

## Social Computing, Behavioral Modeling and Prediction (SBP 2009)

### Overview

The [Second International Workshop on Social Computing, Behavioral Modeling and Prediction](#) was held in Phoenix, Arizona from Mar 31 – Apr 1, 2009. Most presentations are available at the workshop website. The workshop was jointly chaired by Prof. Huan Liu (Arizona State University), Dr. John Salerno (Air Force Research Laboratory, Information Directorate) and Dr Michael Young (Air Force Research Laboratory, Human Effectiveness Directorate).

The event was kicked off with a reception on Mar 30 that provided an opportunity for the participants to familiarize themselves with each other before the workshop. The workshop spanned two days over four sessions. Invited talks were scattered over these sessions and a keynote speech set the tone for each day. An additional poster session was also held on the first day. This poster board session was well liked by the participants as it afforded them an opportunity to interact, discuss and build interdisciplinary relationships.

With sponsorships and support from multiple prestigious organizations such as AFOSR, AFRL, ONR, NIH and NSF, the event evinced a keen interest from numerous researchers from the academia, industry as well as government organizations while also attracting a number of students. A total of 108 participants, about the same as the first workshop, were in attendance. The participants had diverse education and cultural background, with about a third of them being female.

### Keynote Speaker, Alex Pentland, in conversation with participants



## Keynote and Invited Speakers

The keynote speeches were well received by an enthused audience. The first keynote speaker, Prof. **Philip Bonacich** (University of California, Los Angeles), a sociologist of great repute best known for developing measures on centrality in networks, presented social-psychological models of power and exploitation in exchange networks. The second keynote speaker, Prof. **Alex (Sandy) Pentland** (Massachusetts Institute of Technology), director of the Human Dynamics Lab at MIT and a pioneer in computational social science, presented his influential work on Honest Signals and Reality Mining, which uses data gathered from cell phones and other specially designed equipment to provide insight into patterns of human behavior and social interactions.

### Keynote Speaker, Philip Bonacich presents



Invited speakers from funding agencies also piqued the audiences' interest through their informative talks and foresight. Dr. **Patty Mabry** (Office of Behavioral and Social Sciences Research, NIH) presented a talk on the opportunities for Systems Science in Health Research, highlighting areas that were of particular interest to the various institutes under National Institutes of Health. Dr. **Joseph Psotka** (Army Research Institute for the Behavioral and Social Sciences) presented a talk on the assessment of the consistency of personal knowledge as a measure of intelligence. **John Graniero** (Director, Information Institute, Air Force Research Labs) presented on the opportunities for research and development with the Information Institute. Dr. **Terence Lyons** (Program Manager, Air Force Office of Scientific Research)

presented on research directions in collective behavior and socio-cultural modeling and related opportunities with AFOSR. Dr. **Mary Lou Maher** (Deputy Director, Information and Intelligent Systems, NSF) presented on the challenges and vision for research in human-computer intelligence. Dr. **Rebecca Goolsby** (Office of Naval Research) presented on the major challenges for research in modeling, social communication and weak states.

Springer published the workshop's proceedings <http://www.springer.com/978-1-4419-0055-5>.

## Papers, Participants and Awards

A total of 19 papers were selected for presentation and another 12 were accepted as posters (from a total of 47 paper submitted). Each paper was allotted 25 minutes for presentation and discussion. The authors of the poster papers were also given an opportunity to provide a 5 minute overview of their work, a format that was appreciated by many participants. The talks were truly multi-disciplinary and included a wide range of topics that mixed various areas including computer science, sociology and psychology.

### Student Awardees



This year's workshop also saw a change in the participant interaction. While last year's participants were mostly unfamiliar with each other, this year was a different case with a lot of participants being the same as last year. Facilitated by the intimate setting of the workshop, a stronger camaraderie and a sense of belonging were distinctly noticeable. While last year's workshop helped build numerous

multidisciplinary relationships, this year's workshop fortified these partnerships, while laying ground for new ones.

### Student Author Awardees

Name	Affiliation	Department
Babatunde Olubando	Morgan State University	Industrial, Manufacturing & Information Engineering
Karsten Steinhaeuser	University of Notre Dame	Computer Science and Engineering
Nika Kabiri	University of Washington	Department of Sociology
Shade Shutters	Arizona State University	School of Life Sciences
Shuyuan Mary Ho	Syracuse University	School of Information Studies
Zheshen Wang	Arizona State University	Computer Science and Engineering
David Murillo	Arizona State University	Department of Mathematics and Statistics
Vadas Gintautas	Los Alamos National Laboratory	Center for Nonlinear Studies
Yasmin Said	George Mason University	Department of Computational and Data Sciences

### Student Participant Awardees

Name	Affiliation	Department
Courtney Corley	University of North Texas	Computer Science and Engineering
Kun (Maggie) Hu	Virginia Tech University	Industrial and Systems Engineering
Sally Olderbak	University of Arizona	Department of Psychology
Shannon Smith	Arizona State University	Department of Exercise, Nutrition and Wellness
Sindhu Anand	Arizona State University	Department of Bioengineering
Tawandra Rowell	University of Pennsylvania	School of Social Policy & Practice
Priyamvada Tripathy	Arizona State University	Computer Science and Engineering
Jesus Barrientos	Arizona State University	Control Systems Laboratory

This year's workshop also saw an increased participation of enthusiastic students. A total of 30 students participated this year and were enriched by the experience. In addition, some postdoctoral participants also gained considerable exposure to this developing area of research. Among these, 17 were funded towards registration, travel and/or lodging expenses from the funding provided by our sponsors. These included 9 authors and 8 participants who did not have a paper or poster accepted by the workshop.

The awardees included an eclectic mix from diverse backgrounds, both academically and ethnically. More than half of these awardees were female.

### Student Awardees with Sponsors



### Suggestions for Next Year's Workshop

The workshop concluded with discussion about the future of the workshop. The audiences' mandate was clear; they were looking forward to another edition of the workshop. The sponsors concurred with the audience, leading to an animated session filled with numerous suggestions. Among the suggestions were the following:

- Sponsors' discussions led to the suggestion of using a session for identifying challenge problems in the area through group discussions. This would allow for the delineation of suitable problems that researchers could work on and sponsors could fund. A related idea was to identify participants who would be willing to work together on these interdisciplinary ideas to submit white papers. These ideas are prime examples of the reach of the workshop in shaping this area of research.
- A change in format was also called for to incorporate the numerous suggestions. As a part of this change, it was decided that a structure would be put together in advance and modified iteratively through a collaborative tool such as a wiki. Among the suggestions for change, was also a call for parallel sessions.
- Numerous participants were also interested in sessions that would allow scientists from one discipline to educate those from a different discipline to allow for knowledge sharing and

understanding that would allow scientists from multiple disciplines to be on common ground. Some suggestions for tutorials and outlines were provided.

- One of the ideas called for the collaborative creation of a common dictionary for computer scientists and social scientists to help alleviate some of the discrepancies caused by conflicting understanding of various terms used commonly by both groups.
- Finally, it was decided that the location for the workshop would be changed for next year. One suggested approach was to alternate between the east coast and the west coast each year. Volunteers were requested to head the workshop upon the proposed move to the east coast. Both Georgia Tech Research Institute (GTRI) and George Mason University (GMU) have offered to take on next year's organizational responsibilities.

## **Acknowledgments**

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More details of SBP09 can be found at <http://www.public.asu.edu/~huanliu/sbp09/>.