



Foreseeing the Unseen: Probability Estimation over Large Alphabets

Rhodes Hall 310: March 6, 2013 @ 12:00PM



ISN Seminar Speaker:

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Abstract

Many applications require estimating probabilities of rare, even unseen, events. We outline the problem's theory, applications, relation to works by Fisher, Laplace, Good, Turing, Ramanujan, Hardy, Shannon, and Shakespeare, and recent constructions of asymptotically optimal estimators. The talk is self contained and based on work with several past and current students.

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Biography

Alon Orlitsky received B.Sc. degrees in Mathematics and Electrical Engineering from Ben Gurion University in 1980 and 1981, and M.Sc. and Ph.D. degrees in Electrical Engineering from Stanford University in 1982 and 1986.

From 1986 to 1996 he was with the Communications Analysis Research Department of Bell Laboratories. He spent the following year as a quantitative analyst at D.E. Shaw and Company, an investment firm in New York city. In 1997 he joined the University of California, San Diego, where he is currently a professor of Electrical and Computer Engineering and of Computer Science and Engineering, and directs the Information Theory and Applications Center and the Center for Wireless Communications. His research concerns information theory, statistical modeling, machine learning, and speech recognition.

Alon is a recipient of the 1981 ITT International Fellowship and the 1992 IEEE W.R.G. Baker Paper Award, and co-recipient of the 2006 Information Theory Society Paper Award. He co-authored two papers for which his students received student-paper awards: the 2003 Capocelli Prize and the 2010 ISIT Student Paper Award. He is a fellow of the IEEE, and holds the Qualcomm Chair for Information Theory and its Applications at UCSD.