



## The National Research Center for Statistics and the Environment

The University of Washington  
April 22, 1999

### RECOGNITION AND AWARDS

#### June Morita Receives Teaching Award

June Morita is a 1999 recipient of the University of Washington's Distinguished Teaching Award. She was one of four recipients selected from a field of over 90 applicants.

In addition to her classroom performance, June was selected based on her work to promote and improve the teaching of mathematics and statistics in local school districts. This work has been funded by the Eisenhower Foundation and, more recently, by the National Science Foundation and the Discuren Foundation.

June has also recently taken the position of Interim Project Director of the NSF-funded project, "Creating a Community of Mathematics Learners", CCML. CCML is a Local Systemic Change project, working with all of the middle school and high school math teachers in six local school districts. This project involves in-service training of teachers, including mathematics instruction, discussion of pedagogy, curricula, assessment methods, and materials, and strategies for sustaining change in mathematics instruction.

June will be honored at an awards ceremony on Thursday afternoon, June 10 in Meany Auditorium, and she will also be recognized during the Commencement ceremony on June 12.

#### Environmental Curriculum Project : The Truth is Revealed

Ashley Steel and Kathryn Kelsey have been working with upper elementary/middle school teachers at two local schools in developing and delivering a research-based environmental curriculum which integrates math and science skills. One of the tangible products from their first implementation of their curriculum was a fabulous set of poster presentations produced by their students. These posters displayed the students' research questions, discussed data collection, showed graphs of their data, discussion and conclusions. The posters decorated the walls of NRCSE for a couple of weeks early this month. During this time period, the posters were assessed by UW faculty judges and the top posters were selected for prizes. The NRCSE and the Puget Sound Chapter of the American Statistical Association are sponsoring prizes for the top posters. All of the participating students will receive certificates and letters including comments and questions about their posters. Congratulations to the participating students, and to Ashley and Kathryn for their great work.

The web page for this is located at <http://www.nrcse.washington.edu/resource/curriculum/truth.asp>.

#### James Karr and Loveday Conquest Win Distinguished Service Award

Jim Karr and Loveday Conquest were recipients of a twentieth century distinguished service award for outstanding contribution to the synergistic development and direction of statistics, ecology, environment and society. The awards ceremony was at the ninth Lukacs Symposium at Bowling Green State University. The Advisory Committee, Paul Switzer, Abdel El-Shaarawi and Larry Cox were also recipients of this award.

## Papers Submitted by Center Members

### Enrica Bellone

Enrica Bellone, James P Hughes, and Peter Guttorp submitted a paper to *Climate Research* entitled "A hidden Markov model for downscaling synoptic atmospheric patterns to precipitation amounts".

### Nicolle Mode

Nicolle Mode, Loveday Conquest, and David Marker have a paper coming out: NA Mode, LL Conquest, DA Marker, 1999. Ranked set sampling for ecological research: accounting for the total costs of sampling. *Environmetrics* 10. 16 galley pp.

Nicolle also has a report, A Comparison of Methods for Estimating Stream Habitat Area, 1999, 5 pp., summarizing the material in various poster presentations. This report may be found at: <http://salmo.cqs.washington.edu/people/nicolle/stream/writeup.html>.

### June Morita

The March 1999 issue of *Mathematics Teaching in the Middle School*, a publication of the National Council of Teachers of Mathematics, features an article written by June Morita about using goldfish crackers for teaching school kids about mark-recapture estimation. Color photos include a former Statistics Department graduate student.

### Eun Sug Park

Eun Sug Park, Ronald C. Henry, and Clifford H. Spiegelman submitted "Estimating the number of factors to include in a multivariate mixture model" to *Technometrics*.

There is also an in-press article "Comparing a new algorithm with the classic methods for estimating the number of factors" by Ronald C. Henry, Eun Sug Park, and Clifford H. Spiegelman in *Chemometrics and intelligent laboratory systems* (1999).

## Presentations by Center Members

### Nicolle Mode

Nicolle Mode gave a presentation at the 1/27/99 UW Center for Streamside Studies Symposium, "Incorporating Judgment Into Sampling Approaches for Streams".

### Loveday Conquest

Loveday Conquest gave a presentation on Ranked Set Sampling at an All Scientists' Meeting of the Pacific Northwest Ecosystem Research Consortium [an EPA-funded consortium consisting of UW, U of O, OSU doing ecosystem research and management research].

## WORKSHOPS/SEMINARS

### Model Assessment Workshop

September 7-10, 1999

Among the topics to be discussed are:

Defining the Problems of Model Assessment and Quality Assurance; Developments of Methodological and Quantitative Techniques; Assurance of Models Used in Environmental Regulation; The Way Ahead: Linking Research and Practice on Model Assurance.

For details of registration and presentation of posters, please see [www.nrcse.washington.edu/events/qaem.asp](http://www.nrcse.washington.edu/events/qaem.asp).

### Corvallis EPA Workshop

April 19, 1999

A group of NRCSE people were involved in an EPA Workshop in Corvallis, Oregon in April. The purpose was to keep EPA personnel aware of current Center research activities. We are planning further such workshops at other EPA sites. Each presentation had an audience of 20-25 individuals, and the audience was changing throughout the day. In all some 45 EPA, USFS and OSU scientists were present. The following presentations were made:

Peter Guttorp, Director of NRCSE, "Overview of the Center".

Loveday Conquest, Professor, Fisheries, "Integrating Judgment Into Ecological Sampling".

Ashley Steel, Graduate student, QERM, "In-stream Factors Controlling Juvenile Chinook Migration".

David Ford, Professor, Forest Resources, "Multi-criteria assessment of ecological process models".

Dennis Lettenmaier, Professor, Civil Engineering, "Hydrologic effects of logging in Western Washington".

Dean Billheimer, Assistant Professor, Statistics, "Measures of environmental quality and compositional data".

Peter Guttorp, Professor, Statistics, "Graphical modeling as a tool to study the components of the IBI".

### Spring Weekly Seminar Schedule 1999

Tuesdays, 1:00-2:30 p.m., Bagley Hall Room 425

The NRCSE Spring Seminars are joint with Quantitative Ecology and Resource Management (QERM).

**April 6:** Eun Sug Park, NRCSE "*Multivariate Receptor Modeling from a Statistical Science Viewpoint*".

**April 13:** David Caccia, QERM. "*Toward a Method for Design of Air Pollution Sampling Networks*".

**April 20:** Mary Fishel, Atmospheric Sciences. "*A Comparison of Statistical Methods Used to Predict US Surface Temperatures from Sea Surface Temperatures*".

**April 27:** Kevin Brinck, QERM, "*Adding Biological Information in a Multivariate Analysis to Measure Biological Condition*".

**May 4:** Alison Cullen, Graduate School of Public Affairs, "*Elicitation and Calibration Exercise*".

**May 11:** Enrica Bellone, Statistics. "*A Hidden Markov Model for Downscaling Synoptic Atmospheric Patterns to Precipitation Amounts*".

**May 18:** Susan Crane Lubetkin, QERM, *Title not available*.

**May 25:** Kevin Brand, Research Associate, Environmental Health. "*Adding biological information in a multivariate analysis to measure biological condition at a site*".

**June 1:** Heather Caffoe, QERM "*Describing and Modeling Early Growth in Managed Stands of Douglas Fir*".

## FROM THE DIRECTOR

We recently took the first step in a strategy of outreach to EPA laboratories and centers, when eight representatives of NRCSE visited the EPA lab in Corvallis and talked about some of the ongoing ecological research at our Center. The day-long workshop resulted in some good contacts, and we hope that these will lead to more collaborations between the groups. There will be more lab visits coming up.

We do not at the moment have any long-term visitors for next year. If you can think of someone who you would like to see at the UW, let me or Paul Sampson know. The Center has substantial funding for visitors, and it is important that we present a national (or even international) image to the field of environmental statistics.

## EXECUTIVE COMMITTEE NEWS

The Executive Committee met March 26 and April 1. The main topic was evaluation of internal NRCSE research proposals.

Rafael Ponce, Research Scientist in Environmental Health and Technical Director of CRESA, was elected as a member of NRCSE.

Mary Lou Thompson agreed to reconvene the Seminar Committee. Its task is to review the Center seminar setup and make a recommendation to the Director.

The duties of the Director, and of a proposed Assistant Director, were discussed. Essentially the Director will be responsible for budgeting matters, long-term planning and personnel matters, while the Assistant Director will be responsible for the internal and external information, in particular the NRCSE web pages. The two individuals share responsibilities for contacts with the EPA. Paul Sampson was chosen for fill the position of Assistant Director.