EDITORIAL

By Runze Li

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We grieve the loss of Professor Peter Hall on January 9, 2016. Peter was a true scholar who played a major leadership role throughout the statistics profession. For the Institute of Mathematical Statistics (IMS), he served as President and as Co-Editor of *The Annals of Statistics* (AoS). As a mentor and friend of so many in our statistical community, his tremendous support of young scholars was legendary. Approved by the IMS, this issue of AoS is dedicated to the memory of Professor Peter Hall.

With the help of Professors Edward I. George and Tailen Hsing, the Editors of AoS, Runze Li led the organization of this dedicated issue. Starting with five invited memorial articles, this issue consists of fourteen regular papers selected from the more than 70 already accepted AoS papers, but not yet published as of January 31, 2016. These regular papers represent the spectrum of Peter's research and a reflection of the worldwide impact of Peter's work. The authors of the regular papers were invited to add a tribute to Peter Hall as a footnote in the first page of their papers.

Professor Peter Hall made a wide ranging and ground-breaking contribution to many statistical fields including, but not limited to, bootstrap, nonparametric modeling, deconvolution, functional data analysis and high-dimensional data modeling. Song-Xi Chen, a formal Ph.D. student of Professor Peter Hall, was invited to write a memorial article with highlights of Peter's contributions on the bootstrap in [3]. Peter had 80 publications on the bootstrap, with the first paper published in 1985. Peter published a series of important papers that addressed fundamental issues related to bootstrap confidence intervals, iterative bootstrap method and block bootstrap method.

In their memorial article [4], Ming-Yen Cheng, a former postdoctoral fellow of Professor Peter Hall, and Jianqing Fan, one of Peter's close friends and co-authors, present a selective overview on Peter's contributions on nonparametric function estimation and modeling. As indicated in [4], Peter was one of the leading figures in the developments of nonparametric techniques with over 300 published papers on nonparametric density estimation and nonparametric regression including bandwidth selection, boundary issues, shape constraints, residuals variance estimation and applications. Peter's work also addressed fundamental issues related to wavelet estimator and multivariate nonparametric regression. As evidenced in [6], Peter's contribution on nonparametric inference is continuing.