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Title:	Dynamic random links enhance diversity-induced coherence in strongly coupled neuronal systems
Authors:	Sinha, Sudeshna (/jspui/browse?type=author&value=Sinha%2C+Sudeshna)
Keywords:	Coherence resonance Diversity
Issue Date:	2015
Publisher:	Indian Academy of Sciences
Citation:	Pramana - Journal of Physics, 84(2) pp. 249-256
Abstract:	We investigate the influence of diversity on the temporal regularity of spiking in a ring of coupled model neurons. We find diversity-induced coherence in the spike events, with an optimal amount of parametric heterogeneity at the nodal level yielding the greatest regularity in the spike train. Further, we investigate the system under random spatial connections, where the links are both dynamic and quenched, and in all the cases we observe marked diversity-induced coherence. We quantitatively find the effect of coupling strength and random rewiring probability, on the optimal coherence that can be achieved under diversity. Our results indicate that the largest coherence in the spike events emerge when the coupling strength is high, and when the underlying connections are mostly random and dynamically changing.
Description:	Only IISERM authors are available in the record.
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