Allan Sly Awarded 2019 Loève Prize

The 2019 Line and Michel Loève International Prize in Probability is awarded to Allan Sly of Princeton University. The prize, which carries a monetary award of $30,000, will be presented at a ceremony in Berkeley to be held in early 2020.

He received his Ph.D. in 2009 under Elchanan Mossel at U.C. Berkeley. He is best known for the use of deep probabilistic methods to solve long-standing problems at the interface of probability, the theory of algorithms and statistical physics. Three areas in which he has made major advances, and illustrative papers, are

The stochastic block model: in papers such as *A proof of the block model threshold conjecture* and *Belief propagation, robust reconstruction and optimal recovery of block models* (both with Elchanan Mossel and Joe Neeman).

Formalizations of the one step replica symmetry breaking heuristic: in papers such as *Proof of the satisfiability conjecture for large k* and *Maximum independent sets on random regular graphs* (both with Jian Ding and Nike Sun).

Sharp analysis of Glauber dynamics: in papers such as *Critical Ising on the square lattice mixes in polynomial time* and *Cutoff for the Ising model on the lattice* (both with Eyal Lubetzky).

About the Prize. The Prize commemorates Michel Loève, Professor at the University of California, Berkeley, from 1948 until his untimely death in 1979. The Prize was established by his widow, Line, shortly before her death in 1992. Awarded every two years, it is intended to recognize outstanding contributions by researchers in probability who are under 45 years old.