



**POLITECNICO
DI TORINO**



Dipartimento di
Scienze Matematiche
G. L. Lagrange

ECCELLENZA 2018 • 2022

Wednesday the **06 March 2019** at 10:00

Politecnico di Torino, DISMA, Aula Buzano (third floor)

Eugene STEPANOV

Steklov Mathematical Institute of the Russian Academy of Sciences, St.Petersburg

Hybrid control in a model from molecular biology: between continuous and discrete

Prof. Fabio Fagnani introduces the seminar

Abstract

This seminar will focus on Hybrid control - ODEs and finite state machines (FSM), and A biological model - dynamics of protein synthesis.

The central argument of the talk will be the rather modern concept in automated control: hybrid controls through finite state machines in continuous dynamical models. Prof. Stepanov will show that hybrid systems present a highly complicated dynamics. Then a class of largely open problems arising from molecular biology will be presented and studied, where the hybrid system comes out from an extraordinarily simple and completely classical models based on ODEs without any discrete object incorporated.

Biography

Eugene Stepanov received his PhD in Mathematics from Scuola Normale Superiore di Pisa. He then worked at the University of Pisa, the University of St. Petersburg and the Higher School of Economics (Moscow).

His scientific interests include Metric Geometry, Geometric Measure Theory, Partial Differential Equations, Control Theory and Dynamical Systems. He is currently a senior researcher at Steklov Mathematical Institute of the Russian Academy of Sciences, and he cooperates with several international research institutions.

Save the date for the next event: **March 11, 2019**

More info on www.polito.it/disma-excellence