



Prof. Jean-Jacques Slotine
MIT, USA

Contraction analysis of nonlinear dynamical systems -- a tutorial survey

It has been more than a quarter century since a paper by Lohmiller and Slotine introduced contraction analysis to the nonlinear dynamics and control community, outlining the role of differential analysis using state-dependent Riemannian metrics and its many potential applications. Research in this domain is now extremely active, and we will review basics as well as some recent work in our group on applications to machine learning and to non-autonomous partial differential equations.



January 15th 2025

15:00-16:00

Hybrid: UT Hongo Campus

Eng. Bld 2 room 31A

[skype](#)

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.

[add the event to
your calendar](#)

