

Séminaire de mathématiques et leurs applications

9 mars 2017

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Titre: The fractional Liouville equation in dimension 1 - Geometry, compactness and quantization.

Résumé: I will introduce the fractional Liouville equation on the circle S^1 and its geometric interpretation in terms of conformal immersions of the unit disk into the complex plane. Using this interpretation we can show that the solutions of the fractional Liouville equation have very precise compactness properties (including quantization and half-quantization) with a clear geometric counterpart. I will also compare these result to analogue ones for the classical Liouville equation in dimension 2, used to prescribe the Gaussian and Q -curvature. This is a joint work with Francesca Da Lio and Tristan Riviere.