Systems Research Institute Faculty's Aerospace Research Work Published by the American Institute of Aeronautics and Astronautics Journal

Dr. Jyotirmay Gadewadikar from the Sensors and Automation Laboratory, Systems Research Institute, at the Alcorn State University published a peer reviewed full paper at the Journal of Guidance, Control, and Dynamics managed by the American Institute of Aeronautics and Astronautics. AIAA is the world's largest technical society devoted to the global aerospace community. The collaborative work included eminent research scientists from Automation and Robotics Research Institute, University of Texas, and Department of Electrical and Computer engineering, National University of Singapore.

The journal citation information is below

J. Gadewadikar, F. L. Lewis, K. Subbarao, B. Chen. "Structured H-Infinity Command and Control Loop Design for Unmanned Helicopters," Journal of Guidance Dynamics & Control, AIAA, Vol. 31, No. 4, July–August 2008, pp. 1093-1102.
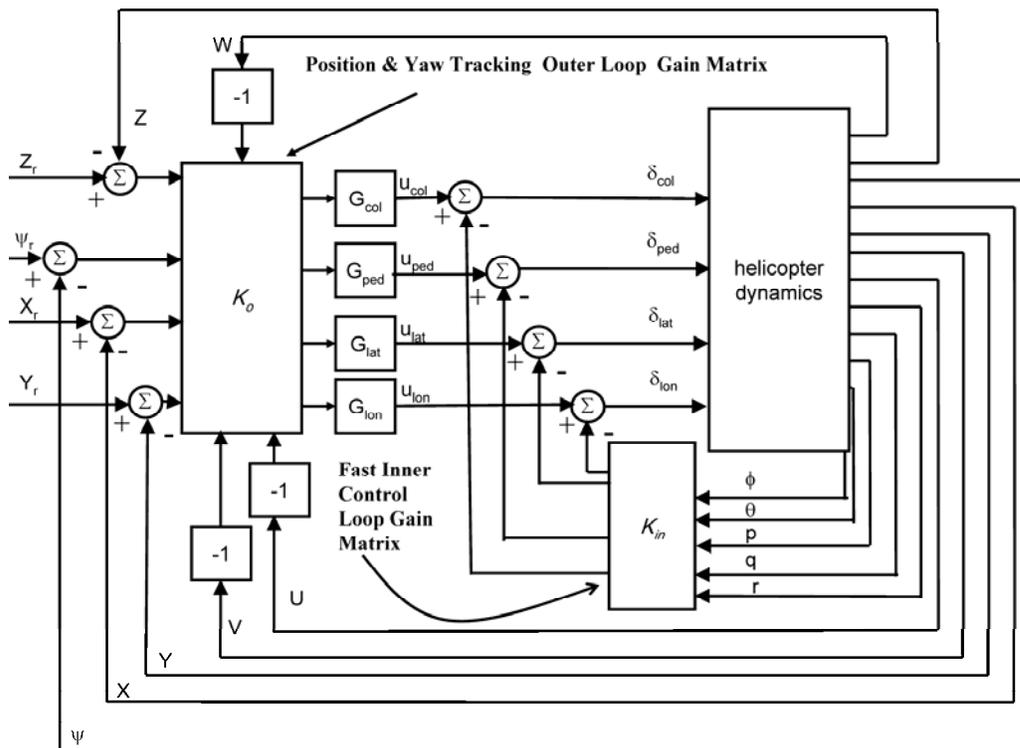
Fig: Structured Command and Control Loops, Gadewadikar *et al.,* 2008

Dr. Gadewadikar has been invited as conference session chair, and to contribute at special issues in journals and conferences relating to Aircraft and Unmanned Aerial Vehicle Control.

He has frequently been asked for his judgment as a reviewer for prestigious publications such as The Institute of Electrical & Electronics Engineers, The Institute of Measurement & Control, The International Federation of Automatic Control, and The Institution of Engineering & Technology.

In the past few years, there has been a significant interest in using Unmanned Aerial Vehicles for applications such as search and rescue, surveillance, and remote inspection. To control and automate an unmanned aerial vehicle is a difficult aerial robotics problem because of the complexities involved. An unmanned aerial vehicle has to remain stable in air as well as mitigate external factors such as wind disturbances.

The use of Unmanned Aerial Vehicles, equipped with video cameras and/or other sensors, is a technically viable method of timely information to support decisions regarding security of critical infrastructure, natural disasters, and also in providing improved safety for the public law and order enforcement. An open research area regarding vehicle implementation is also the usage in agriculture and forestry. At the Sensors and Automation Laboratory at Systems Research Institute, the expertise, including aerial robotics, systems & controls, stochastics, and manufacturing automation is available. Kindly e-mail kwabena@alcorn.edu, Director, Systems Research Institute for further information on possible collaborations and joint research projects.