

Experiences and Technical Issues in Development of Flight Vehicles

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In this talk, experiences of the presenter on the development of several flight vehicles are introduced. At first, key technologies and technical issues for development of high altitude long endurance(HALE) unmanned aerial vehicles(UAVs) are briefly discussed. Experiences during the development of Korea Aerospace Research Institute(KARI)'s HALE UAV, EAV-3, will be shared. They will be about the design, analysis, wind-tunnel test, and flight test results of the propeller for EAV-3. Secondly, some technical issues for a high precision guided bomb are shortly given. Some experiences on aerodynamic issues of the guided bomb development are introduced. Finally, recent experiences on the numerical analyses of aerodynamic performance of rotorcrafts and distributed propulsion flight vehicles will be given. The improved actuator surface method which is time-efficient numerical technique for blade modeling and example results are introduced.