

# Effects of Coupling on Firing Patterns in Thermally Sensitive Neurons

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## Abstract

Mathematical models have been very useful in the study of nonlinear coupled oscillators. From these models and their interaction new phenomena have emerged and generated advances in the understanding of biological systems. In this work we study numerically the effect of coupling strength on the firing patterns of a set of six coupled thermosensitive neurons model. We select the membrane current  $I$  as the coupling variable and considering different strengths and topologies of the network. The emerging dynamical behavior among oscillators is analyzed using standard measure such as interspike interval and the order parameter  $R$ . Finally, we wish to point out that our findings may be contribute to enhance our understanding of one of the most fascinating problems in the biology, namely, the emergence of collective behaviors induced by coupling in complex systems.

## References

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