

Department of Mathematical Sciences welcomes

Professor Jyoti Sarkar IUPUI



February 16, 2018

Tea begins at 3:00
in LD 259

Research Topic
begins at 3:30
in LD 229

Score-Based Secretary Problem (A byproduct of my 2017 sabbatical leave)

In the celebrated “Secretary Problem,” involving n candidates who have applied for a single vacant secretarial position, the employer interviews them one by one in random order and learns their relative ranks. As soon as each interview is over, the employer must either (1) hire the candidate and stop interviewing, or (2) reject her and never recall her. The employer’s optimal strategy to hire the best candidate is to let go roughly the first n/e candidates, and then hire the best among all interviewed candidates. The employer’s success rate is about $1/e$.

We consider a variation of this problem in which the employer also learns the scores, independently drawn from a known continuous probability distribution, of the candidates during the interview. Endowed with this additional information, what strategy should the employer adopt in order to maximize his chance of hiring the best candidate? What is the maximum probability of hiring the best candidate?

ABOUT THE SPEAKER:

Jyoti Sarkar is a Professor and Statistics Consultant in the Department of Mathematical Sciences at Indiana University-Purdue University Indianapolis. He is the inventor of the SARKARCUBES.

Jyoti studied at the Indian Statistical Institute, where he received a B. Stat. (Honors, 1985) and an M. Stat. (1987). After earning a PhD (Statistics, 1990) from the University of Michigan Ann Arbor, he joined IUPUI in 1991. Jyoti’s research areas are reliability theory, applied probability, mathematical statistics, stochastic processes and economics. He serves as a statistics consultant in academic, industrial and governmental sectors.

