

# FM01

## Poster Session

09:00 – 11:00

Chair1 : Hie sik Kim ( Univ. of Seoul, Korea )

Room : base 2nd Floor-Zillertal

Chair2 : Tae-Kyu Kwon ( Chonbuk Nat'l Univ., Korea )

FM01-19

### Transient oscillation analysis for MEMS resonant accelerometer

Sangkyung Sung, Jang Gyu Lee(Seoul Nat'l Univ., KOREA), Taesam Kang(Konkuk Univ., KOREA), Woon Tahk Sung, Chul Hyun(Seoul Nat'l Univ., KOREA)

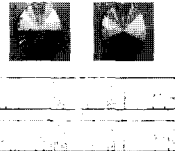
In principle, a resonance type sensor generally has an oscillation characteristic. Thus, an analysis on transient oscillation response takes a great interest since it is related to the performance of resonant sensor. In particular, system bandwidth has tradeoff with oscillation accuracy, i.e. quality factor. For an efficient analysis of the oscillation characteristic, several analytic methods are introduced and summarized. The results are fundamentally based on the classical describing function method, but can explain the transient oscillation by introducing time varying concept about the predicted limit cycle. After introducing those methods, the application results to the specified system, ...

FM01-20

### Feature matching for Omnidirectional Image based on Singular Value Decomposition

Do-Yoon Kim, Young Jin Lee, Myung Jin Chung(KAIST, KOREA)

- Omnidirectional feature matching
- SVD-based matching algorithm
- Using SSD instead of the zero-mean correlation
- The similarity with the Gaussian weighted
- Low computational cost
- It describes the similarity of the matched pairs in omnidirectional images.



FM01-21

### Road Lane Segmentation using Dynamic Programming for Active Safety Vehicles

Dong Joong Kang, Jin-Young Kim, Hyung-keun An(Tongmyong Information Univ., KOREA), In-Mo Ahn(Masan College, KOREA), Tae-Jung Lho(Tongmyong Information Univ., KOREA)

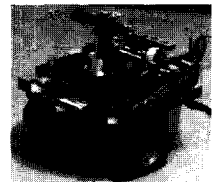
Vision-based systems for finding road lanes have to operate robustly under a wide variety of environmental conditions including large amount of scene clutters. This paper presents a method for finding the lane boundaries by combining a local line extraction method and dynamic programming as a search tool. The line extractor obtains an initial position estimation of road lane boundaries from the noisy edge fragments. Dynamic programming then improves the initial approximation to an accurate configuration of lane boundaries. Input image frame is divided into a few sub-regions along the vertical direction. The local line extractor then performs to extract candidate lines of road lanes in the ...

FM01-22

### Feature Extraction and Classification of Natural Landmarks for Navigation of Mobile Robots

Young-geun Kim, Changmin Choi, Hakil Kim, Ukyoul Huh(Inha Univ., KOREA)

- Feature Detection
- Extracting Feature Information
- Feature Map
- Feature Map Building
- Experimental Results



FM01-23

### A research on the auto tracking and auto zooming modules for active camera

Young-Ouk Kim, Ha-Gyeong Sung(Korea Electronics Technology Institute, KOREA)

1. Introduction
2. System Overview
3. Tracking and Auto Zooming algorithm
  - 3.2 Automatic ROI Setting
  - 3.3 Escaping of the local distracters
4. Pan/Tilt Control System, Performance Evaluation
5. Conclusion

FM01-24

### Visual Tracking System for Arbitrary Shaped Moving Objects

Kyu Bum Han(POSCO, KOREA), Yoon Su Baek(Yonsei Univ., KOREA)

1. Introduction
  2. Detection of the moving object
  3. Correspondence problem
  4. Experiment
  5. Conclusions
- References