Αθήνα, 29/5/2018

Δ Ι Α Λ Ε Ξ Η

Ομιλητής: **Jean Auriol**

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Τίτλος : « Linear Hyperbolic PDEs are neutral systems »

Περίληψη : In this talk, we focus on the equivalence between a general class of linear first order hyperbolic partial differential equations and neutral-differential equations with distributed delays. This equivalence is obtained using the backstepping approach as an analysis tool. Lyapunov-based methods for delay-differential equations can then be used to obtain new sufficient conditions for stability. In the second part of this talk, we use this equivalence to solve the problem of delay-robust stabilization for systems composed of two linear first order hyperbolic equations. More precisely, one must go back to the classical trade-off between convergence rate and delay-robustness: we prove that, for systems with strong reflections, canceling the reflection at the actuated boundary will yield zero delay-robustness. Finally, some extensions for the robust stabilization in presence of delays, uncertainties on the parameters and disturbances are proposed.

Η ομιλία θα δοθεί την **Παρασκευή 1 Ιουνίου 2018** και **ώρα 12:35**, στην Αίθουσα Σεμιναρίων του Τομέα Μαθηματικών, κτ. Ε΄, 2ος όροφος.

Η Επιτροπή Σεμιναρίων