2013 Bernhard Flury Memorial Lecture

Grace Wahba

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Does Lifespan Run in Families, and If So, Why?

Background

Grace Wahba is the I. J. Schoenberg Professor of Statistics at the University of Wisconsin–Madison. She is a pioneer in methods for smoothing noisy data. Best known for the development of generalized cross-validation and "Wahba's problem", she has developed methods with applications in demographic studies, machine learning, DNA microarrays, risk modeling, medical imaging, and climate prediction. She was educated at Cornell (B.A. 1956), University of Maryland, College Park (M.A. 1962) and Stanford (Ph.D. 1966), and worked in industry for several years before receiving her doctorate in 1966 and settling in Madison in 1967. She is the author of Spline Models for Observational Data. She was elected to the United States National Academy of Sciences in 2000 and received an honorary degree of Doctor of Science from the University of Chicago in 2007.

Abstract

The Beaver Dam Eye study began in 1988 and enrolled a group of 4396 people in Beaver Dam, Wisconsin, then aged 43 to 84 years , and followed them for over 20 years. A large fraction of the study population have family members in the study.

Many covariates for the study population have been measured at the start and later, and mortality information on this population has been updated to March 2011.

We compared the pairwise death ages of relatives who had died by March 2011 and pairwise death ages of unrelated members of this population, and it is evident that there is a familial effect on mortality, agreeing with the common perception that mortality/longevity tends to run in families. In this study, we have several lifestyle variables that are risk factors for mortality. We use the tools of Distance Correlation and Smoothing Spline ANOVA to show that these risky lifestyle factors also tend to run in families, contributing to the Nature-Nurture debate.

Presented By

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Location

Swain Hall East 140
March 28, 2013
4:00 pm

Coffee, Tea and Cookies in Rawles Hall 107, 3pm

Followed by a Reception at the Statistics House, 309 N. Park Ave.

About Bernhard Flury

Professor Bernhard Flury, an applied statistician, was on the faculty in the Department of Mathematics at IU's Bloomington campus for more than ten years, starting in 1987. He did research in Multivariate Analysis and was a popular teacher of courses in statistics. For several years he was the director of the Statistical Consulting Center. He was killed by a rockslide while hiking in the Italian Alps in the summer of 1999. At the initiative of his wife Leah, as well as Professor Walter Gautschi (of Purdue University) and several other people, a fund was established in the Mathematics Department to fund a series of lectures in his memory. The first Bernhard Flury Memorial Lecture was given in the spring of 2004 by Professor Jim Schott of the University of Central Florida. Professor Ben Boukai of IUPUI gave the second lecture in 2006. The Department of Statistics began hosting this lecture alternately with The Department of Mathematics in 2007.