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Unmanned aircraft systems test site selection and UAV for next generation

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Federal Aviation Administration announced RFP for 2013 UASTSS (Unmanned Aircraft Systems Test Site Selection) at Feb. 14th of 2013. Main purpose of the UASTSS program is to facilitate feasibility study on UAV flight in NAS (National Air Space). The program requests eligible universities and other public entities to develop six unmanned aircraft systems (UAS) research and test sites in USA. According to the FAA modernization and reform act of 2012, the focus of research and development in UAS include developing technologies and methods to assess the risk of and prevent defects, failures and malfunctions of UAV as well as developing a better understanding of relationship between human factors and unmanned aircraft system safety. Another key area is the dynamic simulation model development for integrating all classes of UAS into NAS without any degradation of existing levels of safety of all national airspace system users. TAMUCC, as a leader institute of 16 research institutes, non-profit corporations, private-sector companies and state agencies in TEXAS, has a designated test site of 450 sq miles in Kenedy county approved by COA and perform researches in multi-agent quad rotor UAV, autonomous collision detection, automatic risk identification technology, as well as security surveillance along the Gulf of Mexico coast line compressor, before hardware construction, can be modeled and its behavior in various scenarios will be observed without a need for hardware test that is very expensive.

Biography

Dugan Um achieved his Ph.D. in Mechanical Engineering in the University of Wisconsin at Madison. Sensitive robotic skin for unknown environments motion planning was the subject of his dissertation. After he received his degree, he joined Caterpillar Inc. as a research engineer and worked for about 4 years at Caterpillar R&D group and Research center. Currently he is at Texas A&M University, Corpus Christi delivering his 4 years of engineering experiences into classes. His research areas include robotic motion planning, 3D sensing, UAV control, and MEMS technology. He is currently an assistant professor of Mechanical Engineering, Texas A&M University-Corpus Christi.

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