

**3 SEPTEMBER 2025, 11:00 A.M.
ROOM A204, POLO FERRARI 1 - VIA SOMMARIVE 5, TRENTO**

An efficient method for stability of systems with rapidly oscillating coefficients is averaging: the system is stable for small enough values of the parameter provided the averaged system is stable.

All the existing methods for averaging are qualitative without giving quantitative bounds on the small parameter. In this talk I will present new constructive approaches to averaging that are based on time-delay and delay-free transformations and special model presentations. The results will be applied to stabilization of unstable systems by fast switching, power systems and Brockett problem (static output-feedback by using time-varying gains) and to extremum seeking (a powerful real-time optimization method without requesting a knowledge of system model).

**Speaker: Emilia Fridman
Tel Aviv University**

Constructive methods for averaging-based control

DII SEMINAR

