2018 PARZEN PRIZE FOR STATISTICAL INNOVATION

to be awarded by
Department of Statistics, Texas A&M University
Presented to

BIN YU

Thursday September 5, 2019 @ 11:10 am
Hawking Auditorium

The 2018 EMANUEL AND CAROL PARZEN PRIZE FOR STATISTICAL INNOVATION will be proudly awarded to BIN YU, Chancellor's Professor in the Department of Statistics and Electrical Engineering & Computer Science at the University of California Berkeley on September 5, 2019 at 11:10 am.

Iterative Random Forests
BIN YU
Chancellor's Professor in the Department of Statistics & Electrical Engineering & Computer Science at University of California Berkeley

The Parzen Prize for Statistical Innovation is awarded (in the Spring or Fall of even numbered years) to North American statisticians who have made outstanding and influential contributions to the development of applicable and innovative statistical methods. The prize has stimulated the establishment of other prestigious awards and prizes that recognize outstanding careers in the discipline and profession of statistics. The Parzen Prize for Statistical Innovation is supported by the Emanuel and Carol Parzen Fund, which was established as an endowment at the Texas A&M Foundation in honor of the 65th birthday of Emanuel Parzen on April 21, 1994.

The 2018 Parzen Prize is awarded to **Bin Yu** for innovative, influential, and outstanding research in algorithm and theory of statistical machine learning and casual inference. Her group is engaged in interdisciplinary research with scientists from genomics, neuroscience and precision medicine.

In order to augment empirical evidence for decision-making, she and her group are investigating methods/algorithms (and associated statistical inference problems) such as dictionary learning, non-negative matrix factorization (NMF), EM and deep learning (CNNs and LSTMs), and heterogeneous effect estimation in randomized experiments (X-learner). Their recent algorithms include staNMF for unsupervised learning, iterative Random Forests (iRF) and signed iRF (s-iRF) for discovering predictive and stable high-order interactions in supervised learning, contextual decomposition (CD) and aggregated contextual decomposition (ACD) for phrase or patch importance extraction from an LSTM or a CNN.

Bin Yu received a B.S in Mathematics from Peking University, her M.S. in Statistics from University of California, Berkeley and her Ph.D in Statistics from University of California, Berkeley. She is an elected Fellow of the American Statistical Association, the Institute of Mathematical Statistics, the Institute of Electrical and Electronics Engineers, the American Association for the Advancement of Science, the American Academy of Arts and Sciences and Guggenheim. She is a member of the National Academy of Sciences and was President of Institute of Mathematics Sciences from 2013 – 2014. She was the Tukey Memorial Lecturer of the Bernoulli Society in 2012 and the Rietz Lecturer of IMS in 2016. She received the E. L. Scott Award from COPSS (Committee of Presidents of Statistical Societies) in 2018. She was a founding co-director of the Microsoft Research Asia (MSR) Lab at Peking University and is a member of the scientific advisory board at the Alan Turning Institute in the UK. She has published over 150 refereed articles in top-tier statistical, engineering, computational and other journals.

Emanuel Parzen, long-time Distinguished Professor of Statistics at Texas A&M University, was born in New York City on April 21, 1929, and educated at Harvard (B.A. 1949) and University of California Berkeley (Ph.D. 1953). He served as a Statistics faculty member at Columbia (1953-56), Stanford (1956-70), SUNY Buffalo (1970-1978), Texas A&M (1978-2016), and a visiting faculty member at Imperial College London, M.I.T., IBM, Harvard, and the Center for Advanced Study in Behavioral Sciences. In 1994 he was awarded the Samuel Wilks Memorial Medal from the American Statistical Association. Emanuel Parzen retired in 2009 and passed away on February 6, 2016.