TP05

Robot Application II

13:30-15:30
Room : 1st Floor-Strauss

Chair1 : Kang Woong Lee (Hankuk Aviation Univ., Korea)
Chair2 :

13:30 – 13:50 **TP05-1**

Position and Force Control of a Sensorized Microgripper

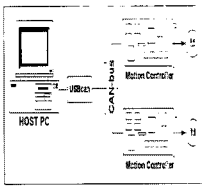
Sang Min Kim, Deok-Ho Kim, Kyunghwan Kim, Byungkyu Kim(KIST, KOREA), Chung Choo Chung(Hanyang Univ., KOREA), Jaehong Shim(Polytechnic Univ., KOREA)

1. Introduction
2. Design of the Sensorized Microgripper
3. Sensing and Control of Position and Force
4. Experiments
5. Conclusions

13:50 – 14:10 **TP05-2**

Development of a Distributed Motion Controller Using CAN

Myoung Chol Cho, Jae Wook Jeon(Sungkyunkwan Univ., KOREA)

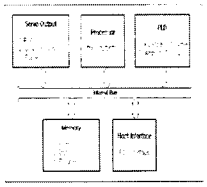


- A PC can control the fixed number of motors because the number of slots is limited.
- We propose a distributed motion controller using CAN.
- TMS320F243 of TI which is a DSP with embedded CAN-module was used as the main processor.
- The command from GUI is transmitted to each motion controller through CAN-bus
- CAN communications may occur at a maximum recommended rate of 1Mbit/sec.
- The user can control more motors easily by connecting to the CAN network which has the CAN receive.
- This distributed motion controller may be used usefully in factory automation or an unmanned factory

14:10 – 14:30 **TP05-3**

Development of A High Performance Motion Controller

Jung Uk Cho, Jae Wook Jeon
(Sungkyunkwan Univ., KOREA)

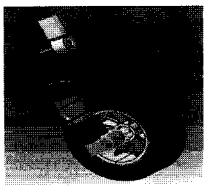


- A high performance motion controller can be applied to a wider range of areas.
- Users can easily add, delete, or modify the library functions in this motion controller.
- Users can easily create, delete, or change GUI menu in this motion controller.
- The motion related libraries base on IEEE/NEMI low-cost open architecture controller specification.
- Many low-level libraries and GUI that can make users easily interface with hardware are developed.
- Various velocity profiles are generated for performing given tasks efficiently.
- The hardware of a high performance motion controller is developed with using DSP and PLD.

14:30 – 14:50 **TP05-4**

Active Control Method of Automotive Suspension System

Seonghark Jeong, Jungha Kim, Donghee Moon
(Kookmin Univ., KOREA)



- Introdution
- Robotic Suspension
- Vehicle Dynamics
- Result
- Conclusion

14:50 – 15:10 **TP05-5**

The System Design of a Miniaturized Unmanned Vehicle

Hee Chang Moon, Chang Man Kim, Sang Gyum Kim,
Jung Ha Kim(Kookmin Univ., KOREA)

- Introduction
- System Configuration
- Control System
- Sensor System
- Vision System
- Wireless Communication System
- Test and Result

15:10 – 15:30 **TP05-6**

Robot Techologies in Response to Accidents in Nuclear Power Plants

Seungho Kim, Kyung Min Jung, Chang-Hoi Kim,
Yong-Chil Seo(KAERI, KOREA)

- KAEROT/m1 with an omni-directional planetary wheel mechanism for the narrow corridor.
- KAEROT/m2 can pass over the ditch with specially designed four wheel of a re-configurable crawler.
- Stereo imaging system with master manipulator enhancing the tele-presence.
- Small hybrid dosimeter detecting radiation dose and dose rate simultaneously.