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## 38<sup>th</sup> Probability Summer School, Saint-Flour, France

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# Programme of the school

## Main lectures

Richard Kenyon	Lectures on dimers
Vladimir Koltchinskii	Oracle inequalities in empirical risk minimization and sparse recovery problems
Yves Le Jan	Markov paths, loops and fields

## Short lectures

Michael Allman	Breaking the chain
Pierre Alquier	Lasso, iterative feature selection and other regression methods satisfying the “Dantzig constraint”
Jürgen Angst	Brownian motion and Lorentzian manifolds, the case of Robertson-Walker space-times
Witold Bednorz	Some comments on the Bernoulli conjecture
Charles Bordenave	Spectrum of large random graphs
Cédric Boutillier	The critical Ising model on isoradial graphs via dimers
Robert Cope	Modelling in birth-death and quasi-birth-death processes
Irmina Czarna	Two-dimensional dividend problems
Michel Émery	Geometric structure of Azéma martingales
Christophe Gomez	Time reversal of waves in random waveguides: a super resolution effect
Nastasiya Grinberg	Semimartingale decomposition of convex functions of continuous semimartingales
François d’Hautefeuille	Entropy and finance
Erwan Hillion	Ricci curvature bounds on graphs
Wilfried Huss	Internal diffusion limited aggregation and related growth models
Jean-Paul Ibrahim	Large deviations for directed percolation on a thin rectangle
Liza Jones	Infinite systems of non-colliding processes
Andreas Lagerås	General branching processes conditioned on extinction

Benjamin Laquerrière	Conditioning of Markov processes and applications
Krzysztof Latuszynski	“If and only if” conditions (in terms of regeneration) for $\sqrt{n}$ -CLTs for ergodic Markov chains
Thierry Lévy	The Poisson process indexed by loops
Wei Liu	Spectral gap and convex concentration inequalities for birth-death processes
Gregorio Moreno	Directed polymers on a disordered hierarchical lattice
Jonathan Novak	Deforming the increasing subsequence problem
Ecaterina Sava	The Poisson boundary of lamplighter random walks
Bruno Schapira	Windings of the SRW on $\mathbb{Z}^2$ or triangular lattice and averaged Dehn function
Laurent Tournier	Random walks in Dirichlet environment
Nicolas Verzelen	Kullback oracle inequalities for covariance estimation
Vincent Vigon	LU-factorization and probability
Guillaume Voisin	Pruning a Lévy continuum random tree
Peter Windridge	Blocking and pushing interactions for discrete interlaced processes
Olivier Wintenberger	Some Bernstein’s type inequalities for dependent data



Edited by J.-M. Morel, B. Teissier; P.K. Maini

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