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Finding the role of time-delays in complex systems¹ WEI LIN, School of Mathematical Sciences and Centre Computational Systems Biology, Fudan University — Time delays are omnipresently observed in many nature and artificial systems including physical, biological, and chemical systems. Naturally, two kinds of questions arise: How to identify the time delays when a certain amount of datasets are obtained from the experiments or real world systems whenever the theoretical model is known or unknown? and How to characterize the intrinsic roles of time delays that are played in the critical transition of coupled network systems In this talk, we introduce recent works that address the previous two questions, and show the significance of time delays in dealing with various biological systems.

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