

# FA01

## Control Instrument

09:00-11:00

Room : 1st Floor-Mozart

Chair1 : Uk-Youl Huh ( Inha Univ., Korea )

Chair2 :

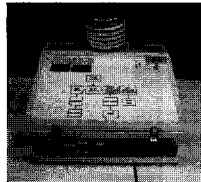
09:00 – 09:20

FA01-1

### Induction Heating

Sawai Pongswatd, Prapat Ukakimapurn, Witsarut Sriratana,  
Sart Kummool(KMITL, THAILAND)

- INTRODUCTION
- PRINCIPLE AND THEORY
- DESIGN OF THE SYSTEM
- EXPERIMENT RESULT
- CONCLUTION
- REFERENCE



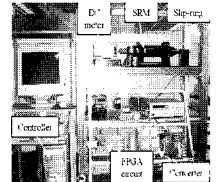
09:20 – 09:40

FA01-2

### The Roll Control of a Flight Projectile Using a Switched Reluctance Motor

Yongdae Kim, Kyihwan Park(KJIST, KOREA)

- Roll Control
- Switched Reluctance Motor
- Field Programmable Gate Array
- Single Pulse Mode Current Control
- On/off Angle Control



09:40 – 10:00

FA01-3

### A Coupled-Field Analysis of Galloping for Power Transmission Line

Hwan-Seong KIM, Tuong-Long NGUYEN(Korea Maritime Univ.,  
KOREA), Gi-Sig BYUN(Pukyong Nat'l Univ., KOREA )

- A Coupled-Field Analysis of Galloping for Power Transmission Line
- Fluid-Structure interaction, Galloping, Power Transmission Line, ANSYS

10:00 – 10:20

FA01-4

### Dual-Output DC-DC Power Supply with Buck-Boost and Zeta Converter

Yutthana Kanthaphayao, Yuttasak Rungruengphalanggul,  
Ake Chaisawadi(KMUTT, THAILAND)

- Introduction
- Circuit modified
- Implement of the dual output converter
- Conclusions

10:20 – 10:40

FA01-5

### H/sub/spl infin// Controller Design for Parallel DC-DC Buck Converters

Uthen Supatti, Sudchai Boonto, Veerapol Monyagul, Cherdchai  
Prapanavarat(KMUTT, THAILAND)

- 1.Introduction
- 2.Modeling of Paralleled Converters with ACC
- 3.H/sub/spl infin//Control
- 4.Controller Design Example
- 5.Simulation Result
- 6.Conclusions

10:40 – 11:00

FA01-6

### Control of the Intraocular Pressure by Using the Micro Valve Actuator for a Glaucoma Implant

Byunghoon Bae, Junhyun Park, Kyihwan Park, Jonghyun Lee(KJIST,  
KOREA), Yeon Lee(Lee Yeon Eye Clinic), Hongseok Kee, Seonho  
Kim(Lee Yeon Eye Clinic, KOREA), Taeseok Sim, Yongkweon  
Kim(Seoul Nat'l Univ, KOREA)

- A new implant capable of controlling IOP actively and coping with personal difference among patients
- The valve actuator of the active implant is proposed and fabricated.
- In vitro experiments are carried out extensively with and without a rabbit.
- The experiments are conducted by using the open and closed loop pressure control.
- The experiment with the rabbit is similar as a in vivo experiment,
- since the compliance and the aqueous humor of the rabbit's eye are included.
- The experimental results verify the possibility of the valve actuator for a glaucoma implant.

