Welcome Message from the ISMAR 2015 Science and Technology Program Chairs

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ISMAR 2015 Science and Technology Program Chair

We are delighted to welcome you to IEEE ISMAR 2015, the 14th International Symposium on Mixed and Augmented Reality! This year’s symposium continues a long tradition of ISMAR meetings, a series that itself followed a related series of IWAR, ISMR, and ISAR meetings.

We hope the dynamic program that has been assembled will provoke creative thoughts and discussions, establish new connections between people and fields, and inspire you to think about augmentation in new ways. From papers to posters to demos to workshops to tutorials, there should be something for everyone at this year’s meeting. We look forward to your active participation!

Program Overview
This year’s Science and Technology (S&T) track includes a collection of highly selective mixed and augmented reality research and related work. Specifically, in the S&T program this year, you will find 22 papers, as well as a stimulating mixture of keynote talks, demonstrations, workshops, and a new category of extended posters. All of these elements of the program are the result of dedicated work by members of various conference committees and additional volunteers, and we would like to thank all of them for their generous efforts.

This year was the first to introduce a fixed submission date, 15th of March, for this and all future ISMAR events in order to assist researchers in planning the dissemination of their research.

The S&T track received 103 paper submissions from 26 countries. The accepted papers came from eight countries, demonstrating, as in previous years, the global nature of active research in mixed and augmented reality. The accepted papers reflect the diverse nature of the field. This year’s S&T paper session topics include Tracking, Medical AR, HMDs, Depth Cameras, Closed-loop Visual Computing, and Applications of AR. We are confident that these sessions will provide inspirations for your own work, as will the other program elements at ISMAR 2015.

ISMAR 2015 continues its recognition of outstanding papers with the Best Paper and Honorable Mention awards. These awards are determined by an Award Committee comprised of pioneering and leading MR and AR researchers from around the globe. We gratefully acknowledge the large amount of time and effort that the Award Committee invested in this process.

Finally, we want to thank the international Program Committee (PC) members and external reviewers for all of their hard work. The PC members invested a tremendous amount of time and effort managing the reviewers, facilitating discussion, and arriving at a final decision for a large number of submissions. The PC continued the ISMAR tradition of two-day, three-site [Nara (Japan), Munich (Germany), and Redmond (Washington, USA)] video conference to discuss each submission. This format helps reduce costs while keeping the communication quality necessary for high-quality/confidence decisions. In addition, because the Full Papers are being published as journal papers, each accepted Full Paper had to undergo a second review cycle, guided by a PC member, which required even more work than in previous years. It is due to the volunteer efforts of the PC and the international reviewers that ISMAR stands as the world’s premier symposium for mixed and augmented reality research.

Reviewing Process
ISMAR has used a two-tiered reviewing system for a number of years.

And for the first time, a general open call for PC member volunteers was introduced in an attempt to diversify the Program Committee (PC) and give the opportunity to involve younger researchers. Following this call, we invited a group of fifteen experts in areas of AR and MR research selected from different regions of the world to form the PC. We assigned each submission to one member of the PC who acted as the Primary reviewer. These Primaries assigned external reviewers to each submission. Papers had at least four reviewers, with a mix of junior and senior reviewers from varying areas of expertise in the field of AR/MR. Reviewers were recruited by the Program Chairs from the international research community informed by recent publications in relevant venues. Program Committee members could also invite additional reviewers at their discretion.

This year, we continued a rebuttal phase after the review period. Authors could view the reviews they had received and write a short statement to answer any questions that had come up. We believe the rebuttal phase contributed to both authors’ and reviewers’ satisfaction.

After the review period, the primaries ran a week-long online discussion period with the reviewers of each paper to settle on an overall evaluation and arrive at a summarizing initial recommendation. Following this, each
of the three Program Chairs read through one third of the reviews, rebuttals, and discussions for the papers, and came up with a summary recommendation. Program Chairs and the Program Committee gathered at three locations, kindly offered by Microsoft Research (Redmond, USA), Metaio (Munich, Germany) and the Nara Institute for Science and Technology (Nara, Japan) on May 21 and 22, connecting via online video to make final decisions. At this meeting, we examined each Full and Short Paper submission and its reviews, and debated whether the submission had sufficient contribution to merit acceptance for the category to which it was submitted, capturing the discussion results in a meta review for each submission. The discussion was guided by a number of general rules that were clearly identified before and during the meeting and applied to all decisions in order to make the process as fair and transparent as possible. Our primary goal was to accept as many high quality submissions as possible. We did not consider a pre-set maximum number of acceptances.

**Distinction between Full Papers, Short Papers, Extended Posters, and Posters**

New this year was the fact that all accepted Full Paper submissions are being published in a Special Issue of the journal Transactions on Visualization and Computer Graphics (TVCG). This required a two-round review process for all Full Papers. No Full Paper was accepted outright, but was rather conditionally accepted, with a “shepherd” assigned to ensure reviewer comments were adequately addressed, followed by a second full review.

Short Papers were assessed using the same criteria as Full Papers, but calibrated so that the “contributions-per-page” matched the length of the submission.

Also new this year is that besides Posters, we have a new category: Extended Posters; both categories were treated separate from the paper categories. Please see the Poster Chairs’ welcome message for details.

**Statistics**

Out of 103 valid paper submissions (60 Full and 43 Short), the final cut has 22 papers (12 Full and 10 Short), which represents 21.3% of those submitted. One Short Paper was withdrawn by the authors after acceptance. Four Full Paper submissions were recommended to be Short Papers. These numbers are the result of a rigorous reviewing process and attest to the very high quality of the final program.

Additionally, three Full Papers were recommended to TVCG directly as a major revision. While these three papers will not appear in the same Special Issue as will the 12 accepted Full Papers, their authors can expect a faster publication process, as the initial ISMAR review process is counted as one review cycle for TVCG. Furthermore, by guaranteeing reviewer continuity, we support faster turnaround times for publications.

**Value of Posters**

We consider posters, as well as demonstrations, to be one of the core elements of ISMAR. We expect them to spark exciting discussions and thus turn ISMAR into a true breeding ground for future directions of research, technical development, and applications of augmented reality. For this reason, we will have a several poster and demonstration sessions and also invite all presenters to show their work during breaks whenever they can find the time. Because of the importance of posters in stimulating and communicating novel ideas and applications, ISMAR includes posters in the proceedings as two-page abstracts.

We think that it is important to have a written record of ideas when they are first presented to the public, so that appropriate credit can be attributed to the originators of novel ideas. Yet, we do not formally consider posters to be publications in the strictest sense of the word that would prohibit future publication as full papers; ISMAR allows paper submissions on the same topic of a previously presented ISMAR poster, and encourages other venues to likewise welcome extended versions of ISMAR posters.

**Publication Ethics**

Careful attention was paid to submissions that contained duplicated work. We distinguished different kinds of duplications. We considered papers as double submissions, and thus in violation of research ethics, if the same material with only minor variations was submitted in parallel to several venues. Plagiarism and self-plagiarism is another case of ethically flawed behavior, characterized by using text passages that are copied verbatim from earlier publications without being marked as a quotation. In both cases, submissions were returned to the authors without reviews and all affected stakeholders were informed. A third case is the problem of “slicing” new research results too thin among several publications, as may happen when authors report on incremental research or when they participate in several, disjoint research communities. Such cases were discussed at length and in detail.

**Reviewing Ethics**

Single blind reviewing anonymity was observed during the reviewing process. Using technology and procedures, we strictly prevented Program Chairs and Program Committee members from seeing reviewer identities for submissions where they had a conflict of interest. For example, the online reviewing system prevented such disclosures, based on author and institution conflicts established before the reviewers were assigned. In addition, during the PC meeting the Chairs and Program Committee members left the room for discussions of submissions coming from authors who had worked at the same organization, directly collaborated with them in a project, had been their students or teachers, or had had a sponsorship relationship in the past three years.
Thank you very much for your participation and we hope you enjoy the program!