

2022 年 11 月 7 日

研究室 OB の活躍

天下の英才を得て教育するのは、第三の楽しみである。 孟子

群馬大学 小林春夫

研究室 OB 元澤篤史君（学士卒、修士修了、ルネサスエレクトロニクス勤務、群馬大学非常勤講師兼任）が IEEE Asian Solid-State Circuits Conference 2022 でオンライン発表を行った。今後のますますの研鑽を期待したい。



A-SSCC 2022

IEEE Asian Solid-State Circuits Conference

The Grand Hotel, Taipei, Taiwan

November 6-9, 2022



| |
|--|
| Home |
| How to participate in the virtual conference |
| Organization |
| Technical Program |
| Floor Plan |
| SDC Exhibition |
| FPGA Demo |
| Industry Demo |
| Submission |
| Registration |
| Venue & Transportation |
| Restaurants |
| Accommodation |
| General Information |
| Quarantine Rules |
| Visa Application |
| Sponsorship |
| Contact Us |

Regular Sessions

Session 1: Design Techniques for Industrial Applications

Session Chair: Jinwook Oh, Rebellion
Session Co-chair: Po-Hung Lin, National Yang Ming Chiao Tung University
Date: Nov. 07, 2022 (Monday)
Time: 10:50 - 12:30 (UTC+8)
Room: Auditorium 國際會議廳, 10F

| ID | Time | Title / Authors / Affiliation |
|-------------------------------------|---------------------|---|
| 1.1 (7033) (Highlight) | 10:50 11:15 | Energy Efficient BNN Accelerator using CiM and a TimeInterleaved Hadamard Digital GRNG in 22nm CMOS <i>Richard Dorrance, Deepak Dasalukunte, Hechen Wang, Renzhi Liu, Brent Carlton</i> Intel Corporation, USA |
| 1.2 (7176) (Highlight) | 11:15 11:40 | Sub-GHz RF Energy Harvester including a Small Loop Antenna <i>Darshan Shetty¹, Christoph Steffan¹, Wolfgang Bösch², Jasmin Grosinger²</i> ¹ Infineon Technologies AG, Austria ² Graz University of Technology, Austria |
| 1.3 (7022) (Highlight) | 11:40 12:05 | An Attachable Fractional Divider Transforming an Integer-N PLL Into a Fractional-N PLL with SSC Capability <i>Atsushi Motozawa, Yasuyuki Hiraku, Yoshitaka Hirai, Naoaki Hiyama, Yusuke Imanaka, Fukashi Morishita</i> Renesas Electronics Corporation, Japan |
| 1.4 (7024) (Highlight) | 12:05 12:30 | A Learning-Based Algorithm for Early Floorplan With Flexible Blocks <i>¹JEN-WEI LEE, ¹YI-YING LIAO, ¹TE-WEI CHEN, ¹YU-HSIU LIN, ¹CHIA-WEI CHEN, ¹CHUN-KU TING, ¹SHENG-TAI TSENG, ¹RONALD KUO-HUA HO, ¹HSIN-CHUAN KUO, ¹CHUN-CHIEH WANG, ¹MING-FANG TSAI, ¹CHUN-CHIH YANG, ¹TAI-LAI TUNG, and ²DA-SHAN SHIU</i> ¹ MediaTek, Taiwan ² MediaTek Research, Taiwan |



An Attachable Fractional Divider Transforming an Integer-N PLL Into a Fractional-N PLL with SSC Capability

Atsushi Motozawa, Yasuyuki Hiraku, Yoshitaka Hirai,
Naoaki Hiyama, Yusuke Imanaka, and Fukashi Morishita

Renesas Electronics Corporation, Tokyo, Japan



IEEE Asian Solid-State Circuits Conference



Outline

- Motivation
- Proposed Attachable Fractional Divider
 - PLL Transformation
 - Level Shifter
 - Automatic Region Keeping
- Measurement Results
- Conclusion

Session 1-

IEEE Asian Solid-State Circuits Conference

Slide 1



新しき葡萄酒は新しき皮袋に入れよ。新約聖書

新しい時代のメインストリームは若い人が牽引するのが良いのだろう。

もう一花咲かせるというなら誰もやっていないことであろう。