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Association Announcement

JOHN AITCHISON: KRUMBEIN MEDALIST

IAMG President Ricardo A. Olea presented John Aitchison with the Twentieth Krumbein Medal during the 1997 Annual Conference of the Association, which was held in Barcelona, Spain, September 22–27.

The William Christian Krumbein Medal is the highest award given by our association. According to the by-laws, this medal is awarded to individuals who have made exceptional contributions in the field of mathematical geology. Conditions include (1) original contributions to the science, (2) service to the profession, and (3) support of the association. Professor Aitchison's accomplishments

John Aitchison

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clearly satisfy the requirements. I am not only firmly convinced that he deserves the medal, but also happy that he was chosen. He has done important work in statistical research that is crucial to the advancement of quantitative thinking in the earth sciences. But, who is John Aitchison?

John was born in East Linton, East Lothian, Scotland, on July 1926. East Linton, a 1-hour drive from the center of Edinburgh, is a charming historic village on the banks of the river Tyne with a traditional main street centered around a triangle instead of a square!

John was named after his father, John Aitchison, who was a railway signalman. His mother, Margaret Blackhall Aitchison, was devoted to the family. There, in his hometown, he attended primary school at the East Linton School and moved to Preston Lodge, in Prestopans, to attend the secondary "Joint Dux of School." In 1943, he went to the University in Edinburgh. John tells that he went to university because, when the Headmaster of Preston Lodge asked the then 16-year-old boy: "You'll be going to university, won't you?," the boy was too shy to say: "No."

Thus, during the war years 1943–1947, he studied mathematics at the University of Edinburgh. He was fortunate to have one of the best teams of instructors one can dream of: Sir Edmund Whitaker; Max Born; A. C. Aitken; and A. Erdelyi, among others. In 1946, John received the Foundations of Analysis Medal from the University of Edinburgh; 1 year later, he was granted a Bruce of Grangehill Scholarship at the same university. With these impressive achievements he received his MA degree in 1947 and prepared for his service to the nation.

His studies on radar techniques caused the call-up to the armed forces to be deferred. Later, upon graduation in 1947, he was expected to fulfill the 2 years of national service, but demobilization was still in progress. So, being a graduate in mathematics, the requirement to join the armed forces was switched to a requirement to perform civilian work of national importance. Not surprisingly, actuarial work in insurance offices was regarded as such: it led to foreign currency earnings! And John ended up as a trainee actuary with the Standard Life Assurance Company. He even completed Part II of the Faculty of Actuaries Examination in 1947.

After national service, he received a scholarship to Trinity College in Cambridge (1949–1951) and continued his studies in mathematics until he received his Bachelor of Arts but, desperately looking for real applications for the mathematical thought, he became hooked on statistics by a wonderful introductory course given by Frank Ascombe. So he decided to divert to the Cambridge Diploma in Mathematical Statistics and again he was in luck; the faculty was outstanding, having the opportunity to learn from professors such as John Wishart, David Cox, Henry Daniels, Frank Ascombe, and Dennis Lindley. He finished his studies with distinction in 1952 being a senior scholar of Trinity College in Cambridge since 1951.

In 1952, John started his academic life, a rich and fruitful life, moving from one university to the next and leaving an undeniable impact at each place where he taught. He started as a statistician in the Department of Applied Economics at the University of Cambridge (1952–1956), then he moved to the University of Glasgow, where he was a Lecturer in Statistics in the Department of Mathematics (1956–1962). Next stop was at the University of Liverpool, where he took over the position of Head of the Sub-Department of Mathematical Statistics. During 1962–1974, he was a Senior Lecturer there, in 1964–1966 a Reader. He returned to the University of Glasgow and from 1966 to 1976, he was Titular Professor of Statistics and Mitchell Lecturer in Statistics. This lectureship was founded in 1925, and its purpose is the provision of a series of public lectures in statistics. Next came a major jump, which led John to the South China Sea.

He started the second half-century of his life as Professor of Statistics at the University of Hong Kong. He stayed there for 13 years, assuming the position of Chairman of the Statistics Department, and is, since 1984, Emeritus Professor. After retirement, he again made a major jump, this time to the United States, to the University of Virginia, where he was Professor of Statistics and Chairman of the Division of Statistics until 1994. That year he closed the circle and returned to Glasgow, to the Department established in the Faculty of Sciences in 1966 with Professor David Silvey as Head and John as Titular Professor. Now the Department is one of the largest university statistical groups in the United Kingdom, and John is Honorary Senior Research Fellow. Besides still-intensive academic activities, John now devoted his time to gardening in his house in Carrington Castel, Lochgoilhead, conjuring, and enjoying music.

The list of societies he is or has been a fellow or member of is long: the Royal Statistical Society (since 1960); the Royal Society of Edinburgh (since 1968); the International Statistical Institute (1974–1994); the Hong Kong Statistical Society (since 1978, first President and now Honorary Member); the Bernoulli Society for Mathematical Statistics and Probability (1979–1994); the International Association for Mathematical Geology (since 1980, Vice-President 1989–1993); and the Institute of Mathematical Statistics. Also, he has been joint Editor of the Royal Statistical Society, Series B (1963–1965) and Associate Editor of Biometrika (1966–1969).

According to his own comments, John's teaching activities range from Christmas talks for schoolchildren to postgraduate and staff research lectures, from statistical theory to data analysis classes, student project supervision and service courses, as well as supervision of PhD students. More than 30 visiting lectureships and fellowships, more than 60 invited colloquium lectures and papers, distributed all over the world (Hong Kong, Canada, England, Australia, China, New Zealand, United States), reflect on the international acknowledgment of his work. This acknowledgment is also patent in his extensive experience as consultant, extended over 44 years, for a wide range of university departments

and teaching hospitals with a special interest in the modeling of nonstandard problems in medical statistics and, more recently, in promoting appropriate methods of analysis of compositional data in the earth sciences.

But the most important aspects of the professional academic activity of John lie certainly in his research activities in statistical inference, with special emphasis on practical Bayesian techniques; in multivariate analysis, particularly in compositional data analysis; and in statistical prediction analysis and in medical statistics. This research activity has seen the light in many publications, specialty books, and research papers. His first book, *The Lognormal Distribution*, published in 1957 by Cambridge University Press, coauthored with J. A. C. Brown, is still one of the standard references in statistical libraries. His last book, *The Statistical Analysis of Compositional Data*, is on the way to becoming one. About 60 citations in the mean per year speak well about the acceptance of his work.

Out of his many research papers (more than 70) I would like to emphasize two: "The Statistical Analysis of Compositional Data (with Discussion)," published in the *Journal of the Royal Statistical Society, Series B* in 1982, for which he received the Guy Medal in Silver from the same society, and "A New Approach to Null Correlations of Proportions," published in *Mathematical Geology* in 1981, for which he received the Best Paper Award from the journal. These papers, among many others related to the subject of compositional data analysis, have meant a real breakthrough in a field that has been stagnant in its theoretical evolution since Karl Pearson baptized the problem as the *spurious correlation* problem in 1987.

In 1952, John married Muriel Shackleton, and they had three children. Now there are five grandchildren—a growing clan. Muriel is a great woman. I was particularly impressed by a wonderful patchwork hanging on a wall of the Statistics Department at the University of Hong Kong that she made herself. Not only the colors and the excellent finish were impressive, it was also the motif: a Greco-Latin experimental design. It was (and I hope it still is) a masterpiece of statistics converted into art.

The International Association can be proud, honored, and grateful to include John Aitchison among its distinguished Krumbein medalists. Congratulations to John and to all the members of the association!

Vera Pawlowsky Glahn
Universitat Politècnica de Catalunya