The National Research Center for Statistics and the Environment

The University of Washington
April 16, 2001

RECOGNITION AND AWARDS

Eun Sug Park

Eun Sug Park accepted a new position effective March 1 at the Texas Transportation Institute, a part of the Texas A & M University system. Her new position as Assistant Research Scientist, is in the Mobility Analysis Program of the System Planning, Policy and Environment Research Group. Her duties will include collaboration with transportation engineers and planners on a wide variety of transportation research and consulting projects such as traffic engineering and operations, intelligent transportation systems (ITS), and materials/pavement design and evaluation. She will also supervise graduate students from Texas A & M. Her new e-mail is epark@stat.tamu.edu.

Doris Damian and Fadoua Balabdoui

Doris Damian and Fadoua Balabdoui were nominated by NRCSE for its institutional membership award for The International Environmetrics Society (TIES). They will each have a year's membership with all the publications and privileges of regular members of TIES.

DEGREES AWARDED

Peter Craigmile, who was a student in the Statistics department, received his Ph.D. in Autumn quarter, 2000. His supervisors were Don Percival and Peter Guttorp. The title of his dissertation was " Wavelet-Based Estimation for Trend Contaminated Long Long Memory Process". He is currently teaching for the Statistics Department and will be an Assistant Professor at Ohio State University in the Fall.

NEW BOOK AVAILABLE

"Geographic Information Systems for Group Decision Making" by Piotr Jankowski and Tim Nyerges has been recently released by Taylor & Francis Publishers. The findings of this volume show how research into the use of group-based GIS results in new knowledge of participatory problem-solving and decision making. It provides keys to a collaborative spatial decision making approach using theory, methodology and substance. Examples of spatial decision problems include allocation of funds for primary health care, site selection for transportation improvement, and arrangement of sites for estuarine habitat (re)development. Ordering information: URL: http://www.tandf.co.uk/books/ email: cserve@routledge-ny.com ISBN:0-748-40932-7.

PAPERS SUBMITTED/PUBLISHED BY CENTER MEMBERS

Mode NA, Conquest LL, Marker DA, 2000. "Incorporating prior knowledge in environmental sampling: ranked set sampling and other double sampling procedures", submitted to *Environmentrics*. Also presented at the International Environmetrics and Chemometrics Conference, Las Vegas, Sept. 2000.

Doberstein CP, Karr JR, Conquest LL, 2000. "The effect of fixed-count subsampling on macroinvertebrate biomonitoring in small streams", Freshwater Biology 44:1-17.

Levy D, Lumley T, Sheppard L, Kaufman J, Checkoway H., "Referent selection in case-crossover analyses of health effects of air pollution", Epidemiology. 12:000-000, 2001.

Sheppard L, Levy D, Checkoway H. "Correcting for the effects of location and atmospheric conditions on air pollution exposure analysis in a case-crossover study', J of Exp Analysis and Environ Epi.

Papers cont.

G. Shaddick and Jon Wakefield submitted “Modelling Multivariate Pollutant Data at Multiple Sites” to Applied Statistics.

Peter F. Craigmile, "Simulating a class of stationary Gaussian processes using the Davies-Harte algorithm, with application to long memory processes" has been submitted to the Journal of Time Series analysis.

Park, E. S, Guttorp, P., Henry, R.C., “Multivariate receptor modeling for temporally correlated data by using MCMC” has been accepted by JASA.

The special issue (No. 6., 2000) of *Environmetrics* on statistical methods for particulate matter air pollution, guest edited by Peter Guttorp, has now appeared. It contains papers by Center members and visitors.

WORKSHOPS/SEMINARS

Spatial Moving Average Models Workshop

The Spatial Moving Average Models Workshop will be at the UW in the HUB on May 20-May 22. The goal of this workshop is to bring together authors to share ideas and possibly produce an edited volume that summarizes the current state of the field or a special issue of a journal to draw attention to recent research. The invitation-only event will include the following people: David Higdon (Duke University), Jay ver Hoef (Alaska Dept. of Fish and Game), Noel Cressie (Ohio State), Victor de Oliveira (Universidad Simon Bolivar), Ronald Barry (University of Alaska, Fairbanks), Konstantin Krivoruchko (Environmental System Research Institute), Montse Fuentes (North Carolina State University), Nicky Best (Imperial College), Katja Ickstadt (Darmstadt University of Technology), Robert Wolpert (Duke University) and John Kern (Duquesne University).

NSF/CBMS Regional Conference in the Mathematical Sciences

An NSF funded CBMS lecture series on Environmental Statistics, with principal lecturer Richard Smith from the University of North Carolina, will be at the UW on June 25-29, 2001 in the Walker-Ames Room in Kane Hall. Dr. Smith will give 10 lectures, including topics such as geostatistics, nonstationary models, lattice models, spatio-temporal models, monitoring network design, time series, trend detection and extreme values. Other speakers will be Peter Guttorp, Doug Nychka, Paul Sampson, Paul Switzer and James Zidek. For more information on this conference, check the web site for updates: http://www.nrcse.washington.edu/events/cbms/ .

This will also be listed as a Statistics course: 578 for A-term Summer Quarter, 2001, for two credits.

International Society for Exposure Analysis

Center members Tim Larson, Thomas Lumley, and Lianne Sheppard presented three papers at the International Society for Exposure Analysis meeting in Monterey, CA, in October. Together with colleagues from the EPA Northwest PM Center we used data from an EPA-funded personal exposure study in Seattle to investigate the relationships between indoor and outdoor concentrations; spatiotemporal variation in outdoor concentrations; and the excess of personal exposure over ambient concentrations.

Assessment of Exposure to Fine Atmospheric Particulate: Challenges and Progress

This workshop is being held on May 16, 2001. The aim of the workshop is to define the unique issues inherent in assessment and management of fine particulate pollution in ambient air, to highlight the relationship between population and health studies and ambient air quality studies, and to share some current research areas of inquiry and findings regarding the links between fine atmospheric particulate exposures and health. For more information on this course, call Sharmaine Guyll (206) 543-1069 or view http://depts.washington.edu/envhlth/conted/ce/course_descriptions/pm01.html.

PROPOSALS

NRCSE has submitted two proposals that entail continuation of the Center. One is a strict continuation of NRCSE, which would be funded (five years at $1.25 million dollars per year) by the EPA. Four proposals are competing for this award. The other expands the scope of the Center to a Mathematical Institute. This proposal, to the National Science Foundation, has a budget of $14 million, $3 million of which comes from the University of Washington.

Environmental Protection Agency

This proposal requests funding for a continuation of the National Research Center for Statistics and the Environment. It will continue to be a multi-disciplinary worldwide focal point for environmetric research. The Center will continue to be organized around cross-disciplinary working groups, grouped under the main headings of Space-time Analysis, Process Model Assessment, and Environmental Epidemiology. Center members and visiting researchers will work with graduate students and postdoctoral researchers on specific projects. Communication of Center research will still be facilitated by our internet presence and by various workshops and conferences. The Center will have a substantial educational component including a graduate diploma and an internship program, as well as outreach programs in the direction of K-12 education and science journalism.

National Science Foundation

The National Environmetrics Institute (NEI) will be a multidisciplinary, worldwide focal point for environmetric research. It will be organized around scientific and methodological working groups, with science-based groups organized under the major headings of pollution, process models, environmental policy, and climate, and methodological groups working on space-time modeling, spatial epidemiology, network design and sampling, and computing. The Institute will have a substantial educational component including a graduate diploma and an internship program and also an undergraduate and K-12 curricula and web-based courses to be made available to government agencies. The proposed dates are 7/02-6/07.

VISITORS

Ernst Linder, from the University of New Hampshire, is visiting from February 16 until June 15. Dr. Linder is working with Paul Sampson and Peter Guttorp.

Alan Gelfand, from the University of Connecticut, visited from March 4 to March 24, working with Peter Guttorp, Doris Damian, Ernst Linder and Paul Sampson.

Bryson Bates, of CSIRO in Australia, was here April 5-11. He worked on a paper with Jim Hughes.

Ronit Nirel, who has visited several times at the Center, has a new position. Her title is Chief Scientist at the Central Bureau of Statistics in Jerusalem. Her new e-mail is ronit@dev.cbs.gov.il.

EXECUTIVE COMMITTEE NEWS

The Executive Committee elected two new members, Mark Handcock, from the Center for Statistics and the Social Sciences, who has a joint appointment between Statistics and Sociology, and Julian Besag, from the Department of Statistics.

NEW PEOPLE AT THE CENTER

Abdulla Almasri

Abdullah Almasri is visiting from Lund University in Sweden. He will be here from January until June 15 and is working with Don Percival and Peter Craigmile on periodicity using wavelet analysis. Other research interests include time series, long-memory processes and wavelet analysis. He is in PDL office B228.

FROM THE DIRECTOR

Since the EPA site visit last summer (see the previous newsletter for more about that), many Center members have been spending considerable time working on the two proposals for renewal funding that we have submitted to the NSF and the EPA. Brief descriptions of the proposals can be found elsewhere in this newsletter. The main difference between them is that the NSF proposal has a broader scope, and is asking for twice as much money. The NSF competition has 15 participants (three or so are expected to be funded, from all of the mathematical sciences), while the EPA competition has 4 proposals entered. By early July we should have a better idea of what will happen to the Center. I am extremely grateful to all of you who participated in this process. The resulting proposals are very strong.

The EPA just published the second draft of the document Air Quality Criteria for Particulate Matter. It is EPA's summary of all research on PM up until about the middle of last summer. I expect there to be considerable controversy about this document. From an NRCSE point of view, none of the papers in the Environmetrics special issue on statistical analysis of PM data are referred to, in spite of us making quite an effort to make sure that the papers arrived at EPA before the deadline. Since these papers indicated several problems with previous analyses of PM health effects, this omission is lamentable.

Peter Guttorp
Director, NRCSE