Seminar/Talk

Absolute continuity of non-Gaussian and Gaussian multiplicative chaos measures

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Gaussian multiplicative chaos (GMC) is a well-studied random measure appearing as a universal object in the study of Gaussian or approximately Gaussian log-correlated fields. On the other hand, no general framework exists for the study of multiplicative chaos associated to non-Gaussian log-correlated fields. In this talk, we examine a canonical model: the log-correlated random Fourier series, or random wave model, with i.i.d. random coefficients taken from a general class of distributions. The associated multiplicative chaos measure was shown to be non-degenerate when the inverse temperature is subcritical ($\gamma < \sqrt{2d}$) by Junnila. The resulting chaos is easily seen to not be a GMC in general, leaving open the question of what properties are shared between this non-Gaussian chaos and GMC. We answer this question through the lens of absolute continuity, showing that there exists a coupling between this chaos and a GMC such that the two are almost surely mutually absolutely continuous.

Monday, March 2, 2026 04:00pm - 05:00pm
Central Bldg / O1 / Mondi 2a (I01.O1.008)

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