Preface

In 2015, the 18th International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI 2015) was held in Munich, Germany. It was organized by the Technical University Munich (TUM) and the Friedrich Alexander University Erlangen-Nuremberg (FAU). The meeting took place in the Philharmonic Hall "Gasteig" during October 6-8, one week after the world-famous Oktoberfest. Satellite events associated with MICCAI 2015 took place on October 5 and October 9 in the Holiday Inn Hotel Munich City Centre and Klinikum rechts der Isar. MICCAI 2015 and its satellite events attracted word-leading scientists, engineers, and clinicians, who presented high-standard papers, aiming at uniting the fields of medical image processing, medical image formation, and medical robotics.

This year the triple anonymous review process was organized in several phases. In total, 810 valid submissions were received. The review process was handled by one primary and two secondary Program Committee members for each paper. It was initiated by the primary Program Committee member, who assigned a minimum of three expert reviewers. Based on these initial reviews, 79 papers were directly accepted and 248 papers were rejected. The remaining papers went to the rebuttal phase, in which the authors had the chance to respond to the concerns raised by reviewers. The reviews and associated rebuttals were subsequently discussed in the next phase among the reviewers leading to the acceptance of another 85 papers and the rejection of 118 papers. Subsequently, secondary Program Committee members issued a recommendation for each paper by weighing both the reviewers' recommendations and the authors' rebuttals. This resulted in "accept" for 67 papers and in "reject" for 120 papers. The remaining 92 papers were discussed at a Program Committee meeting in Garching, Germany, in May 2015, where 36 out of 75 Program Committee members were present. During two days, the 92 papers were examined by experts in the respective fields resulting in another 32 papers being accepted. In total 263 papers of the 810 submitted papers were accepted which corresponds to an acceptance rate of 32.5%.

The frequency of primary and secondary keywords is almost identical in the submitted, the rejected, and the accepted paper pools. The top five keywords of all submissions were machine learning (8.3%), segmentation (7.1%), MRI (6.6%), and CAD (4.9%).

The correlation between the initial keyword counts by category and the accepted papers was 0.98. The correlation with the keyword distribution of the rejected papers was 0.99. The distributions of the intermediate accept and reject phases was also above 0.9 in all cases, i.e., there was a strong relationship between the submitted paper categories and the finally accepted categories. The keyword frequency was essentially not influenced by the review decisions. As a

conclusion, we believe the review process was fair and the distribution of topics reflects no favor of any particular topic of the conference.

This year we offered all authors the opportunity of presenting their work in a five-minute talk. These talks were organized in 11 parallel sessions setting the stage for further scientific discussions during the poster sessions of the main single-track conference. Since we consider all of the accepted papers as excellent, the selection of long oral presentations representing different fields in a single track was extremely challenging. Therefore, we decided to organize the papers in these proceedings in a different way than in the conference program. In contrast to the conference program, the proceedings do not differentiate between poster and oral presentations. The proceedings are only organized by conference topics. Only for the sake of the conference program did we decide on oral and poster presentations. In order to help us in the selection process, we asked the authors to submit five-minute short presentations. Based on the five-minute presentations and the recommendations of the reviewers and Program Committee members, we selected 36 papers for oral presentation. We hope these papers to be to some extent representative of the community covering the entire MICCAI spectrum. The difference in raw review score between the poster and oral presentations was not statistically significant ($p > 0.1$). In addition to the oral presentation selection process, all oral presenters were asked to submit their presentations two months prior to the conference for review by the Program Committee who checked the presentations thoroughly and made suggestions for improvement.

Another feature in the conference program is the industry panel that features leading members of the medical software and device companies who gave their opinions and presented their future research directions and their strategies for translating scientific observations and results of the MICCAI community into medical products.

We thank Aslı Okur, who did an excellent job in the preparation of the conference. She took part in every detail of the organization for more than one year. We would also like to thank Andreas Maier, who supported Joachim Hornegger in his editorial tasks following his election as president of the Friedrich Alexander University Erlangen-Nuremberg (FAU) in early 2015. Furthermore, we thank the local Organizing Committee for arranging the wonderful venue and the MICCAI Student Board for organizing the additional student events ranging from a tour to the BMW factory to trips to the world-famous castles of Neuschwanstein and Linderhof. The workshop, challenge, and tutorial chairs did an excellent job in enriching this year's program. In addition, we thank the MICCAI society for provision of support and insightful comments as well as the Program Committee for their support during the review process. Last but not least, we thank our sponsors for the financial support that made the conference possible.

We look forward to seeing you in Istanbul, Turkey in 2016!

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