International Prize in Statistics Awarded to Sir David Cox for Survival Analysis Model Applied in Medicine, Science, and Engineering

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ALEXANDRIA, VA (October 18, 2016) – Prominent British statistician Sir David Cox has been named the inaugural recipient of the International Prize in Statistics. Like the acclaimed Fields Medal, Abel Prize, Turing Award and Nobel Prize, the International Prize in Statistics is considered the highest honor in its field. It will be bestowed every other year to an individual or team for major achievements using statistics to advance science, technology and human welfare.

Cox is a giant in the field of statistics, but the International Prize in Statistics Foundation is recognizing him specifically for his 1972 paper in which he developed the proportional hazards model that today bears his name. The Cox Model is widely used in the analysis of survival data and enables researchers to more easily identify the risks of specific factors for mortality or other survival outcomes among groups of patients with disparate characteristics. From disease risk assessment and treatment evaluation to product liability, school dropout, reincarceration and AIDS surveillance systems, the Cox Model has been applied essentially in all fields of science, as well as in engineering.

"Professor Cox changed how we analyze and understand the effect of natural or human-induced risk factors on survival outcomes, paving the way for powerful scientific inquiry and discoveries that have impacted human health worldwide," said Susan Ellenberg, chair of the International Prize in Statistics Foundation. "Use of the 'Cox Model' in the physical, medical, life, earth, social and other sciences, as well as engineering fields, has yielded more robust and detailed information that has helped researchers and policymakers address some of society's most pressing challenges."

Successful application of the Cox Model has led to life-changing breakthroughs with far-reaching societal effects, some of which include the following:

- Demonstrating that a major reduction in smoking-related cardiac deaths could be seen within just one year of smoking cessation, not 10 or more years as previously thought
- Showing the mortality effects of particulate air pollution, a finding that has changed both industrial practices and air quality regulations worldwide

- Identifying risk factors of coronary artery disease and analyzing treatments for lung cancer, cystic fibrosis, obesity, sleep apnea and septic shock

His mark on research is so great that his 1972 paper is one of the three most-cited papers in statistics and ranked 16th in *Nature's* list of the top 100 most-cited papers of all time for all fields.

In 2010, Cox received the Copley Medal, the Royal Society's highest award that has also been bestowed upon such other world-renowned scientists as Peter Higgs, Stephen Hawking, Albert Einstein, Francis Crick and Ronald Fisher. Knighted in 1985, Cox is a fellow of the Royal Society, an honorary fellow of the British Academy and a foreign associate of the U.S. National Academy of Sciences. He has served as president of the Bernoulli Society, Royal Statistical Society and International Statistical Institute.

Cox's 50-year career included technical and research positions in the private and nonprofit sectors, as well as numerous academic appointments as professor or department chair at Birkbeck College, Imperial College of London, Nuffield College and Oxford University. He earned his PhD from the University of Leeds in 1949, after first studying mathematics at St. Johns College. Though he retired in 1994, Cox remains active in the profession in Oxford, England.

Cox considers himself to be a scientist who happens to specialize in the use of statistics, which is defined as the science of learning from data. A foundation of scientific inquiry, statistics is a critical component in the development of public policy and has played fundamental roles in vast areas of human development and scientific exploration.

Note to Editors: Digital footage of Susan Ellenberg, chair of the International Prize in Statistics Foundation, announcing the recipient will be distributed on October 20. Ellenberg and Ron Wasserstein, director of the International Prize in Statistics Foundation and executive director of the American Statistical Association, will be available for interviews that day.

About the International Prize in Statistics
The International Prize in Statistics recognizes a major achievement of an individual or team in the field of statistics and promotes understanding of the growing importance and diverse ways statistics, data analysis, probability and the understanding of uncertainty advance society, science, technology and human welfare. With a monetary award of $75,000, it is given every other year by the International Prize in Statistics Foundation, which is comprised of representatives from the American Statistical Association, International Biometric Society, Institute of Mathematical Statistics, International Statistical Institute and Royal Statistical Society. Recipients are chosen from a selection committee comprised of world-renowned academicians and researchers and officially presented with the award at the World Statistics Congress.

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