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Social Computing, Behavioral-Cultural Modeling and Prediction

5th International Conference, SBP 2012
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Proceedings

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Preface

Welcome to the proceeding of the 2012 International Conference on Social Computing, Behavioral–Cultural Modeling and Prediction (SBP 2012). Continued from 2011, the SBP 2012 conference was the result of merging two successful international conferences on closely related subjects: the International Conference on Social Computing, Behavioral Modeling, and Prediction (SBP) the and International Conference on Computational Cultural Dynamics (ICCCD). The overall goal of the conference is to bring together a diverse set of researchers/disciplines to promote interaction and assimilation for the better understanding of social computing and behavior modeling. Social computing harnesses the power of computational methods to study social behavior within a social context. Cultural behavioral modeling refers to representing behavior and culture in the abstract-sense, and is a convenient and powerful way to conduct virtual experiments and scenario planning. Both social computing and cultural behavioral modeling are techniques designed to achieve a better understanding of complex behaviors, patterns, and associated outcomes of interest. In 2008, the first year of SBP, we held a workshop and had 34 papers submitted; in 2011 we had grown to a conference and had 85 submissions from 18 countries. This year, we had 76 submissions representing works in health sciences, computing and information sciences, military and security, economics, methodology and others. We truly hope that our collaborative, exploratory research can advance the emerging field of social computing and behavioral–cultural modeling.

The overall SBP 2012 conference program encompassed pre-conference tutorials, keynote presentations, high-quality technical paper presentations and posters, a cross-disciplinary round-table session, a modeling challenge session and a panel featuring program staff from federal agencies discussing potential research opportunities. This year, SBP 2012 included a new dimension with the Modeling Challenge session aiming to demonstrate the real-world and interdisciplinary impact of social computing. The challenge was geared to engage the social computing research community in solving relevant, interesting, and challenging research problems contributing toward theoretical, methodological, and applicational advancement of the area.

The accepted peer-reviewed papers cover a wide range of interesting problem domains, e.g., economics, public health, and terrorist activities, and they utilize a broad variety of methodologies, e.g., machine learning, cultural modeling and cognitive modeling. Over the past several years of SBP conferences, we have started to see the increasing participation of the human and social sciences in social computing, as well as the active collaboration between such fields and science and engineering fields. Disciplines represented at this conference include computer science, electrical engineering, psychology, economics, sociology, and

health sciences. A number of interdisciplinary and applied research institutions were represented.

SBP 2012 could not be run successfully by a only few. We would like to first express our gratitude to all the authors for contributing an extensive range of research topics showcasing many interesting research activities and pressing issues. The regret is ours that due to the space limit, we could not include as many papers as we wished. We thank the Program Committee members for helping review and providing constructive comments and suggestions. Their objective reviews significantly improved the overall quality and content of the papers. We would like to thank our tutorial and keynote speakers for presenting their unique research and visions. We deeply thank the members of the Organizing Committee for helping to run the conference smoothly: from the call-for-papers, the website development and update, to proceedings production and registration.

Last but not least, we sincerely appreciate the support from the University of Maryland and the following federal agencies: Air Force Office of Scientific Research (AFOSR), Air Force Research Laboratory (AFRL), Army Research Office (ARO), National Institute of General Medical Sciences (NIGMS) at the National Institutes of Health (NIH), National Science Foundation (NSF), and the Office of Naval Research (ONR). We also would like to thank Alfred Hofmann from Springer and Lisa Press from the University of Maryland. We thank all for their kind help, dedication, and support in making SBP 2012 possible.

April 2012

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