



Interface Foundation of North America, Inc.  
P.O. Box 7460  
Fairfax Station, VA 22039-7460

July 11, 2013

SUBJECT: Interface Conference on Applied Statistics

Dear Colleague,

The Executive Board for the Interface Conference on Applied Statistics (ICAS) is pleased to announce that its inaugural conference will be held from October 21-25, 2012 in Washington, DC. ICAS is a conference of the Interface Foundation of North America and a forum for the presentation and discussion of theoretical and applied papers relating to the use of probability and statistics for solving problems of national importance, with an emphasis on defense and national security. ICAS provides valuable opportunities for constructive interaction among academic, industry, and government agency scientists. ICAS also serves a nurturing role in the elevation of statistical proficiency among researchers in other disciplines who find themselves statistical practitioners because of the compelling benefits statistical science brings to research, development, and testing.

ICAS is the successor conference to the Army Conference on Applied Statistics (ACAS), which was established in 1995 by six sponsoring activities within the national defense community. In the ensuing years, the organization has broadened its mission to include context areas of national importance and has attracted more industry, academia, and other government agencies. In 2013, ICAS was established to reflect the broadening role of statistical methodology in solving national problems. The present direction represents a natural progression from being a conference under Army direction (1995-2004) to one under the direction of the Interface (2005-2012) to one that continues under the Interface but with an expanded role in the statistical community. ICAS is also the successor to the Conference on the Design of Experiments in Army Research, Development, and Testing, a historic series of meetings that began in 1955 and formally concluded in 1994. In their 58 years of service to the Army and DoD, these predecessor conferences have welcomed presentations on far-ranging techniques and tools such as reliability analysis, experimental design, statistical computing, visual data mining, simulation, linear and stochastic modeling, and data fusion.

This year's conference program will include invited talks by prominent investigators in various branches of statistics and applied probability as well as contributed papers of a technical, applied, or clinical nature. To date, the following distinguished researchers have been confirmed:

- Antonio Possolo, keynote (National Institute of Standards and Technology, "Shape Metrology")
- Kirk Borne (George Mason, "Big Data")
- Shane Reese (Brigham Young, "Bayesian Statistics")
- Colin Wu (National Institute of Health, "Longitudinal Data")

This year's conference will also feature four special sessions on the following topics: Robust Statistics (organized by Craig Andres, Aberdeen Test Center), Text Data Mining (Wendy Martinez, Bureau of Labor Statistics; Edward Wegman, George Mason University), Agent Based Modeling (Alyson Wilson, Institute for Defense Analysis) and Statistics at the Air Force Institute of Technology (LT COL Richard Warr, AFIT).

ICAS technical sessions will feature contributed papers by government, academic and industrial scientists, including investigators under contract to government agencies. Contributed papers can range in content from new research to well-posed problems in which statistical methods are applied to solve specific national problems. Speakers are strongly encouraged to present their papers in terms of the potential or real problems that motivated the work. Results that rely on relatively recent or specialized results in the theory of statistics and probability should be explained in sufficient detail to permit an audience of statistical practitioners with broadly varying backgrounds to use the results to enhance their own problem-solving capabilities.

Clinical sessions, a distinct element of ICAS, accept unresolved problems in applied statistics. A panel of experts comprised of invited speakers and other distinguished attendees offer guidance on how to proceed. Authors of a clinical paper must provide a brief description of the problem by September 16, 2013 to allow sufficient time for panelists to prepare their recommendations. We invite you to consider this opportunity to present an interesting statistical problem to some of the country's leading applied and mathematical statisticians.

The Executive Board of ICAS is also pleased to announce that Prof. Wei-Yin Loh of the University of Wisconsin - Madison will present a free short course for registered conference attendees, prior to the conference on October 21 & 22. "Classification and Regression Trees and Forests" are essential tools for data mining, machine learning, and statistical data analysis. In a classification or regression tree model, the data and sample space are split into two or more partitions and a simple statistical model is fitted to each of them. The model is intuitive to interpret because the partitions can be displayed as a decision tree. Besides, the models often

possess prediction accuracy as good as or better than that of linear discriminant analysis and linear regression. This course reviews the major techniques and discusses their relative strengths, weaknesses, capabilities, and computational requirements. Concepts will be explained with examples from business, industry, science, and engineering. Special emphasis will be given to the instructor's GUIDE algorithm ([www.stat.wisc.edu/~loh/guide.html](http://www.stat.wisc.edu/~loh/guide.html)). If time permits, instruction on the use of GUIDE and other free software will be given.

Participation from many activities is sought to ensure a mixture of science and application. A call for papers is hereby extended. Speakers will be notified regarding paper acceptance no later than September 6. It may become necessary to limit the number of papers, so a timely response is recommended. To submit a paper for consideration, please send the following information by September 3 to Don Faxon, [dfaxon@gmu.edu](mailto:dfaxon@gmu.edu). A digital projector will be provided for presentations. Presenters may use their own laptop or a conference laptop able to project pdf or Powerpoint.

1. Title of paper, and a brief abstract.
2. Name of author(s) and exact title of the organization(s).
3. Type of paper (technical or clinical).
4. Telephone number of the author(s).
5. E-mail address of the author(s).

Technical papers are nominally allowed 30 minutes, to include 5 minutes at the end for audience discussion and questions. Of the 40 minutes available for clinical papers, approximately 15 minutes are recommended for the problem statement, allowing 25 minutes for panel discussion.

The Interface Conference on Applied Statistics also marks the occasion when the Army Wilks Award is presented for significant contributions in statistical research or applications relevant to national defense. This year the Board is accepting open nominations for award candidates. Letters of nomination should include the nominee's vita relevant to national service, and should be mailed by August 22, 2013 to U.S. Army Research Laboratory, ATTN: RDRL-HR (Jock Grynovicki), APG, MD 21005-5425.

This year's conference and short course will take place in downtown Washington, DC just a few blocks from the city's transportation hub, Union Station. With three airports, a convenient Metro system and plenty of pedestrian-friendly sidewalks, DC is easy to get to and around. The nation's capital offers an assortment of entertainment, sports and outdoor activities, and sightseeing opportunities. Named by *Travel & Leisure* in 2011

as the top U.S. destination for museums and galleries, DC is noted for the assortment and quality of fantastic free attractions, from the magnificent memorials and monuments on the National Mall to must-see sites like the National Gallery of Art, the Library of Congress and the museums of the Smithsonian Institution. If you are planning to see some of the area when you arrive, be sure to visit Washington DC's official travel website, <http://washington.org/>.

After this mailing, information concerning the conference and short course will be made available at [www.armyconference.org](http://www.armyconference.org). This site will be periodically updated as details finalize, including information regarding registration fees, lodging, agenda, etc. Any additional inquiries concerning the conference may be directed to Wendy L. Martinez, by email ([Martinez.Wendy@bls.gov](mailto:Martinez.Wendy@bls.gov)), phone (202-691-7400), or fax (202-691-7426).

Sincerely,

David W. Webb  
 U.S. Army Research Laboratory  
 Aberdeen Proving Ground, MD

<b>Executive Board of the U.S. Army Conference on Applied Statistics</b>		
<b>Wendy L. Martinez</b> (Chair) <i>Bureau of Labor Statistics</i>		
<b>Craig Andres</b> <i>Aberdeen Test Center</i>	<b>Arthur Fries</b> <i>Institute for Defense Analyses</i>	<b>Yevgeniya K. Pinelis</b> <i>Center for Naval Analysis</i>
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<b>Thomas A. Donnelly</b> <i>SAS Federal LLC</i>	<b>Yuanzhang Li</b> <i>Walter Reed Army Institute of Research</i>	<b>Charles E. White</b> <i>Walter Reed Army Institute of Research</i>
<b>Don R. Faxon</b> <i>George Mason University</i>	<b>Allan T. Mense</b> <i>Raytheon Company</i>	<b>Alyson Wilson</b> <i>North Carolina State University</i>

