

HKIAS Distinguished Lecture

Disconnection, Random Interlacements, and the Gaussian Free Field

Professor Alain-Sol Sznitman

Department of Mathematics
ETH Zurich, Switzerland



Date : 9 April 2019 (Tuesday)

Time : 4:30pm – 6:00pm (*Light refreshments will be served from 4:00pm to 4:30pm*)

Venue: Connie Fan Multi-media Conference Room, 4/F, Cheng Yick-chi Building
City University of Hong Kong

Abstract

Random interlacements have been introduced in order to gain a better understanding of certain phenomena of disconnection and fragmentation created by simple random walks. In this perspective, the investigation of the percolative properties of random interlacements has been of special importance. Over time, it has emerged that random interlacements are closely related to the Gaussian free field, a classical model of random field. This link has been very fruitful and has shed new insights on both models.

In this lecture, which is addressed to a non-specialist audience, we will attempt to describe some of the developments on these matters that took place roughly over the last ten years.

Biography

Alain-Sol Sznitman has been full Professor at the ETH Zurich, in the Department of Mathematics since 1991. He has been director of the FIM (Mathematics Research Institute) from 1995 until 1999.

Professor Sznitman was born in 1955 in Paris. He studied at the Ecole Normale Supérieure in Paris. Following his studies he became Attaché de Recherche at C.N.R.S. in 1979, and worked at the Laboratoire de Probabilités de l'Université Pierre et Marie Curie. In 1983 he received the Doctorat d'Etat, became Chargé de Recherche and then spent two years at the Courant Institute in New York, returning to Paris in 1985. In 1987 he was appointed associate professor at the Courant Institute, and in 1990 full professor. In 1989 Prof. Sznitman received the Alfred P. Sloane Fellowship, and in 1991 the Rollo Davidson Prize. In 1992 he presented a Plenary Lecture at the First European Congress of Mathematics in Paris. In 1997 he became a Fellow of the Institute of Mathematical Statistics. In 1998 he was an Invited Speaker at the International Congress of Mathematicians in Berlin, and in 1999 he received the Line and Michel Loève Prize. In 2008 he became member of the Academia Europaea, in 2012 member of the Inaugural Class of AMS Fellows, and in 2014 member of the IMU Circle.

Professor Sznitman's research concerns probability theory, with a special focus on problems connected with physics, in particular problems of random media. He is the author of several scientific publications and member of several scientific committees.



All are welcome

Enquiries:

Tel: 3442 6611

Email: hkias@cityu.edu.hk

Online registration: www.cityu.edu.hk/hkias/event