

I-FP01

Invited Session

13:00-15:00
Room : C105

Chair : Choi Gi Sang (Seoul Univ.)
Co-Chair : Sumalee Unhavanich (King Mongkut Institute of Technology.)

13:00 – 14:00

I-FP01-1

Three Dimensional Aerial Combat Simulation

Y. Baba (Department of Aerospace Engineering, National Defense Academy)

This paper deals with the development of a practical control system or an algorithm for optimal aerobatic maneuvers and aerial combat maneuvers. First, a nonlinear flight trajectory tracking control system is synthesized and used to realize the optimal aerobatic maneuver. Some simulation results show that the trajectory achieved with the proposed tracking system is close to the optimal one. This means that the tracking system presented is the practical and effective method to realize the optimal aerobatic maneuvers. Second, the algorithm for a fighter in air combat is presented. This is a simple algorithm that uses a proportional navigation, some dynamic rules based on the conservation of specific energy and some experiential rules in air combat. However...
