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Robert Tibshirani

Robert Tibshirani FRS FRSC (born July 10, 1956) is a Professor in the Departments of Statistics and Biomedical Data Science at Stanford University. He was a Professor at the University of Toronto from 1985 to 1998. In his work, he develops statistical tools for the analysis of complex datasets, most recently in genomics and proteomics.

His most well-known contributions are the Lasso method, which proposed the use of L^1 penalization in regression and related problems, and Significance Analysis of Microarrays.

Contents

	Robert Tibshirani
	FRS FRSC
Born	July 10, 1956
Nationality	Canadian, American
Alma mater	University of Waterloo Stanford University
Known for	Lasso method
Spouse(s)	Cheryl Denise Tibshirani
Scientific career	
Fields	Statistics
Institutions	Stanford University
Doctoral advisor	Bradley Efron[1]
Doctoral students	Daniela Witten[2][1]
Website	statweb.stanford.edu /~tibs (https://statweb. stanford.edu/~tibs)

Education and early life

Tibshirani was born on 10 July 1956 in Niagara Falls, Ontario, Canada. He received his B. Math. in statistics and computer science from the University of Waterloo in 1979 and a Master's degree in Statistics from University of Toronto in 1980. Tibshirani joined the doctoral program at Stanford University in 1981 and received his Ph.D. in 1984 under the supervision of Bradley Efron. His dissertation was entitled "Local likelihood estimation".[1]

His son, Ryan Tibshirani, with whom he occasionally publishes scientific papers, is currently an Associate Professor at Carnegie Mellon University in the Department of Statistics, jointly in the Machine Learning Department.

Honors and awards

Tibshirani received the COPSS Presidents' Award in 1996. Given jointly by the world's leading statistical societies, the award recognizes outstanding contributions to statistics by a statistician under the age of 40. He is a fellow of the Institute of Mathematical Statistics and the American Statistical Association. He won an E.W.R. Steacie Memorial Fellowship from the Natural Sciences and Engineering Research Council of Canada in 1997. He was elected a Fellow of the Royal Society of Canada in 2001 and a member of the National Academy of Sciences in 2012.[3]

Tibshirani was made the 2012 Statistical Society of Canada's Gold Medalist at their yearly meeting in Guelph, Ontario for "exceptional contributions to methodology and theory for the analysis of complex data sets, smoothing and regression methodology, statistical learning, and classification, and application areas that include public health, genomics, and proteomics".[4] He gave his Gold Medal Address at the 2013 meeting in Edmonton. He was elected to the Royal Society in 2019.

Publications

Tibshirani is a prolific author of scientific works on various topics in applied statistics, including statistical learning, data mining, statistical computing, and bioinformatics. He along with his collaborators has authored about 250 scientific articles. Many of Tibshirani's scientific articles were coauthored by his longtime collaborator, Trevor Hastie. Tibshirani is one of the most ISI Highly Cited Authors in Mathematics by the ISI Web of Knowledge.[5] He has coauthored the following books:

- T. Hastie and R. Tibshirani, *Generalized Additive Models*, Chapman and Hall, 1990.
- B. Efron and R. Tibshirani, *An Introduction to the Bootstrap*, Chapman and Hall, 1993
- T. Hastie, R. Tibshirani, and J. Friedman, *The Elements of Statistical Learning: Prediction, Inference and Data Mining*, Second Edition, Springer Verlag, 2009 [6] (available for free from the co-author's website).
- G. James, D. Witten, T. Hastie, R. Tibshirani, *An Introduction to Statistical Learning with Applications in R*, Springer Verlag, 2013 [7] (available for free from the co-author's website).
- T. Hastie, R. Tibshirani, M. Wainwright, *Statistical Learning with Sparsity: the Lasso and Generalizations*, CRC Press, 2015 [8] (available for free from the co-author's website).

References

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2. Witten, Daniela (2010). *A penalized matrix decomposition, and its applications* (https://stacks.stanford.edu/file/druid:fw911jf5800/WittenThesisJune212010-forsubmission-augmented.pdf) (PDF). *stanford.edu* (PhD thesis). Stanford University. OCLC 667187274 (https://www.worldcat.org/oclc/667187274). Retrieved 2018-08-28.
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5. "H - Research Analytics" (http://researchanalytics.thomsonreuters.com/highlycited/names/h/). Thomson Reuters. Retrieved 8 April 2012.
6. Hastie, Trevor; Tibshirani, Robert; Friedman, Jerome H. "The Elements of Statistical Learning" (https://web.archive.org/web/20091110212529/http://www-stat.stanford.edu/~tibs/ElemStatLearn/). Archived from the original (http://www-stat.stanford.edu/~tibs/ElemStatLearn/) on 10 November 2009. Retrieved 15 June 2012.
7. James, Gareth; Witten, Daniela; Hastie, Trevor; Tibshirani, Robert. "An Introduction to Statistical Learning with Applications in R" (http://www-bcf.usc.edu/~gareth/ISL/). Retrieved

3 July 2016.

8. Hastie, Trevor; Tibshirani, Robert; Wainwright, Martin. "Statistical Learning with Sparsity: the Lasso and Generalizations" (http://web.stanford.edu/~hastie/StatLearnSparsity/). Retrieved 3 July 2016.

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