

Foreword

1. Introduction

In the days when the proceedings of conference were produced as printed books, the foreword was assumed to be where delegates to the conference would start reading, and also a formal record of the kind of information that might be presented in the introductory session of the conference, and so it was customary to begin it with a welcome to the conference. Since CSEE&T has now moved over to having its proceedings distributed only in electronic forms, the assumption that delegates will be reading this prior to the start of the conference may well not be a valid one, although it is still important that it should provide a formal record of some information about the conference that is presented in the introductory session.

Hence, it is appropriate to begin by welcoming readers to the 26th Conference on Software Engineering Education and Training (CSEE&T 2013) in San Francisco, California, USA. It is also appropriate to explain here, for those readers who are not aware of it, that CSEE&T is sponsored by the IEEE Computer Society, and is the premier international peer-reviewed conference that addresses all major areas related to software engineering education, training and professionalism. For information on previous conferences readers are invited to visit <http://conferences.computer.org/cseet/>, which provides a record of its history right back to the inaugural event in 1987.

This year we are pleased to have CSEE&T co-located with the 35th International Conference on Software Engineering (ICSE), which is the community's premier research conference. The co-location of these two long established conferences follows the success of two years previously, in Honolulu, Hawaii, USA, and provides an excellent opportunity to address a wide range of issues ranging from research through to "Real-World" practice.

2. Program

In planning for this year's conference we were very mindful of the fact that the discipline of software engineering itself is changing rapidly, as are educational methods and approaches, not least because of an increasing emphasis on the importance of quality in education. Both education and training in software engineering therefore have to respond to these changes and emphases, and so we set as the overall theme for the conference "SE Education and Training: maintaining quality in an uncertain future".

To reflect this theme, we have two very different keynote addresses to start the second and third days of the conference. On the Monday, Armando Fox from UC Berkeley will be taking the theme "*Myths About MOOCs and Agile*". Armando is the Academic Director of the Berkeley Resource Center for Online Education, and in that role he co-designed and co-taught Berkeley's first MOOC on Engineering Software-as-a-Service. As such, he is uniquely well-placed to explain to us just how such courses can contribute to providing quality education in software engineering, and to discuss the role that agile methods can and should play within such courses.

On the Tuesday, our second keynote is given by Tom Hilburn from Embry Riddle Aeronautical University, where he is now an emeritus professor. At CSEE&T in 2011 Tom received the Nancy Mead Award for Excellence in Software Engineering Education, and his keynote address, with the title "*Preparing Students for Professional Practice*", reflects one of the concerns that underpinned much of the work for which he received that award.

Apart from the keynotes, the core of a conference such as CSEE&T is the presentation of submitted papers, and this year these were organized into three categories: Academic research papers, which are presented in the normal way; short papers, which are presented as posters, and training and experience reports. There was a good response to the call for papers (perhaps because of the co-location with ICSE), and in total 55 academic research papers, 26 short papers and one training and experience report. Each paper was reviewed independently by three members of the program committee, distributed so that each reviewer had no more than 5 submissions to review. In a few cases the three original reviewers came up with very different conclusions, and in these cases additional reviews were arranged, so that some papers ended up with four or even five reviews. The outcome of this process was that we accepted 26 academic research papers (an acceptance rate of 47%) and 14 short papers (54%). It is regrettable that the one training and experience report that had been submitted could not be accepted, since this is a category that we were hoping to encourage.

The accepted academic research papers were then organized into sessions on the basis of common themes in them, which reflected either particular aspects of software development processes or particular pedagogical approaches. This led to the following set of sessions for these papers, plus one session for the poster presentations of the short papers:

- Requirements and Risks;
- Team Projects;
- Architecture and Design;
- Introductory and Specialized Curricula;
- Processes and Distributed Development;
- Agile Methods;
- Programming within Software Engineering; and
- Formal Methods, Testing and Evaluation.

We hope that there is enough variety of topics here to be of interest to all the delegates at the conference, and indeed to all readers who subsequently find themselves referring to these proceedings.

Alongside these submitted papers, the call for papers encouraged submission of proposals for panel sessions, for highly-collaborative workshops and for tutorial sessions, and we also invited some specific proposals in each of these categories. The submitted proposals were all refereed in the same way as the papers, and most of them were accepted. Hence, together with the invited contributions, the program for the conference includes three panel sessions, two workshops and five tutorials.

In addition to these, the call for papers also invited submissions for one other category of proposals, namely the Academy for Software Engineering Education and Training. When this academy was first set up, in 2006, its goal was to give relatively junior members of faculty the opportunity to learn how software engineering should be taught from the most experienced educators. In this it has had varying degrees of success, but in particular in 2011 it attracted very few delegates, due in part to the competition from what ICSE now calls its New Faculty Symposium, which covers similar ground, although with more emphasis on how to carry out research in SE.

To avoid this competition in 2013 we decided to re-interpret the academy concept as a “change academy”, which would give delegates generally the opportunity to explore how likely changes in both software engineering practice and educational practice might affect all of us working in the field. It was decided that this change academy should be structured as one (or

more panel sessions, and a number of aspects of these likely changes were identified as possible topics for these panel. Prospective panelists were then invited to submit proposals for position papers for this session, and again we invited some specific proposals. The result is one session which contains an interesting mix of four different perspectives on the central question, and we hope that this mix will produce a lively discussion about the future of software engineering education and training between the panelists and the others who attend the session.

3. Acknowledgements

Preparing the program and proceedings for a conference such as CSEE&T 13 is a task that requires the help of many individuals, and it is right that we should thank all of them for their contributions. Firstly we should thank all the authors who submitted their work, both those whose submissions were successful and those who were not, for without their efforts the conference would be a very shallow event.

Secondly, thanks need to go to all the members of the program committee for their work in reviewing the submitted contributions: both for the very full reviews that they provided initially, and then for the (sometimes quite extensive) dialogues that followed, in order to try to resolve disagreements. As well as making overall evaluations and constructive comments for each submission, the reviewers judged each submission according to its relevance to the conference theme(s), correctness, maturity, significance, and presentation. They also provided estimates of their confidence in their judgments, and these values were used to weight the overall evaluations when final decisions were made.

Particular thanks should also go to those members of the program committee who are also members of the conference steering committee, for they were the ones who were called on to conduct additional reviews of papers where the original reviewers were disagreeing. Their willingness to perform these reviews (sometimes to quite tight time scales) contributed greatly to the whole review process.

Thirdly, the success of a conference such as CSEE&T 13 depends on the success of the many detailed practical arrangements that must be made, and so thanks need to go to all the members of the organizing committee for the conference. Their work began back in the autumn of 2012, and through a series of monthly video conference calls the details have been discussed and refined to ensure that everything should run smoothly.

The list that follows in this volume of proceedings indicates the various roles that they have carried out, and it would be invidious to single out any one particular individual: all have contributed enormously. There is, however, one name that does not appear there, but that does need to be mentioned, and this is Dirk Beyer of Conference Publishing Solutions, who ran the systems that assembled all the individual contributions into a set of proceedings, and arranged for their distribution, and for their upload into the IEEE digital library. Without the work done by him and his colleagues you would not be reading this.

Finally, in carrying out such detailed planning, it is enormously valuable to be able to draw on advice from others about what has, or has not, worked in the past. When needed that advice has come from members of the steering committee for the conference, who of course started the whole thing off by deciding back in May 2011 on the venue and co-location arrangements for this run of the conference. They too deserve our thanks for their input.

Tony Cowling and Shawn Bohner: Program Co-Chairs

Mark Ardis: Conference Chair