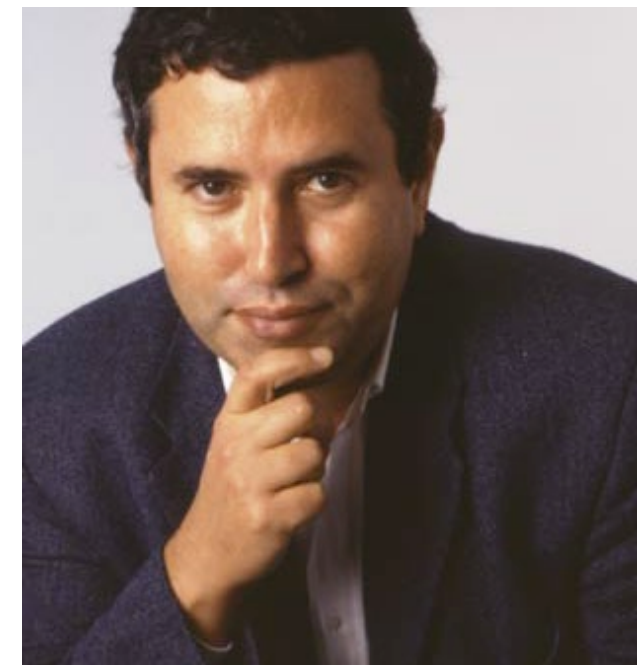




Prof. Jean-Jacques Slotine, Massachusetts Institute of Technology, USA

Recent results on contraction analysis and applications to machine learning

In this presentation we review recent results in contraction analysis and virtual dynamical systems, and their applications to aspects of machine learning and bio-inspired learning. Time permitting, we may briefly discuss how contraction tools can also be applied to quantum physics.



January 13th 2026
11:00-12:00

Hybrid: UT Hongo Campus
Eng. Bld 2 room 31A

[zoom](#)

Jean-Jacques Slotine is Professor of Mechanical Engineering and Information Sciences, Professor of Brain and Cognitive Sciences, and Director of the Nonlinear Systems Laboratory. He received his Ph.D. from the Massachusetts Institute of Technology in 1983, at age 23. After working at Bell Labs in the computer research department, he joined the faculty at MIT in 1984. Professor Slotine teaches and conducts research in the areas of dynamical systems, robotics, control theory, computational neuroscience, and systems biology. One of the most cited researchers in systems science, he was a member of the French National Science Council from 1997 to 2002, a member of Singapore's A*STAR SigN Advisory Board from 2007 to 2010, a Distinguished Faculty at Google AI from 2019 to 2023, and has been a member of the Scientific Advisory Board of the Italian Institute of Technology since 2010.

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