



ME Seminar



Air Vehicle Configuration Design—Some Experiences

Prof. Srikumar Pullat, Visiting Professor, NIAS

ABSTRACT

India's indigenous Aeronautical Systems development initiatives picked up momentum in the 1980s with the initiation of several new projects by various organisations. The Aeronautical Engineers who joined the R&D organisations and Industry during that period got challenging opportunities to put into practice the knowledge accumulated during their academic career. Flight Vehicle Configuration Design is a very complicated process. Almost all Flight Vehicle Development Programmes in the country have encountered problems in properly optimizing the Air Vehicle configuration. Most of the designs encountered situations wherein the initial configuration had to be revised, in some case more than once, leading to time and cost overruns. While some projects have struggled to meet projected performance requirements, some others have gone ahead with diluted performance, and a few projects were abandoned. The speaker will share some of his interesting experiences at various stages of his career spanning 33 years at ADE (DRDO), which pioneered the development of Unmanned Aerial vehicles in India. He will highlight the importance of MDO methodology and Systems Engineering approach for successful realisation of multidisciplinary Systems.

ABOUT THE SPEAKER

Prof. Srikumar Pullat is a Visiting Professor at National Institute of Advanced Studies (NIAS), Bangalore, where he is currently studying the issues related to operation of Civil UAVs and Drones in National Air Space. His areas of interest include Systems Engineering and Systems Analysis of Aeronautical Systems. An Aerospace Engineer with degrees from Punjab University, IIT Bombay and College of Aeronautics, Cranfield, he made significant contributions to the design of Control, Guidance & Navigation system of UAV Nishant. He was Project Director and Chief Designer of India's Subsonic Cruise Missile "Nirbhay", successfully integrating indigenous technologies from more than 10 R&D laboratories in the country. He retired as Director of ADE Bangalore in 2015. He was conferred DRDO Performance Excellence awards twice - In 2004 as a member of Nishant development team, and in 2014 as leader of Nirbhay development team. Also, under his leadership, ADE was awarded the Silicon Trophy, as the Best Systems Lab of DRDO in 2014. He is the joint winner National Aeronautics Prize from Aeronautical society of India in 2014, and was also awarded the Eminent Engineer Award by Institution of Engineers, Bangalore Chapter in the same year. Presently he is heading the International Strategic and Security Studies Programme (ISSSP), under the School of Conflict and Security Studies at NIAS, Bangalore.



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