# Séminaire de Probabilités et Statistique

**Mardi 1er mars à 14h00**

Salle Fizeau (5ème étage)


## Anne Estrade

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*Gaussian random fileds and Gaussian mixture processes: stochastic geometry, inferential statistics and spatial extremes.*


Many results on the geometrical features of random fields have been established in the case of Gaussian fields, such the length of nodal lines or the Euler characteristic, describing the topological structure of excursion sets. Beside, most commonly used models for statistical analysis of extreme values of spatial processes arise as certain scale or location mixtures of Gaussian processes. In this talk, we will first present some results on the stochastic geometry of Gaussian excursion sets and show how they can be used to statistically infer parameters or features of the considered field. We will then take advantage of these results to provide novel results for Gaussian mixture processes and for related limit processes known as generalized Pareto processes.

Joint work with E. Di Bernardino (LJAD, Nice) and T. Opitz (BioSP, INRAE Avignon).