FP02

Invited Session IV(Aerospace IV)

13:30-15:30 **Chair1 : Yoriaki Baba (National Defense Academy, Japan)**
Room : Base 1st Floor-Inntal **Chair2 :**

13:30 – 14:10

- Invited Talk IV
  - A preliminary on the flight control system of the stratospheric platform.

14:10 – 14:30 **FP02-1**

A probabilistic nearest neighbor filter incorporating numbers of validated measurements

Sang J. Shin, Taek-Lyul Song(Hanyang Univ., KOREA), Jo-Young Ahn(ADD, KOREA)

- Nearest neighbor filter
- Probabilistic nearest neighbor filter
- Probabilistic nearest neighbor filter incorporating numbers of validated measurements
- Probability density function of the NDS
- Simulation results in a clutter environment to verify the performances
- Sensitivity analysis for the unknown spatial clutter density

14:30 – 14:50 **FP02-2**

Guidance Law for a Flight Vehicle after Burnout

Naoto Dohi, Yoriaki Baba, Hiroyuki Takano(Nat'l Defense Academy, JAPAN)

The new guidance law for a missile with the varying velocity after the rocket motor burned out is presented. This guidance is mechanized by combining the proportional navigation and the pure pursuit navigation. Some simulations are performed and then the simulation results show that the guidance law presented is effective even if the vehicle speed decreases significantly and has higher off-boresight ability than the proportional navigation.

14:50 – 15:10 **FP02-3**

Design of integrated navigation system using GPS and pseudolite

Jae-Won Chang, Sung Tae Kim, Sang Jeong Lee (Chungnam Nat'l Univ., KOREA), Chansik Park, Jae Youl Choi(Chungbuk Nat'l Univ., KOREA)

This paper designs an integrated navigation system that uses the signals from both GPS satellites and pseudolites. While GPS satellite clocks are synchronized, pseudolite clocks are not exactly synchronized even though pseudolite can use 1PPS signal from the GPS receiver. This can cause large range error and can be solved by transmitting the correction information. Assuming that the positions of pseudolites are known, it is possible to determine the true range between two pseudolites. Also, from the measurement of pseudolite signals, the pseudo range between two pseudolites can be calculated. Using the difference between the true range and the pseudo range, each pesudolite can produce correc...