

# Review and Perspectives on Fault Tolerant Control for Interconnected Systems

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## Abstract

The interconnected system model arises in engineering practice to represent a system consisting of multiple dynamical subsystems that are coupled with each other with physical couplings or network connections. Fault tolerant control (FTC) of interconnected systems is a remarkable aspect of the control field in recent years, which has both important academic and engineering values. This report introduces the basic structure and main idea of the FTC design for interconnected systems, and makes a comprehensive review of the recent theoretical results and aerospace applications on the FTC of systems with mechanical interconnections, network interconnections, and model virtual interconnections. Some perspectives are also provided.

## About the speaker...



**Hao Yang** was born in Nanjing, China, in 1982. He received PhD degrees in automatic control from Université de Lille 1: Sciences et Technologies, France, and Nanjing University of Aeronautics and Astronautics (NUAA), China, both in 2009. Since 2009, he joined College of Automation Engineering in NUAA, where he is currently a full professor. His current research interests include stability and fault tolerant control of switched and interconnected systems with their applications. Dr. Yang has published two books and more than 60 papers on international journals including IEEE Trans. Automatic Control, IEEE Trans. Control Systems Technology, Automatica, and AIAA Journal of Guidance, Control and Dynamics. He was a recipient of the National Science Fund for Excellent Young Scholars in 2016 and the Top-Notch Young Talents of Central Organization Department of China in 2017. He has served as an Associate Editor for Nonlinear Analysis: Hybrid Systems.