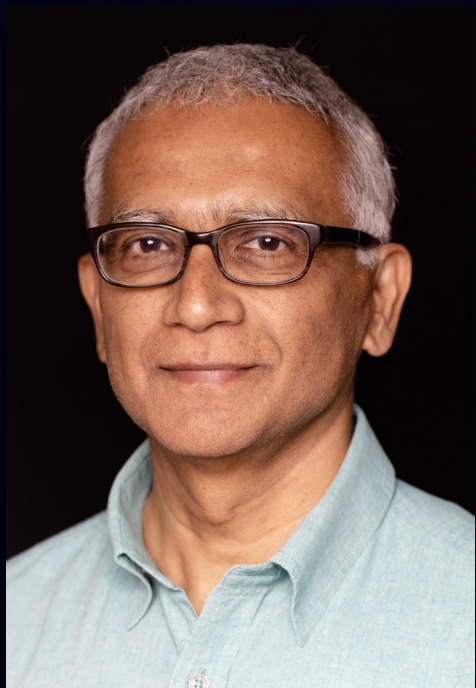## ICTS MONTHLY COLLOQUIUM

From LLMs to LRMs
The Rise of Reasoning Models

When large language models became the dominant machine learning paradigm in 2002, their performance surprised almost everyone, including many experts. LLMs showed "emergent" behavior—bigger models could do tasks that identically-trained smaller models had failed at. Empirical scaling laws suggested that models would get predictably better with increasing model size, more training data and more training-time compute. But these laws began to saturate, only for a new scaling regime to enter the picture. In this talk, Anil Ananthaswamy will chart the ongoing transition to so-called large reasoning models, which use more compute during inference and ostensibly "think" and "reason" before answering, by using extra compute to explore multiple pathways to the final answer.

Anil Ananthaswamy

Advisor, Science Journalism, NCBS
Consultant, Dept of Data Science and Artificial
Intelligence, IIT Madras

Anil Ananthaswamy is an award-winning science journalist and author, and former deputy news editor of New Scientist magazine. He's the author of four books, including Why Machines Learn: The Elegant Math Behind Modern AI. He was a 2019-2020 MIT Knight Science Journalism Fellow and is a distinguished alumnus of IIT-Madras. He conducts an annual science journalism workshop at the National Centre for Biological Sciences, Bangalore

3:30 PM IST, 14 October 2025

Zoom link: https://shorturl.at/Iyq6k
Meeting ID: 912 7956 0521
Passcode: 202030

Ramanujan Lecture Hall, ICTS, Bengaluru