

ON THE ROBUST DISTRIBUTED CONTROL OF INVERTER-BASED MICROGRIDS

Speaker:

Dr.Ing. Alessandro Pisano, PhD

Date: Thursday Dec. 26th

Time: 1:15 to 2: 15PM

Location: B59 Room 2016

Abstract:

The talk will illustrate some recent results concerning the secondary voltage and frequency restoration of inverter-based smart micro-grids. The results are developed within the framework of the distributed control of multi-agent systems, with the sliding mode control technique being the main methodological approach. Finite-time converging distributed voltage and frequency restoration controllers will be outlined along with suitable generalizations considering the presence of time-varying measurement and communication delays.

Biography:

Alessandro Pisano is Associate Professor of Automatic Control at the University of Cagliari, Department of Electrical and Electronic Engineering. His general research interests include nonlinear control theory and its application to control, observation, and fault detection for finite and infinite-dimensional systems. Fields of specialization include the control and observation for distributed-parameter systems and multi-agent systems theory, with focus on distributed control and optimization over networks. Recent applications include the distributed control of smart grids and the control of autonomous vehicles. Dr. Pisano coauthored 1 monographic book, 75 papers on international journals, 12 chapters in monographic books of international relevance, and 115+ papers in international conference proceedings. His work received 3867 total citations by 2829 documents, and his h-index is 29 (source: Scopus)

