

編集委員長

工 藤 正 博

Editor in chief

Masahiro KUDO

編集委員

青 木 正 喜

久 富 寿

笠 原 和 夫

渡 邊 一 衛

Editorial Board

Masayoshi AOKI

Hisashi HISATOMI

Kazuo KASAHARA

Ichie WATANABE

成蹊大学

理 工 学 研 究 報 告

第 44 卷 第 2 号

The Journal of the Faculty of Science and Technology

Seikei University Vol. 44, No.2(2007)

本報告に掲載された論文、速報、解説等は、順次 Web 上で公開しています。

このことに関しては、各文書の著作権者の許諾を得ています。

URL は下記のとおりです。

<http://www.seikei.ac.jp/university/st/>

<http://www.seikei.ac.jp/university/library/st/journal/>

2007 年 12 月 1 日 発 行

発行者 成蹊大学理工学部

〒180-8633 武蔵野市吉祥寺北町 3 - 3 - 1

Tel : 0422-37-3705, Fax : 0422-37-3871

印刷所 株式会社 大和メディアクリエイティブ

〒162-0824 新宿区揚場町 2 - 2 0

---

Faculty of Science and Technology , Seikei University

3-3-1 Kichijoji-Kitamachi , Musashino-shi,

Tokyo 180-8633, Japan

Tel : + 81-422-37-3705, Fax : + 81-422-37-3871

E-mail : kenkyujosei@jim.seikei.ac.jp

Printed by Yamato Media Creative Co. in Tokyo

## C O N T E N T S

<b>1. Power System Voltage Stabilizer using LC Resonance Circuit with Superconducting Coil and Capacitor</b>	.....	Shinobu KAWASHIMA , Takeshi ISHIGOHKA , Akira NINOMIYA	1
<b>Short Notes</b>			
<b>1. 5-fluorouracil-inducible mRNAs in a colorectal cancer cell line</b>	.....	Marie UCHIDA, Hisashi HISATOM	5
<b>New faculty members' paper</b>			
<b>1. ICT Technologies and Business in Japan Impact of Mobile Phone Broadband ?</b>	.....	Hitomi MURAKAMI	9
<b>2. PROPAGATION FORMULA FOR PRINCIPAL SERIES WHITTAKER FUNCTINS ON GL(3,C)</b>	.....	Miki HIRAMNO	17
<b>Column</b>			
<b>Off the track notes of an engineer – a sabot and a sneaker -</b>	.....	Masayoshi AOKI	25
<b>Outline and technical reports of recently introduced equipments and facilities</b>			
<b>1.Wavelength Routing System based on Wavelength Division Multiplexing (WDM)</b>	.....	Kimio OGUCHI	31
<b>Technology for Large Capacity Contents Transfer</b>	.....		
<b>2. Qualitative and quantitative analysis of trace metals by the simultaneous multi element analysis system</b>	.....	Toshinori KOJIMA, Shigeru KATO	33
<b>Papers, reviews, and short notes related to special research fund</b>			
<b>1. Manufacture of Low Heat In-leak Ferrite Core Transformer with Room Temperature Primary and Low Temperature Secondary</b>	.....	Takeshi ISHIGOHKA, Akira NINOMIYA,Taichi FUTEMMA	39
<b>2. Study on Plasmaless Dry Texture Process for Crystalline Semiconductor Solar Cells</b>	.....	Yoji SAITO, Tadashi MOMMA, Takeshi KOSUGE	43
<b>3. Motion Compensated Video Signal Processing for Flat Panel Display</b>	.....	Kenji SUGIYAMA, Naoya SAGARA, Yoshiyuki YAYADA, Hiroyasu OBATA	45
<b>4. Synthesis of New 2,4-Pteridinediones and Their Application to Fluorescence Derivatization Reagents</b>	.....	Akira KATOH, Kayo KAMEO, Ryota SAITO, Yuriko MATSUMURA	53
<b>5. Novel Fractionation Method for Soy Phospholipid Classes</b>	.....	Setsuko HARA, Nana UNO, Yoichiro TOTANI	65
<b>6. An efficient algorithm for a railway fare calculation</b>	.....		
<b>A case study involving 510 JR stations within the Suica/Pasco system ?</b>	.....	Shunji MORITA , Atsuko IKEGAMI , Jo KIKUCHI, Takuma YAMAGUCHI , Toshihiro NAKAYAMA , Motohiro OHKURA	75
<b>7. Statistical Inference for the Positive Binomial Distribution</b>	.....	Manabu IWASAKI , Kiyotaka YOSHIDA	79
<b>8. Proposed congestion control methods for all IP-based networks</b>	.....	Kenichi HATAKEYAMA, Shin-ichi KURIBAYASHI	83
<b>Research Activities (Apr. 2006 - Mar. 2007)</b>	.....		89
<b>Abstracts of Current Papers</b>	.....		121
<b>Abstracts of Doctoral Dissertations and Reports of Dissertation Committee</b>	.....		139