

Effective dimension: from computation to fractal geometry and number theory

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Effective dimension was defined as a partial randomness concept, initially in the context of computational complexity. Immediately very close ties with algorithmic information theory were obtained, and then the corresponding finite-state dimension characterized Borel normality. In this talk we will review effective dimension focusing on the latest results obtained in fractal geometry through the point to set principle and on the information theory results on entropy in connection with number theory.