Recurrence-based reconstruction of dynamic pricing attractors

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Relevance to the Centre

Dynamic pricing depends on the understanding of uncertain demand. We ask the question whether a stochastic system is sufficient to model this uncertainty. Lu proposes a novel paradigm based on statistical analysis of recurrence quantification measures. The paradigm fits nonlinear dynamics by simultaneously optimizing both the determinism and the trapping time in recurrence plots and identifies an optimal time delay embedding Findings highlight the importance of fitting and recreating non-linear dynamics of data in modelling practical problems.