Message from Program Chairs

We hope you enjoy the ICCV 2011 program. We received 1433 complete submissions by the deadline. Papers that did not meet the submission guidelines were rejected without review, leaving 1394 papers at the end of the reviewing phase. Handling the review process for such a large number of papers remains a challenge and we will give more details on the ICCV 2011 reviewing process below. Our committee accepted 45 papers for Oral Presentation (3.1%) and 294 papers as Posters (20.5%). These numbers were arrived at naturally, without us specifying a target acceptance rate. They correspond to an overall acceptance rate of 23.7%, in line with previous editions, and cement ICCVs reputation as one of the most competitive events in our field. The distribution of submitted and accepted papers per topic is shown in figure 1 on the next page. All Posters have a short oral spotlight presentation, interleaved with the longer Oral Presentations, in a single-track program. Videos could also be produced for all papers, if the authors so desired. In addition to contributed papers, the program includes three invited speakers from fields closely related to Computer Vision.

Given the importance and prestige of ICCV, and the challenges presented by the growth of the field, extensive discussions on the paper selection process were conducted starting in 2007. Of the many possible changes considered, a few were implemented, to address the most pressing concerns expressed by authors, reviewers and attendees of previous editions.

The review process in place during the recent past had each paper assigned to one Area Chair (AC). Each AC was usually in charge of more than 30 papers. Reviewers were selected based on suggestions by the AC and considerations such as conflicts and load balance among reviewers. Based on the reviews, authors rebuttal, and discussions with reviewers, the AC prepared a consolidation report and a preliminary recommendation for each paper. At an in-person AC meeting, the primary ACs usually worked with a so-called buddy (another AC handling a similar load of papers as primary AC), and together they reached final accept/reject decisions for their sets of papers, finalized consolidation reports, and proposed papers for oral presentation. Buddy pairs were usually grouped in 3 or 4 conflict-free groups (panels). Where buddy pairs failed to agree, a third, conflict-free AC was brought in to split the tie.

Modulo minor variations, this process has served our community well, but has come to be strained by the growth in our field. Buddy pairs handled between 60 and 80 papers. The timing of the in-person meeting made it difficult for an AC to get well acquainted with the papers of his/her buddy and their reviews and rebuttals. As a result, the primary AC often had a stronger influence on the fate of a paper than the buddy. It also made it difficult for a third AC, already busy handling 60-80 papers, to provide a careful additional review to split a tie. In addition, the existing selection process for oral papers has also come under pressure. The nature and time-constraints of the in-person meeting, and the difficulty in handling conflicts within, made it difficult for ACs to gather a broad view of the accepted papers, and arrive at a balanced selection of orals. Finally, given the size of the AC body and the challenges of world-wide winter travel, Program Chairs were often left handling difficult contingencies when one or more of the ACs failed to show up at the in-person meeting.

In order to overcome these challenges, we implemented the following innovations for the ICCV 2011 review process.

The first innovation was to assign two Area Chairs (ACs) with equal responsibility to each paper; they remained anonymous to one another throughout the process. Both ACs were asked to suggest reviewers. After the submission of reviews, both ACs had the possibility to discuss with reviewers, both before and after the rebuttal, to clarify issues and to gather feedback on the

reviews and the rebuttal. After the rebuttal, both ACs had to independently assess the assigned papers, based on the reviews, the rebuttal and their own reading of the papers. In a first phase, the ACs provided independent consolidation reports and recommendations for decisions. In a second phase, each AC could see the other ACs consolidation and discuss papers with the aim of reaching a consensus recommendation, through anonymous on-line discussion involving also reviewers when necessary. All discussions were conducted on-line and were logged. Where ACs reached consensus, and their consensus was consistent with reviewers scores, a final accept/reject decision was made. All other cases, where ACs failed to reach consensus, or arrived at a decision that was inconsistent with reviewers scores, were handed off to the Program Board, as explained below.

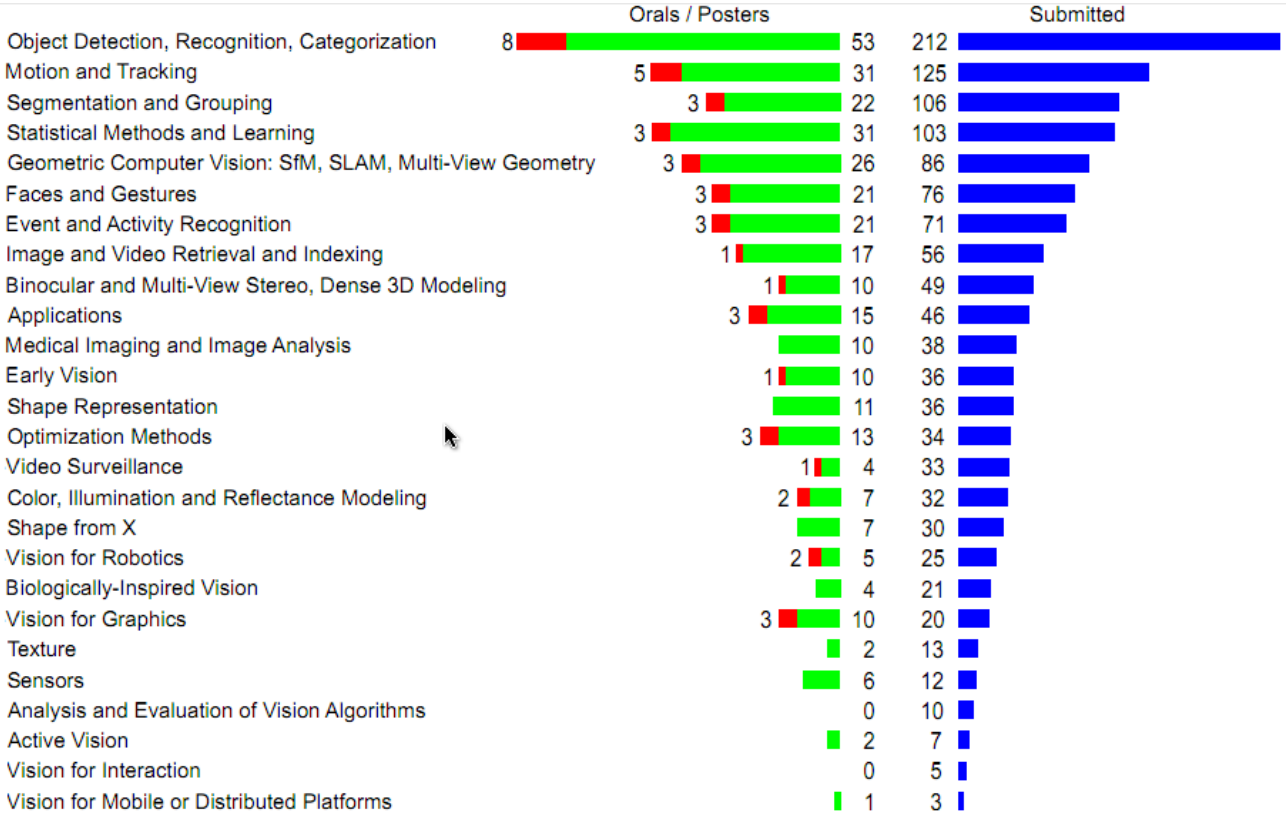

Figure 1: Papers per topic (as per primary keywords indicated by authors). Numbers in the middle stand for accepted (orals + posters) and submitted papers (extracted at the time of writing of this editorial, based on the 1285 papers still present in the review system out of 1433 submitted papers), respectively. Numbers to the left of the bars stand for oral papers.

The second innovation was to renounce the in-person AC meeting. This was partly motivated by the expected efficiency of the newly introduced measures, partly by the larger than usual number of ACs required for the process, making an in-person meeting incompatible with the budgetary constraints of the conference and growing environmental concerns. An important side-benefit of the on-line meeting was the possibility to use dynamic buddy pairs, that is the assignment of different combinations of ACs for each paper, as opposed to two ACs sharing a common batch of 60-80 papers: on average, each AC was working with seven other ACs on his/her allocated papers. This allowed optimizing the thematic fit between papers and Acs.

The third innovation was meant to address several weaknesses at once. We wanted a body of respected and experienced researchers that could compose the conference program, i.e. make

the selection of oral and poster papers, based on a complete look at the set of papers accepted by ACs. In particular, we wanted that sufficient time be available for this task and that cross-calibration be achieved at this stage. This body of researchers was named the Program Board (PB). The PB members were also available to act as (a) reviewers, when assigned reviewers failed to complete their task by the deadline, (b) ACs, when assigned ACs failed to reach consensus or reached a decision contradicting that of the reviewers, (c) Program Chairs, to handle appeals of decisions from authors.

Members of the PB were grouped into four panels, which were each associated with an AC panel from the beginning of the process, in such a way that there would be no conflicts of interest. Each controversial paper (where ACs and reviewers reached different consensus, or ACs could not reach consensus) was assigned to a Pbmember for a final decision. Additionally, each accepted paper was assigned to a PB panel and discussed on-line. PBs could involve in their discussion any AC or reviewer. The final program was assembled in a voting process, involving PBs as well as ACs, that yielded a very clear threshold, whereby all selected orals gathered at least five votes, and all posters gathered three or fewer.

While some of the innovations we had originally considered were eventually not implemented, we feel that the changes above were the best achievable compromise to address the existing challenges. Note that some aspects of the process as implemented, such as anonymity between ACs and PB members, are completely optional. There are certainly challenges remaining, but we feel that the program assembled by our committees is strong. You will be the judge.

Program Chairs were not involved in any decisions, other than designing the process, and selecting the Awards Committee for the Best Paper Award, Best Student Paper Award, and Test of Time Award. The Awards Committee consisted of 4 highly accomplished and respected senior members of our community. For the Best (Student) Paper Awards, they have been given the list of all papers (45) that have been nominated by ACs for Best Paper or that were selected as Oral Papers, together with all the reviews, rebuttals, and consolidation reports. For the test-of-time award(s), the Program Chairs have transmitted to the Committee a spreadsheet with all the papers that have been published at ICCV up to and including 10 years ago, starting from 1990 (a test-of-time award for earlier editions was given at ICCV 2009), together with their citation score per Google Scholar, the same score normalized by year, as well as titles and authors. The Program Chairs have instructed the Committee to exclude from the list of award candidates any paper coauthored by themselves and their immediate collaborators, the Program Chairs, and the General Chairs. Other than for these guidelines, the Program Chairs have had no input in the selection of the Awards, that are not known at the time of writing of this editorial.

Last but not least we would like to thank everyone involved for their time and dedication to make the ICCV 2011 program possible. Any program relies on the authors to submit high quality papers, on the dedication of reviewers to submit in-depth and quality reviews, and in our case, we also rely on the fair assessment and wise judgments of ACs and PB-members. Thank you all very much for your dedication and support. Our thanks also go to the General Chairs, Luc Van Gool, Dimitri Metaxas, Long Quan, and Alberto Sanfeliu, for their support. To C.J. Taylor for the paper assignment script he developed and made available to the community and which we used as a basis for paper assignment. To Antoni Grau, Jesus Galceran, and Anderson Rocha for putting together the proceedings and so much more. To Mario Fritz for taking care of the spotlight program.

Steve Lin, Bernt Schiele, Stefano Soatto, Peter Sturm.
Program Chairs of ICCV 2011.

Below we give a few more details about the process, for those interested.

The submission deadline was firm, and no extensions were granted. Authors that had their submission clipped because it was being uploaded when the submission site closed were allowed to re-submit manually, shortly after the deadline.

The Program Chairs as well as the General Chairs did not submit any papers to the conference. The Pcs assigned each paper to two ACs. In order to keep the load for the ACs similar to previous years we assembled an AC committee of 71 vision researchers, many of whom had experience serving as an AC in prior conferences. We considered thematic coverage, geographic distribution, gender, and seniority in compiling the list of ACs. We distributed the papers approximately uniformly among ACs for an average load of 39 papers per AC. Each AC suggested five reviewers for each paper, out of which three reviewers were selected in total for each submission, partly automatically using software based on the script developed by C.J. Taylor, and partly manually for finetuning. The selection was based on the ACs ranked preferences, the maximum load of 12 papers per reviewer, and conflict of interest issues. In all cases we were able to assign at least one preferred reviewer from each AC.

A pool of 741 reviewers was selected based on the ACs suggestions and on reviewer lists from previous conferences. The reviewers had about five weeks to complete the reviews and at the beginning of the rebuttal phase we had 4,192 reviews, at least three completed reviews for each of the then remaining 1394 papers. At this point the ACs were responsible for addressing issues such as uninformative reviews and for initiating discussions with reviewers particularly in cases of highly diverging reviews and ratings. An additional field in the review template was added, where reviewers and ACs could ask specific questions for the authors to address in their rebuttal. The authors were able to post a rebuttal during a one-week period, in the course of which 78 papers were withdrawn.

After the rebuttal period was closed, each AC had three weeks to write initial consolidation reports, independently of the second AC. The ACs had four rating options: strong accept, weak accept, weak reject, and strong reject. In contrast to the reviewers, the ACs did not have a borderline option, thus forcing them to take sides. The ACs based their decision and consolidation reports on the reviews, discussions with the reviewers, authors rebuttal as well as their own reading of the papers. It is interesting to note that, at the end of this phase, for more than 90% of the papers, both ACs agreed to either accept or reject the paper. Of these, about 20% were recommendations for acceptance. In the week following this phase the ACs discussed the remaining cases (141 papers, 9.8% of all papers) among themselves and reached consensus in all but 30 papers (2% of all papers). Those 30 papers were assigned to members of the program board (PB) as tiebreakers (of those, 17 papers were accepted, and 13 rejected). Another 32 papers were also assigned to members of the PB because the ACs consensus was not in line with that of the reviewers. In 25 cases, the PB member sided with the ACs, and in 7 cases the ACs were over-ruled in favor of reviewers.

At the end of the accept/reject decision phase, the consolidation reports of both ACs were finalized and the Acs could nominate papers for either oral or poster presentation. The ACs had the following options for nomination: oral, potential oral, poster, or no recommendation. For 155 papers (of the 339 accepted papers) at least one AC suggested potential oral or oral. These 155 oral candidates were then discussed among the PB-members. The 17 PB-members were divided into four groups of 4-5 members each. Each group of PB-members and ACs was conflict-free. This ensured that the oral candidates could be discussed, and compared, freely within each group of PB members and ACs. At the end of this phase, each PB-member suggested a list of papers

that should become oral. It is worth noting that from the overall 9 or 10 researchers having looked at these papers (3 reviewers, 2 Acs, 4 or 5 PB-members) always a majority of them considered the selected Orals as potential oral or clear oral (at least 5). On average 75% (i.e. 7 or 8 of the researchers) considered the selected Orals as potential orals or clear orals.

We received 8 complaints by authors of papers that were either rejected (7) or not accepted as orals (1). These complaints were assigned each to a PB member not previously involved in the decision, who had access to all reviews, consolidation reports, the rebuttal, and discussions among reviewers and ACs. In all cases, the original decisions were confirmed.

The absence of a physical meeting, while not optimal, enabled conflicts to be handled properly, anonymity to be enforced where appropriate, accountability of each decision and statement, and contingencies for instance failure of reviewers or ACs to complete their work in time, to reach consensus, or to show up at the AC meeting in the first place to be handled efficiently. It should be noted that anonymity was enforced upstream, but not downstream: PBs knew the identity of the ACs (so as to weigh their recommendations), but not vice-versa. ACs new the identity of the reviewers, but not vice-versa.

We are fully aware that any process is necessarily imperfect and that the process implemented for ICCV 2011 is no exception. However, we received a lot of positive feedback from all involved parties (authors, reviewers, ACs, PB-members) suggesting that the quality and robustness of the decision process have improved. In particular, a formal enquiry among the ACs, via a questionnaire, gave overwhelming positive feedback. The main downside of the above process seems to be the increased workload overall for our community (more ACs and additional PB-members). In that sense our community needs to decide if the benefits of a more involved process (potential increase of fairness, quality and robustness of decisions) are worth the cost.