Welcome to the TEI'10 Proceedings

We welcome you to the proceedings of the *4th ACM International Conference on Tangible, Embedded, and Embodied Interaction – TEI'10,* held in Cambridge, Massachusetts, on the 25th -27th of January 2010.

TEI'10 continues the pursuit of key areas of innovation in respect to tangible, embedded, and embodied interactions. These concerns include the interlinking of digital and physical worlds through tangible and embodied interaction and the computational augmentation of everyday objects and environments in new ways through embedded technologies. Research and practice in these innovative areas lead to works of tangible interfaces, graspable interfaces, physical computing, whole-body interaction, gesture-based interfaces, and interactive surfaces. Designing such systems requires interdisciplinary thinking as their creation not only encompasses software, electronics, and mechanics, but also form, aesthetics, and social impact. The high quality, original, and diverse works in these proceedings is a testament to the growth and importance of the field of *tangible computing*.

The call for papers attracted 160 submissions from approximately 20 countries spanning Africa, Asia, Canada, Europe, and the United States. All submissions were peer and blind reviewed and received at least three independent expert reviews. In total, 54 papers were accepted for an acceptance rate of 34%. The papers are a mix of 2, 4, 8 pages in length. From these contributions, the program at the conference includes 16 long talks, 8 short talks, 1 short talk and a demo, 22 demos, and 7 posters. We are proud to continue the tradition of a plenary session for all talks, demos and posters. The paper sessions are organized along five themes. *Bridging the Physical and Digital Worlds* is at the center of tangible computing investigations that explore the intersections of computation and physicality. *Toolkits and Enabling Technologies* explores the functionality of applications and technologies for users and the tools for designers and developers. *Physical Interactions, Perspectives, and Design Techniques* represent the emerging and refined thinking in the field that investigates embodiment, reflections and frameworks, and emerging techniques. *Materials, Garments and Lights* uncovers the serious investigations into new materials and expressions for tangible computing. Lastly, *Learning through Physical Interaction* contributes to the invaluable intersections between tangible computing and learning. In addition, the demonstrations and posters session gives concrete and vibrant evidence for the serious and diverse research in the field.

We are also proud to include innovations in the conference program this year. A new track was created known as *Explorations* aimed at attracting thought provoking, evocative, visually and sensually rich work by a diverse group of creators. 46 submissions were received from which an expert jury accepted 10 contributions. These contributions are interwoven into the papers and demonstration tracks at the conference. Another new track is *Studios,* a series of 21 workshop sessions open to all conference participants that offer novel hands-on experiences ranging from the exploration of new development toolkits, to prototype design techniques, and the use of emerging or traditional materials in creatively applied way. Lastly, the *Graduate Student Consortium* reflects the essential need for the participation and development of new scholars in the areas of tangible computing. 38 submissions were received and 13 contributions were accepted after blind reviews by at least three independent and expert reviewers per submission.

Putting together the program and proceedings was a team effort. First of all, we would like to thank the authors for their outstanding research and contributions. We would like to express our deep gratitude to the program committees, juries and external reviewers across all tracks, who worked tirelessly in reviewing papers and providing suggestions for their improvements. We would also like to thank Jon Kolko and Thecla Schiphorst, the Explorations Co-Chairs, Amon Millner and Jay Silver, our Studios Co-Chairs, and Mark Gross, our Graduate Student Consortium Chair. Special thanks to all of those on the Organizing Committee, Adrienne Griscti at ACM, and Lisa Tolles of Sheridan Printing for invaluable assistance in putting together the proceedings.

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