

Fault-Tolerant Aircraft Control Design Motivated from Safety-Relevant Issues

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Abstract

Fault-tolerant aircraft control (FTAC) has drawn considerable attention due to the important role in maintaining the safety of modern aircraft under abnormal situations. In this presentation, the brief introduction of FTAC is first provided. Subsequently, closely associated with the safety-relevant issues, recent progress in FTAC design is presented. At last, concluding remarks and my thoughts on future work are discussed.

About the speaker...



Xiang Yu received the B.S., M.S., and Ph.D. degrees from Northwestern Polytechnical University, Xi'an, China, in 2003, 2004, and 2008, respectively. He was awarded by Recruitment Program for Young Professionals (known as “the Thousand Young Talents Plan”). He is currently a Professor with the School of Automation Science and Electrical Engineering, Beihang University. Before joining Beihang University, Dr. Yu was a Postdoctoral Research Fellow in the Department of Electrical and Computer Engineering, The University of Western Ontario, London, ON, Canada and a Research Associate in the Department of Mechanical, Industrial and Aerospace Engineering, Concordia University, Montreal, QC, Canada. His research interests cover fault diagnosis and fault-tolerant control of safety-critical systems, guidance, navigation, and control (GNC) of aircraft. He has authored more than twenty prestigious journal papers including IEEE Transactions, AIAA journals, and Progress in Aerospace Sciences. He was the recipient of “Best Conference Paper” and “Best Conference Paper Finalist” at international conferences. He has also served as the Program Co-Chair, Invitation Chair, and IPC Member of several academic conferences.