

## 9th World Congress in Probability and Statistics

The 9th World Congress in Probability and Statistics was held July 11-15, 2016 in Toronto. The World Congress is held every four years, and is sponsored jointly by the *Bernoulli Society for Probability and Mathematical Statistics* and the *Institute of Mathematical Statistics*. Previous congresses have been held in Istanbul (2012), Singapore (2008), Barcelona (2004), Guanajuato (2000), Vienna (1996), Chapel Hill (1994), Uppsala (1990), and Tashkent (1986). This year's was hosted by the *Fields Institute*, on the campus of the University of Toronto.

The Toronto Congress attracted over 400 participants, and featured 18 plenary talks, 40 invited sessions, 4 contributed sessions, and 41 sessions of contributed talks, as well as posters. There were about 280 talks in total, which spanned a broad range of topics from probability, finance, statistics, and biostatistics. With 4 plenary talks per day, plus morning and afternoon rounds of 10 simultaneous sessions, congress participants had a wide variety of options. Sara van de Geer (ETH Zürich) gave a series of three Wald lectures on high-dimensional statistics. Bin Yu (UCB) delivered the Rietz lecture, on *Theory to gain insight and inform practice*; Judith Rousseau (Paris Dauphine) the Ethel Newbold prize lecture, titled *On the Bayesian measures of uncertainty in infinite dimensional models*; Byeong Park (Seoul National Univ.) the Laplace lecture, on *In-sample density forecasting*; David Brillinger (UCB) the Tukey lecture, titled *People are different*; Valerie Isham (Univ. College London) the Bernoulli lecture, on *Applied stochastic modelling for structured physical processes*; Servet Martinez (Universidad de Chile) the Lévy lecture, on *Quasi-stationarity in Markov chains and population dynamics*; Scott Sheffield (MIT) the Doob lecture, on *Random surfaces and gauge theory*; Ofer Zeitouni (Weizmann Institute) the Schramm lecture, on *Extremes in logarithmically correlated fields*; Ruth Williams (UCSD) the Kolmogorov lecture, on *Reflected diffusions and (bio)chemical reaction networks*; and a further plenary talk was given by Fields medalist Martin Hairer (Warwick), titled *On the algebraic structure of renormalisation*. IMS Medallion lectures were delivered by Christina Goldschmidt (Oxford), on *Scaling limits of critical random trees and graphs*; Arnaud Doucet (Oxford), titled *On pseudo-marginal methods for Bayesian inference in latent variable models*; Vanessa Didelez (Bremen), on *Causal reasoning for events in continuous time*; Pierre del Moral (UNSW), on *An introduction to mean field particle methods*; and Frank den Hollander (Leiden), on *Metastability for interacting particle systems*. Details may be found at <http://www.fields.utoronto.ca/programs/scientific/16-17/WC2016/index.html>

There were many memorable talks, and participants remarked on the high quality of the science and the stimulating discussions they encountered (facilitated by the excellent refreshment during the coffee breaks). The World Congress is unusual, in that it brings together both probabilists and statisticians, and gives each group an opportunity to learn what is current in the other's discipline.

The Fields Institute staff and student volunteers made the meeting run very smoothly, and the city of Toronto cooperated with dry warm weather. Accommodations proved a bit of a challenge, as a Microsoft meeting had brought 15,000 people to Toronto at the same time, so between the two meetings the city was virtually sold out of hotel rooms on certain days. While most of the meeting was held at the University of Toronto, an opening reception on the Monday filled two floors of the Fields Institute. This was hosted by the IMS, and was preceded by the IMS awards ceremony and Presidential address. The Bernoulli Society had sponsored a pre-congress meeting for new researchers (held at Fields and organized by Andreas Kyprianou), and during the Congress week it also hosted a reception for new researchers, at a pub near the meeting site. Wednesday evening saw the Congress banquet, which took place while cruising around Toronto harbour and islands aboard the ship Kajama. The weather was beautiful, and participants were rewarded with good company and beautiful views of the city.

Alison Etheridge (Oxford) - Chair, Scientific Program Committee  
Tom Salisbury (York) - Chair, Local Arrangements Committee