Welcome to New York City and the 2006 IEEE Conference on Computer Vision and Pattern Recognition (CVPR). This year’s conference is the twenty-fourth. Besides the main conference, CVPR includes a series of workshops and tutorials, demonstrations and exhibits, and a video proceedings. Conforming with recent CVPR’s, registrants for the main conference have a passport to attend any of the other events, and all of the proceedings are presented on a single DVD. We hope that you’ll explore all that CVPR has to offer.

Our planning for CVPR 2006 began with listening to many people involved in the last few international computer vision conferences (ICCV, ECCV, CVPR). We talked with chairs, area chairs, reviewers, authors, and attendees. These discussions highlighted a small number of areas where improvements on the existing processes or conventions might be worthwhile. These areas included the social program, the production of printed proceedings, the layout of the submitted papers, and the format of the conference.

However, our primary concern was to ensure the best possible paper selection process, of which the most important component is the assignment of papers to reviewers. If reviewers are given papers in areas on which they are expert, the reviews will be of high quality. In contrast, if a reviewer’s stack of papers is randomly drawn from the set of submissions, the reviews will be poor. As CVPR has grown, the volume of papers which must be handled has increased beyond the abilities of even five chairs to assign to reviewers. This year we handled 1,131 papers, requiring nearly 3,500 reviews. Of these, 54 were ultimately selected for oral presentation, with 264 posters.

Recent conferences have therefore moved to a system where the area chairs assign reviewers to papers. This has the benefit of greatly widening the pool of reviewers and the precision of the assignments, but led to difficulties with reviewer load balancing and the management of conflicts of interest. Existing approaches to load balancing had imposed a “first come, first served” process, where some reviewers were quickly overloaded by area chairs who happened to be in an appropriate time zone when the paper assignments were made. Some existing approaches also restricted the choice of reviewers to a pre-nominated pool, which restricts the area chair’s ability to choose the best reviewer for each paper. We avoided these problems by requiring each area chair to nominate a list of five reviewers for each paper, with no restrictions on reviewer identities. The viewers were listed in order of preference by the area chair. As the area chairs do not know the identity of the paper authors, these lists will often include the authors themselves — if the system works accurately, then the author is presumably among the most qualified reviewers! These lists were then pruned to eliminate conflicts of interest. Finally, an automatic assignment of reviewers to papers was performed which maximized the total affinity of reviewers to papers subject to load constraints on each reviewer. This produced an almost-complete assignment which we augmented iteratively with the area chairs. We will be documenting the assignment algorithm used for this process and making the code publicly available for future conference organizers.

Feedback on this process was very positive. We received unsolicited reports from reviewers that they had more appropriate papers, and area chairs were more satisfied with their reviewer assignments than in the past. When paper reviews were returned to authors, they also often reported that the reviews were of higher quality than those from recent conferences.

After the reviewers had finished their work, the authors had the opportunity to rebut errors in the reviews, and the area chairs entered a consolidation page in which papers with disparate reviews were discussed between the reviewers and the area chair. The area chairs then came to the paper selection meeting, held at NYU over the weekend of February 25, with a preliminary rank ordering of their papers. The goal of the paper selection meeting was, for each area chair, to form a final rank ordering of their papers, and to inscribe on each ordering two decision boundaries, dividing the list into oral, poster, and reject. This was achieved in a series of three discussion rounds with other area chairs. Each round was divided into two partitionings so that papers with conflicts of interest could be discussed without revealing to other area chairs who was handling papers with which they had conflicts. Round 1 (pairs) was designed to refine the rank ordering for difficult papers. Round 2 (triples) was to begin to calibrate the accept/reject boundary, and round 3 (groups of ten) was to refine the accept/reject and oral/poster boundaries. In round 1, the area chairs were assigned to partners with similar expertise, so that technical details of their papers
could be resolved. Two sub-rounds with different partners meant that conflicts of interest could be avoided. In round 2, the triplets of area chairs were designed to include people in different subfields so that a calibration of overall quality of submissions could be obtained. The final round, with groups of ten who were of necessity drawn from across the discipline, allowed an overall quality bar to be determined which we hope has given rise to a high quality conference program.

Smaller changes which we felt were valuable were a revamping of the conference paper layout. We implemented changes for which many people had asked in the past, making the papers somewhat more compact, and added a ruler to allow reviewers to comment more precisely on specific lines of the papers. We clarified the instructions on submitting for blind review. On another level, the social program is different from previous conferences. Most notably, although the conference banquet has been a feature of every recent conference, we were surprised to learn that many attendees, across the age range, considered it something of a chore to attend. They would prefer instead to have catered receptions, where mingling is easier, and to make their own dining arrangements. The conference schedule which had had two parallel oral sessions and interspersed poster sessions now runs two poster sessions in parallel with the oral talks. The posters are thus visible for a longer time, and the oral sessions do not overlap.

In making these and other innovations we have been hugely aided by the help and forbearance of the many people involved in the program production. The area chairs had more work to do than in previous conferences, and each handled between 35 and 40 papers. They did their job magnificently, with diligence and with great cheerfulness. Of the 554 reviewers, some (about a fifth) reviewed a dozen or more papers, while others (again about a fifth) reviewed just one, but most did an excellent job. Bob Werner at IEEE handled the large number of accepted papers with tremendous efficiency, and ensured the proceedings was produced to the highest possible quality. To these and the many others who assisted in this effort we would like to extend heartfelt thanks.

Andrew Fitzgibbon, Camillo J Taylor, and Yann LeCun
Program Chairs

Dan Huttenlocher and David Forsyth
General Chairs