2012 International SoC Design Conference

(ISOCC 2012)

Jeju Island, South Korea
4 – 7 November 2012
Oral Session

Monday, November 5, 2012

Session 1

Power Electronics (Energy Harvesting)

15:30~17:00  Regular Session 1  Ramada-2

Chair  Volkan Kursun (Hong Kong Univ. of Science and Technology, Hong Kong)

[RS1-1]  A Battery Interconnect Module with High Voltage Transceiver Using 0.25 \mu m 60V BCD Process for Battery Management Systems
Chih-Lin Chen, Deng-Shian Wang, Jie-Jyun Li, and Chua-Chin Wang
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Kwang-Ho Kim, and Bai-Sun Kong
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Sungkyunkwan University
Suwon, Korea
Young-Hyun Jun
Samsung Electronics, Korea

Keon Lee, Dong-hun Lee, Su-hun Yang, Ji-hyun Park, Kwang-sub Yoon
Department of Electronic Engineering
Inha Univ, Korea

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[RS1-4]  NP Dynamic CMOS Resurrection with Carbon Nanotube Field Effect Transistors
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The Hong Kong University of Science and Technology, Hong Kong

[RS1-5]  A Novel Charge Recovery Logic Structure with Complementary Pass–transistor Network
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[RS1-6]  Automatic Register Transfer Level CAD Tool Design for Advanced Clock Gating and Low Power Schemes
Yunlong Zhang, Qiang Tong, Li Li, Wei Wang and Ken Choi
Illinois Institute of Technology, USA
JongEun Jang, Hyobin Jung, and Si-Young Ahn
Epic Solution Inc., Korea
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*SoC Platform Research Center
Korea Electronics Technology Institute, Korea .......................................................................................... 45

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Siddharth Katare and Narayanan Natarajan
Intel Technology India, India

[RS5-2] A CMOS Voltage Reference Combining Body Effect with Switched–Current Technique
Ning REN, Hao ZHANG and Tsutomu YOSHIIHARA
Waseda University, Japan

[RS5-3] Design and Analysis of a Power–Efficient Cascode–Compensated Amplifier
Shafqat Ali, Steve Tanner and Pierre-André Farine
Swiss Federal Institute of Technology (EPFL), Switzerland

[RS5-4] Spur Suppression in Frequency Synthesizer using Switched Capacitor Array
Debashis Mandal, Student Member, IEEE, Pradip Mandal, Member, IEEE, and Tarun Kanti Bhattacharyya
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Jinsoo Rhim, Kwang-Chun Choi and Woo-Young Choi
Yonsei University, Korea

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YuanZe University, Taiwan
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Shomal University, Iran

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Chair   Kyung Ki Kim (Daegu University, Korea)

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Yuta Atobe, Youhua Shi, Masao Yanagisawa, and Nozomu Togawa
Waseda University, Japan

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[RS9-3] Performance Aware Partitioning for 3D–SOCs
Amit Kumar Sudhakar M. Reddy
University of Iowa, USA
Bernd Becker
Albert Ludwigs University, Germany
Irith Pomeranz
Purdue University, USA

Mohamed A. Abd El Ghany*, Mohamed A. Wanas and Mohamed Zaki
German University in Cairo, Egypt, Darmstadt University Germany*
German University in Cairo, Germany

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Sangchul Kim, Hyunjin Kim, Taeil Chung, Jin-Gyeong Kim
LG Electronics Inc., Korea

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(1)Department of Electronic and Electrical Engineering
(2)POSTECH, Korea
(3)SAMSUNG ELECTRONICS, CO., LTD., Korea ........................................... 192

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Kyung-Ju Cho
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Chair Byeong Kil Lee (University of Texas, San Antonio, USA)

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(1) University of Turku, Finland
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Chair Dr. Tae-Chan Kim(Samsung Electronics Co.)
Co-Chair Prof. Hyunchul Shin(Hanyang University)

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Alexander Getman, Se-Hwan Yun, Tae-Chan Kim
Samsung Electronics, Korea

Session 4
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Chair Prof. Yeong-Luh Ueng(National Tsing Hua University, Hsinchu, Taiwan, R.O.C)

[SS4-1] A Low–Cost Architecture for Multi–Mode Reed–Solomon Decoder
Yun Chen, Yuebin Huang, Wei Meng, Zhiyi Yu, and Xiaoyang Zeng
Fudan University, China

[SS4-2] High–Throughput Turbo Decoder Design with New Interconnection Network for LTE/LTE–A System
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National Central University, Taiwan

[SS4-3] Efficient EMS decoding for Non–Binary LDPC Codes
Leixin Zhou, Jin Sha, Zhongfeng Wang, Senior Member, IEEE
Nanjing University, China

[SS4-4] A 516Mb/s 0.2nJ/bit/iter Variable–Block–Size Turbo Decoder for 3GPP LTE–A System
Chi-Hsuan Hsieh, Ming-Yong Lee, and Yuan-Hao Huang
National Tsing-Hua University, Taiwan

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Yeong-Luh Ueng, Chung-Chao Cheng
National Tsing Hua University, Taiwan
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Chair Prof. Ken Choi(Illinois Institute of Technology, Chicago, USA)

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(1) Institute of Microelectronics, A*STAR, Singapore
(2) Institute of Microelectronics, Singapore, A*STAR, Singapore
### Session 7

**Practical solutions to the challenges of very high integrated SoCs**

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