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Abstract:	Small World networks are relevant in a wide range of naturally occuring and human engi- neered systems. In this thesis, we explore the synchronisation of limit cycle oscillators con- nected in a 'Small World' network. We consider two limit cycle oscillators: the Kuramoto oscillator and the FitzHugh-Nagumo oscillator, with the former being a one-dimensional oscillator and the latter covering the two-dimensional case. We find that synchronisation is dependent on the coupling strength, denoted by k and the rewiring probability, denoted by p for both static and dynamic rewiring. Chimeras are seen to emerge for intermediate values of p and k.
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