

**Stanford University**  
**Departments of Mathematics and Statistics**

PROBABILITY SEMINAR

4pm, Monday, April 16, 2018  
Sequoia Hall Room 200

Refreshments served at 3:30pm in the Lounge.

**Speaker:** Erwin Bolthausen  
*Institute of Mathematics,*  
*University of Zurich*

**Title:** A second moment method for high-temperature mean-field spin glasses

**Abstract:**

It is well known that in mean-field spin glasses, the annealed free energy typically does not agree with the quenched one, even at high temperature. We propose a suitable conditioning argument which leads to an evaluation of the quenched free energy by a conditional second moment method. The proper conditioning is on the solution of the TAP equations. Up to now, it has been worked out only for the SK-model, and it does not (yet) work in the full high-temperature regime. The method can probably be applied much wider.