorous process, we accepted 150 papers for oral presentation and 79 papers for poster presentation. All of them got the same number of pages in the proceedings. The poster presentation track was a first for AAAI.

We were delighted to have Marvin Minsky give the keynote speech for this conference. Minsky's thought-provoking talk "Internal Grounding, Reflection, and the Illusion of Self-Consciousness" started the conference off on the right note, highlighting the diversity of intelligent processes and reasoning methods. On the second day, Ronald Brachman gave the presidential address, in which he made an eloquent case for AAAI as the unifying forum to drive the central integrating goals of AI enterprise.

Our other invited speakers, Tucker Balch, Chitta Baral, Amy Greenwald, Marti Hearst, Sridhar Mahadevan, and Dana Nau all talked about the latest advances in their varied areas of research to full-house audiences. The conference schedule was arranged to avoid conflicts between invited talks and technical paper presentations. There was also a packed megasession on the second evening with 79 technical papers presented as posters, the student abstracts, intelligent system demonstrations, and robot exhibitions.
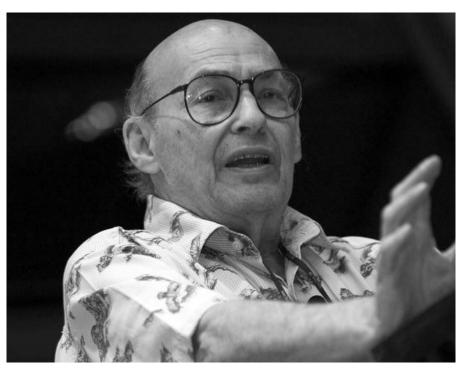
The conference's outstanding paper award went to Vincent Cicirello and Stephen Smith for their paper "The Max K-Armed Bandit: A New Model of Exploration Applied to Search Heuristic Selection." Joerg Hoffmann and Gaurav Sukhatme were recognized for their outstanding service on the PC and the senior PC, respectively.

When the first AAAI conference was held a quarter century ago, it was among the few major forums for presenting the results of AI research. One sign of the evolution of the field is the existence of many high-quality "sister conferences" in AI. While the presence of these other conferences is a healthy sign of the field's growth, it has lead to an increased perception that the enterprise of AI is now too

spread out, making it harder to sustain some of the shared purpose of the early days. As the premier general conference in AI, the AAAI National Conference is an ideal forum to address this concern, and accordingly we put together a sister conference highlights track this year. We were fortunate that representatives from 15 highly visible AI conferences agreed to summarize the exciting developments reported at their conferences. We were gratified by their enthusiastic willingness to come to the AAAI conference. Judging by the healthy attendance at these sessions, the sister conference track seems to have been a success. This is an indication that for all its incredible diversification, the research in AI still exerts a strong unity of purpose. During a special lunch in honor of the track speakers, we discussed ideas to facilitate coordination among the conferences.

The main technical program was complemented by exciting tutorial, workshop, demonstration, student abstract, and doctoral consortium programs. Yolanda Gil and Qiang Yang collected a vibrant and broad tutorial program consisting of 16 tutorials covering material of interest to beginners and senior researchers alike. Adele Howe and Peter Stone selected a program of 14 workshops devoted to an array of cutting-edge topics. Their jobs were particularly challenging this year because of the shifted deadlines for the main conference. Biplav Srivastava and Belinda Thom selected 22 entries for the intelligent systems demonstration program. Sheila Tejada and Paul Rybski organized a varied robot demonstration program. Maria Fox and Avi Pfeffer coordinated the student abstract program and selected 26 submissions. Kiri Wagstaff organized the AAAI/SIGART doctoral consortium and selected 16 participants. Carla Gomes helped in recruiting external sponsors for the conference. This year we also had a general game-playing competition, organized by Michael Genesereth.

The conference itself was lively and energetic, aided both by the increased attendance figures (up by about 25 percent) and the more intimate location of the conference (in a hotel

Marvin Minsky Delivering Keynote at AAAI-05 in Pittsburgh, Pennsylvania.

rather than a convention center). Tim Finin helped set up the first-ever AAAI student blog that provided a successful forum for near real-time commentary by the students. The AAAI staff, ably headed by Carol Hamilton and assisted by Keri Harvey, provided all the logistical support to make the conference a success. Their job this year was particularly challenging because of a significantly shorter interval between the paper submission deadline and the conference dates.

It was an extraordinary privilege for both of us to work together on this conference and get a ringside view of the latest developments in the field. The first AAAI conference took place 25 years ago, and it is close to 50 years since the inception of the field. AI continues to be a fascinating area of research, making robust progress toward its many compelling holy grails, while confronting myriad problems of immediate importance. We hope the conference gave all the attendees a glimpse of the excitement of AI.

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ing in 1980 and an MS in electrical and computer engineering in 1984 from the Instituto Superior Tecnico in Lisbon. Her long-term research goal is the effective construction of teams of intelligent robots where cognition, perception, and action are combined to address planning, execution, and learning tasks, particularly in uncertain, dynamic, and adversarial environments. Veloso is a Fellow of AAAI and was awarded an NSF Career Award in 1995 and the Allen Newell Medal for Excellence in Research in 1997. She was program cochair of AAAI-05 and will be program chair of IJCAI-07.

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