Title: Data-driven control

Lecturer: Prof. Claudio De Persis

Abstract: The lectures focus on a recently introduced approach to design control policies for unknown systems starting from low-complexity data collected during off-line experiments. The approach reduces the design to the solution of data-dependent semidefinite programs, which provide a computationally effective way to deal with the problem of learning control from data. The lectures will show how problems that are central to control, e.g., stabilization and optimal regulation, can be studied with this approach, If time allows, some extensions to nonlinear control systems will also be presented.

Bio: Claudio De Persis is a Professor with the Engineering and Technology Institute, University of Groningen, the Netherlands, since 2011. He received the Laurea and PhD degree in Electronic Engineering in 1996 and 2000, both from the University of Rome "La Sapienza", Italy. He held postdoc positions at Washington University in St. Louis (2000-2001) and Yale University (2001-2002) and faculty positions at the University of Rome "La Sapienza" (2002-2009) and Twente University, the Netherlands (2009-2011). His main research interest is in automatic control and its applications.