

# 20th Workshop on Stochastic Geometry, Stereology and Image Analysis

2–7 June, 2019, Sandbjerg Estate, Denmark

## Monday, 3 June

08:50–09:00	<b>Welcome</b>
09:00–09:45	<b>Thomas Richthammer</b> <i>How rigid are crystals in 2D? The hard disk model and 2D Gibbsian point processes.</i>
09:45–10:10	<b>Pierre Calka</b> <i>Convex hulls of perturbed random point sets</i>
10:10–10:35	<b>Zbyněk Pawlas</b> <i>Limit theorems for marked particle processes</i>
10:35–11:00	<b>Coffee</b>
11:00–11:25	<b>Joseph E. Yukich</b> <i>Multivariate normal approximation for statistics in geometric probability</i>
11:25–11:50	<b>Chinmoy Bhattacharjee</b> <i>Convergence to scale invariant Poisson processes</i>
11:50–12:15	<b>Ilya Molchanov</b> <i>Random diagonal transformations of convex bodies</i>
12:15–15:00	<b>Lunch break</b>
15:00–15:45	<b>Patrick Rubin-Delanchy</b> <i>Spectral embedding of graphs</i>
15:45–16:10	<b>Steffen Winter</b> <i>On distributional properties of geometric functionals of fractal percolation</i>
16:10–16:45	<b>Coffee</b>
16:45–17:10	<b>Kilian Matzke</b> <i>Triangle condition for the critical random connection model in high dimensions via lace expansion</i>
17:10–17:35	<b>Franz Nestmann</b> <i>Cluster counting in the random connection model</i>
17:35–18:00	<b>Mohammad Ghorbani</b> <i>Functional marked point processes – A natural structure to unify spatio-temporal frameworks and to analyse dependent functional data</i>
18:30–19:30	<b>Dinner</b>

## Tuesday, 4 June

09:00–09:45	<b>D. Yogeshwaran</b> <i>CLT for point processes with fast decay of correlations.</i>
09:45–10:10	<b>Günter Last</b> <i>Exponential decorrelation of subcritical repulsive Gibbs particle processes</i>
10:10–10:35	<b>Viktor Beneš</b> <i>Limit theorems for Gibbs particle processes including facet processes</i>
10:35–11:00	<b>Coffee</b>
11:00–11:25	<b>Mathew Penrose</b> <i>Limit behaviour of the coverage threshold</i>
11:25–11:50	<b>Christian Hirsch</b> <i>Optimal stationary markings</i>
11:50–12:15	<b>Olof Elias</b> <i>The fractal cylinder model</i>
12:15–15:00	<b>Lunch break</b>
15:00–15:45	<b>Valentina Cammarota</b> <i>Boundary effect on the nodal length for arithmetic random waves, and spectral semi-correlations</i>
15:45–16:10	<b>Jan Rataj</b> <i>On integral geometric formulas for excursion sets of random fields</i>
16:10–16:45	<b>Coffee</b>
16:45–17:10	<b>Anders Rønn-Nielsen</b> <i>Limits and extremal behaviour of Lévy-based models</i>
17:10–17:35	<b>Mads Stehr</b> <i>Extremal properties over time of an infinitely divisible random field with convolution equivalent Lévy measure</i>
17:35–18:15	<b>Poster flash</b>
18:30–19:30	<b>Dinner</b>
20:00–21:30	<b>Poster session</b>

## Wednesday, 5 June

09:00–09:45	<b>Benjamin Taylor</b> <i>Inference Under obfuscation of stochastic processes</i>
09:45–10:30	<b>Peter F. Craigmile</b> <i>Enhancing statistical inference for stochastic processes using modern statistical methods</i>
10:30–11:00	<b>Coffee</b>
11:00–11:25	<b>Anne Marie Svane</b> <i>Testing goodness of fit for point processes via topological data analysis</i>
11:25–11:50	<b>Jesper Møller</b> <i>The structure of stationary time series and point processes when constructing singular distribution functions</i>
11:50–12:15	<b>Ahmad R. Soltani</b> <i>An application of the geometry of random vectors in data analysis</i>
12:15–17:00	<b>Lunch break and excursion</b>
18:30–19:30	<b>Dinner</b>

## Thursday, 6 June

09:00–09:45	<b>Rémi Bardenet</b> <i>DPPs everywhere: repulsive point processes for Monte Carlo integration, signal processing and machine learning</i>
09:45–10:10	<b>Adrien Mazoyer</b> <i>Monte-Carlo integration in any dimension using a single determinantal point process</i>
10:10–10:35	<b>Christophe A.N. Biscio</b> <i>A general central limit theorem and subsampling variance estimator for <math>\alpha</math>-mixing multivariate point processes.</i>
10:35–11:00	<b>Coffee</b>
11:00–11:25	<b>Jean-François Coeurjolly</b> <i>Second-order variational equations for spatial point processes with a view to pair correlation function estimation</i>
11:25–11:50	<b>Florian Pausinger</b> <i>Persistent Betti numbers of random Čech complexes</i>
11:50–12:15	<b>Jürgen Kampf</b> <i>The variances of surface area estimators based on pixel configuration counts</i>
12:15–15:00	<b>Lunch break</b>
15:00–15:45	<b>Frédéric Lavancier</b> <i>Asymptotic inference of determinantal point processes</i>
15:45–16:10	<b>Bartłomiej Błaszczyszyn</b> <i>On scattering moments of marked point processes</i>
16:10–16:45	<b>Coffee</b>
16:45–17:10	<b>Matthias Schulte</b> <i>Limit theorems for heavy-tailed Boolean models</i>
17:10–17:35	<b>Lothar Heinrich</b> <i>Some older and newer results on Brillinger-mixing point processes</i>
17:35–18:00	<b>Antoine Brochard</b> <i>Point process generative model with wavelet phase harmonics</i>
19:00–21:00	<b>Conference Dinner</b>

## Friday, 7 June

09:00–09:45

**Vincent Tassion**

*Sharpness of the phase transition for continuum percolation*

09:45–10:30

**Elisabetta Candellero**

*Coexistence of First passage percolation processes on hyperbolic graphs*

10:30–11:00

**Coffee**

11:00–11:25

**Felix Herold**

*Tessellations in hyperbolic space*

11:25–11:50

**Hauke Seidel**

*Random sections of regular polytopes and convex cones*

11:50–12:15

**Ana I. Gomez**

*Modeling the covariogram in 2D length estimation*

12:15–14:00

**Lunch break and departure**