Grace Wahba
I. J. Schoenberg-Hilldale Professor of Statistics,
Professor in Departments of Biostatistics & Medical Informatics
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University of Wisconsin, Madison

Grace Wahba to Deliver the 2014 COPSS Fisher Lecture
at the JSM in Boston

Wednesday, 4:00-5:50 p.m., August 6, 2014, CC-Ballroom East

“Positive Definite Functions, Reproducing Kernel Hilbert Spaces and All That.”
The 2014 Committee of Presidents of Statistical Societies (COPSS) Fisher Lectureship Committee has named Grace Wahba, of the University of Wisconsin-Madison, to deliver the Fisher Lecture at the Joint Statistical Meetings in Boston. The committee recognized Dr. Wahba…

“Professor Grace Wahba has made fundamental contributions to many areas of statistics, including time series, splines, smoothing, nonparametric statistics, likelihood estimation, density estimation, and to interdisciplinary areas including climatology, epidemiology, bioinformatics and machine learning. In particular, her work in reproducing kernel Hilbert space representation and generalized cross-validation have become standard practice in scientific research and industry.”

Dr. Wahba will deliver her talk entitled “Positive definite functions, reproducing kernel Hilbert space, and all that.” on Wednesday, August 6, 2014, at 4:00 p.m. in room CC-Ballroom East of the Convention Center.

Abstract

R. A. Fisher was concerned with the importance of statistical methods to scientific investigations, but could hardly have dreamed of modern methods of statistical analysis that often require modern computer capabilities unknown during his lifetime. Reproducing Kernel Hilbert spaces appeared in an influential theoretical paper (Aronszajn) in 1950, but their use as a tool in applied nonparametric regression, statistical model building and machine learning did not begin for another 20 or so years after his death. After a brief tutorial, we describe some modern manifestations of these spaces and how they are used with both simple and complex data structures.

Biography of Grace Wahba

Grace Wahba is the I. J. Schoenberg-Hildale Professor of Statistics at the University of Wisconsin-Madison, where she is also a member of the departments of computer sciences and biostatistics and medical informatics. She is a pioneer in methods for smoothing noisy data and in the use of reproducing kernel Hilbert space methods in ill-posed inverse problems and statistical machine learning. Together with George Kimeldorf (1971) she is responsible for the representer theorem, which is behind many modern statistical model building and machine learning methods. Also well known for the development of generalized cross-validation, she has developed methods with applications in demographic studies, machine learning, DNA microarrays, risk modeling, medical imaging, and climate prediction.

Wahba earned her BA from Cornell in 1956, her MA from the University of Maryland in 1962, and her PhD from Stanford in 1966. She worked in industry for several years before settling in
Madison in 1967. She is the author of *Spline Models for Observational Data* and about 140 peer-reviewed papers.

Wahba was elected to the United States National Academy of Sciences in 2000 and received the honorary degree of Doctor of Science from The University of Chicago in 2007. According to the Mathematical Genealogy Project, she has graduated 34 students and has 198 descendants. When not doing statistics, she enjoys bicycle touring, ballroom dancing, and cross-country skiing with her long-term partner, David Callan, and following the exploits of her three grandchildren.