Neuroinformatics in India: Building academic and research excellence in the Developing World

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Brain as a Tissue
Studying neurogenesis and cell migration in stroke by combining fMRI and Systems Biology.

Multiscale Simulation Tools
Developing the Multiscale Object Oriented Simulation Environment: MOOSE. (http://moose.ncbs.res.in/)

Standards Efforts
Involvement in the development of 9ML, NetworkML. Integration of MLs across scales.

The Computational Worm
Measuring modularity, and wiring efficiency of the C. elegans nervous system.

Structure and Dynamics
Effect of "small-worldness" on spatio-temporal patterns: spiral waves.

INNNI, the Indian National Node for Neuroinformatics was established in 2009 as a hub to bring together Indian researchers and to connect them to the community of neuroinformatics researchers around the world. (http://ininni.ncbs.res.in/)

The INCF Multiscale Modeling Meeting, India was held in November 2009 at Bangalore.

Agenda
- Start to define a multiscale model specification framework: from molecules to neurons.
- Coordinate ongoing efforts to specify electrical-signaling hybrid models.

Outcome
- Preliminary identification of markup language extensions to allow SBML-NeuroML coupling.
- First steps towards setting up of INNNI: Indian National Node for NeuroInformatics.

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