Abstract
This talk deals with the stability analysis and stabilization of linear systems with backlash in the input. Uniform ultimate boundedness stability and stabilization problems are tackled allowing to characterize suitable regions of the state space in which the closed-loop trajectories can be captured. In the state feedback control design, computational oriented solutions are derived to solve suboptimal convex optimization problems able to give a constructive solution.

Bio
Sophie Tarbouriech received the PhD degree in Control Theory in 1991 and the HDR degree (Habilitation à Diriger des Recherches) in 1998 from University Paul Sabatier, Toulouse, France. Currently, she is full-time researcher (Directeur de Recherche) in LAAS-CNRS, Toulouse. Her main research interests include analysis and control of linear and nonlinear systems with constraints (limited information), hybrid dynamical systems. She is currently Associate Editor for IEEE Transactions on Automatic Control, IEEE Transactions on Control Systems Technology, Automatica and European Journal of Control. She is also in the Editorial Board of International Journal of Robust and Nonlinear Control. Since 1999, she is Associate Editor at the Conference Editorial Board of the IEEE Control Systems Society. She is also a member of the IFAC technical committee on Robust Control and Nonlinear Systems.