
Foreword

SLICED INVERSE REGRESSION AFTER 30 YEARS

Statistica Sinica features this special issue on sliced inverse regression (SIR) to honor Ker-Chau Li for his ground-breaking contributions to dimension-reduction techniques in high-dimensional statistics. Professor Li also made substantial contributions in mathematics/computation statistics, high-dimensional data analysis, bioinformatics, systems biology, and applied research. Li served as a Co-editor of Statistica Sinica, 1999-2002, and as the Director of the Institute of Statistical Science, Academia Sinica, 2006-2012. He was elected as Academician of Academia Sinica in 2012, and subsequently as a member to the World Academy of Sciences in 2014. He was also the founder of the Mathematics in Biology Lab at the Institute of Statistical Science, Academia Sinica.

This special issue includes one review in addition to nine excellent articles. The review paper highlights the SIR's fundamental importance and showcases SIR in a spectrum of applications. The other articles cover theory, methods and applications, in SIR in metric spaces, envelope quantile regression, survival data, minimum discrepancy approach with Fourier transform, dimension folding on tensor data, sparse SIR, distributed sufficient dimension reduction, sliced independence test, and data-guided treatment recommendation. In the past 30 years, the research area of SIR has flourished and engaged.

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