May 26, 2004

AMSRD-ARL-WM-BC

SUBJECT: U.S. Army Conference on Applied Statistics

Dear Colleague,

The Executive Board for the Army Conference on Applied Statistics (ACAS) is pleased to announce an historic 50th anniversary meeting of statistics in defense hosted by the Army Research Laboratory at its Georgia Institute of Technology site, 20-22 October 2004. Fifty years ago at the suggestion of Sam Wilks, the Design of Experiments Conference in Army Research, Development and Testing (DOE) began in 1955 at the Diamond Ordnance Fuse Laboratories, now part of the Army Research Laboratory (ARL). That first of forty conferences was organized by the Office of Ordnance Research, now the Army Research Office of ARL. ACAS, DOE's successor, now returns in its 10th year to the Army Research Laboratory to commemorate past contributions of statistics in the Army and to continue with its current, broader focus on defense applications.

ACAS is a forum for the presentation and discussion of theoretical and applied papers relating to the use of probability and statistics for solving defense- and security-related problems. Today's Department of Defense faces far-ranging challenges that include many topics in which probability and statistics can contribute. The development and advancement of defense systems draw upon varied techniques such as survival analysis, data mining, simulation, image analysis, linear and nonlinear modeling, data fusion, and experimental design. ACAS provides a constructive opportunity for interaction among academic, industry, and DoD scientists. It also serves a nurturing role in the elevation of statistical proficiency among DoD researchers in other disciplines who find themselves statistical practitioners because of the compelling benefits statistical science brings to DoD research, development, and testing.

"**Quantitative Graphics and Visual Analytics for Communication and Discovery**", a two-day short course taught by Professor Dan Carr of George Mason University, will precede the conference on October 18 & 19. A summary of Prof. Carr's course will be posted on the ACAS website in the upcoming weeks (http://www.arl.army.mil/main/acas/default.htm).

The conference program will consist of 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 for invited presentations: David Banks (Duke), Doug Bates (Wisconsin), Ron Brookmeyer (Johns Hopkins, keynote), Russell Lenth (Iowa), Bill Szewczyk (NSA), and Mark Vangel (Massachusetts General Hospital),

This year's conference will feature three special sessions. The first of these will explore issues and methods for "**Statistical Text Processing",** a novel and widely-applicable research area that attempts to computationally compare two bodies of text for the purpose of identifying concepts that are common to both. This session will be organized by Carey Priebe (Johns Hopkins) and Ed Wegman (George Mason). The second, entitled "**Recent Advances in Engineering Statistics**", is being organized by Jeff Wu (Georgia Tech). Talks in this session will highlight some of the latest results by statistical researchers in the engineering sciences, and lend insight into the direction of future work. The final session "**The Volume-of-Tube Formula: Perturbation, Mixture Models and Applications**", will introduce theory and inferential methods for fitting perturbation models, a new area of research with applications in image analysis and automatic target recognition. Catherine Loader and Ramani Pilla (Case Western) are organizing this session.

The technical sessions of the conference will also feature contributed papers by DoD scientists, and academic and industrial scientists, including investigators under contract to DoD. Contributed papers can range in content from new research to well-posed problems in which statistical methods are applied to solve specific DoD 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 the U.S. Army Conference on Applied Statistics, 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 24, 2004 in order that panelists have sufficient time 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.

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 1. 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 August 22 to Barry A. Bodt, U.S. Army Research Laboratory, ATTN: AMSRD-ARL-CI-CT, Aberdeen Proving Ground, MD 21005-5067. (Electronic mail sent to babodt@arl.army.mil is preferred.)

1. Title of paper, and a short abstract written in standard ASCII text.
2. Name of author(s) and exact title of the organization(s).
3. Type of paper (technical or clinical).
4. Equipment needed (overhead, slide projector, etc.).
5. Telephone number of the author(s) (DSN or commercial).
6. 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 conference also marks the occasion when the Army Wilks award is presented for significant contributions to the U.S. Army in the areas of statistical research, applications, and/or consulting. This year the Board is accepting open nominations for award candidates. Letters of nomination should include the nominee's vita relevant to Army service, and should be mailed by July 16, 2003 to Jock O. Grynovicki, U.S. Army Research Laboratory, ATTN: AMSRD-ARL-HR-SE, Aberdeen Proving Ground, MD 21005-5425.

This year's U.S. Army Conference on Applied Statistics will be held in downtown Atlanta at the Georgia Tech Hotel and Conference Center. Atlanta is the 11th largest metropolitan area in the nation, yet it still retains that famous Southern hospitality. It is a city of great diversity, with many museums, theaters, shopping venues, and historic landmarks, and was recently ranked 4th in the US when it comes to great restaurants. Atlanta is a terrific sports town – the Braves have won ten division titles in a row and may again be a part of baseball's post-season play during conference week. The Falcons boast one of the NFL's most exciting players in quarterback Michael Vick, and will be in town to play the San Diego Chargers on October 17. If you are planning to see some of the area when you arrive, be sure to browse the Atlanta Convention and Visitors Bureau website, www.atlanta.net.

The conference is sponsored this year by the U.S. Army Research Laboratory, Walter Reed

Army Institute of Research, Uniformed Services University of the Health Sciences, TRADOC Analysis Center - WSMR, United States Military Academy, and Army Research Office – with cooperation from Los Alamos National Laboratory, George Mason University, Office of Naval Research, and Institute for Defense Analyses. A host letter providing more detailed information regarding registration fees, additional lodging, agenda, etc. will follow in early September. Prior to this mailing, information concerning the conference and tutorial can be obtained via the Internet at http://www.arl.army.mil/main/acas/default.htm. Any additional inquiries concerning the conference may be directed to Barry A. Bodt at the address noted previously, by phone (410-278-6659), or by fax (410-278-4988).

Sincerely,

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

Executive Board of the U.S. Army Conference on Applied Statistics

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