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ICTS MONTHLY COLLOQUIUM

The neural basis of math and language: connections and challenges

Mathematics and its allied disciplines have historically relied heavily on the human brain to push the frontiers of the field. However, our understanding of the brain as the instrument that performs this cognitive task is woefully limited. Some of what we do know about the brain and the way it structurally changes with experience and learning, sometimes causing spurious associative learning, suggests that an understanding of the changing computational biases of the system is vital to shaping pedagogical approaches. I look at communication/language and quantitative/mathematical cognition as two examples of key human cognitive abilities, and the ways in which these two cognitive abilities may or may not share connections in the neural realm.

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Bittu Kaveri Rajaraman is an Associate Professor of Biology at Ashoka University. They received a PhD from Harvard University in neuroscience, and went on to become a DST-Kothari postdoctoral fellow at the Center for Ecological Sciences, Indian Institute of Science, and then an INSPIRE Faculty Fellow at the Central University of Hyderabad. They work on the evolution of neural and behavioural systems of communication, the neuroethology of temporal pattern recognition in insects, and quantitative and economic cognition more broadly in zebrafish, dogs and humans.

10 February 2026

3:30 PM

Madhava Lecture Hall

Zoom link: https://shorturl.at/IMBUk

Meeting ID: 957 7504 6889

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