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Synchronization analysis through coupling mechanism in realistic neural models

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**Highlights**

- A general method of coupling for generalized synchronization in neural systems is investigated.
- Two non-identical 3D modified M-L neural models are used for OPCL coupling method.
- A bidirectional coupling function is seen in the neural system connecting through gap junctions.
- We present a bidirectional coupling mechanism for a network of four identical H-R neural system.
- We investigate a NOLC based coupling mechanism through Lyapunov function stability criterion.

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