

TIME DELAY SYSTEMS

Webinar

TDS

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## Strongly Stabilizing Controllers for Systems with Time Delay



**HITAY OZBAY**

Professor

Electrical and Electronics Engineering

Bilkent University

**July 5, 2024, Friday @ 4:00 pm (CET)**

7:00 am (PDT), 10:00 am (EDT), 10:00 pm (CST)

**Event will take place via Zoom**

**ABSTRACT:** Finding a stable feedback controller stabilizing a given plant is known as strong stabilization. This problem has attracted the interests of researchers since 1970s. In this presentation some specific stable controller design techniques are reviewed for linear time invariant finite dimensional plants, and their extensions are discussed for systems with time delays. It is shown that under certain mild conditions, for strictly proper retarded delay systems with finitely many poles and zeros in the right hand plane, it is possible to obtain finite dimensional strongly stabilizing controllers. Illustrative examples are also given.

**BIO:** Hitay Ozbay is a Professor of Electrical and Electronics Engineering at Bilkent University, Ankara Turkey. He received the B.Sc., M.Eng., and PhD degrees from Middle East Technical University (1985), McGill University (1987), and University of Minnesota (1989), respectively. His prior academic affiliations include the University of Rhode Island (1989-1990), and The Ohio State University (1991-2006) where he was a Professor of Electrical and Computer Engineering before joining Bilkent University. He also held a visiting position at INRIA, France (2009-2010). Professor Ozbay was a member of the Board of Governors of the IEEE Control Systems Society (2017-2019) and a general assembly member of the European Control Association (EUCA), representing Turkey, 2013-2019. He served as Associate Editor for many journals, including IEEE Transactions on Automatic Control, SIAM Journal on Control and Optimization, and Automatica. He also served as Vice-Chair of IFAC Technical Committees on Networked Control Systems (2005-2011) and Linear Control Systems (2017-2023). He is a Fellow of IEEE.



Questions? Contact: Gabor Orosz, orosz@umich.edu