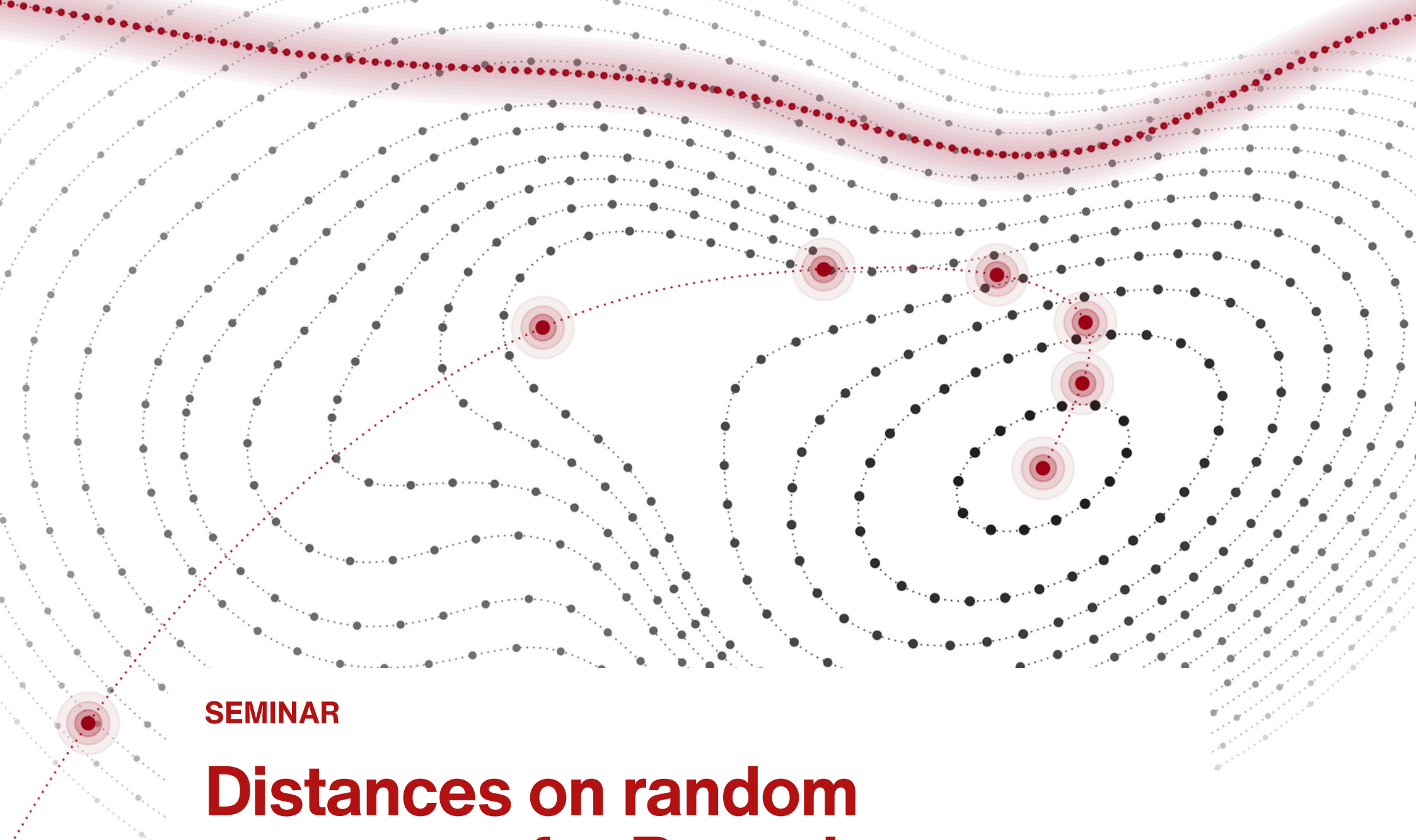




SEMINAR

Distances on random measures for Bayesian nonparametrics

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Dipartimento di Scienze Statistiche - Room Benvenuti

Random measures are a key component of many nonparametric models in Bayesian statistics. Their infinite-dimensionality guarantees remarkable flexibility but makes the investigation of theoretical and inferential properties more demanding. In this talk we underline how several of these properties can be investigated through suitable distances between the laws of random measures. Some crucial desiderata for such distances are metrization of weak convergence, numerical estimation through samples, and tractability of analytical bounds: we achieve them by relying on optimal transport and integral probability metrics. Applications of our findings include measuring dependence in Bayesian nonparametric models, defining merging rates of opinions, developing two-sample tests for measure-valued data, and quantifying the error in approximate posterior inference.



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