

## **On the Dyson Brownian motion and related models**

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The Dyson Brownian motion is the eigenvalues process of the Hermitian Brownian motion. It is described by a system of non-colliding diffusions whose empirical processes converge, when dimension goes to infinity, to the free Brownian motion. In this talk, we shall review this process and present recent extensions to fractional Brownian, Wishart and Lévy Hermitian process. This talk is based on recent and outgoing collaborations with D. Nualart, J.L. Pérez-Garmendia, J.C. Pardo and A. Rocha-Arreaga as well as on an old work with Constantin Tudor.