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1K Opening & Keynote I

Time: 9:00 - 10:30, Tuesday, January 23, 2018
Location: Halla Hall
Chair: Youngsoo Shin (KAIST, Republic of Korea)

1K-1 (Time: 9:30 - 10:30)
(Keynote Address) Designing Heterogeneous Systems in the AI Era: Challenges and Opportunities
Jeff Burns (IBM, U.S.A.)

1A (SS-1) Deep Learning for Applications that Live on Big Data

Time: 11:00 - 12:15, Tuesday, January 23, 2018
Location: Room 302
Organizer: Deming Chen (Univ. of Illinois, Urbana-Champaign)

1B System Level Management and Optimization

Time: 11:00 - 12:15, Tuesday, January 23, 2018
Location: Room 401
Chairs: Ji-Hoon Kim (Seoul National Univ. of Science and Tech., Republic of Korea), Youngjoo Lee (POSTECH, Republic of Korea)

1C Advances in Bio-Chip and Bio-Data-Processing

Time: 11:00 - 12:15, Tuesday, January 23, 2018
Location: Room 402A
Chairs: Yanzhi Wang (Syracuse Univ., U.S.A.), Juinn-Dar Huang (National Chiao Tung Univ., Taiwan)

1D Resource-Constrained Scheduling

Time: 11:00 - 12:15, Tuesday, January 23, 2018
Location: Room 402B
Chairs: Jingtong Hu (Univ. of Pittsburgh, U.S.A.), Yuan-Hao Chang (Academia Sinica, Taiwan)

2A (SS-2) New Advances in Hardware Security

Time: 13:45 - 15:25, Tuesday, January 23, 2018
Location: Room 302
Organizer: Gang Qu (Univ. of Maryland, U.S.A.)

2B Energy-Efficient CNN Accelerators

Time: 13:45 - 15:25, Tuesday, January 23, 2018
Location: Room 401
Chairs: Chun-Yi Lee (National Tsing Hua Univ., Taiwan), Shao-Yun Fang (National Taiwan Univ. of Science and Tech., Taiwan)

2C Networks on Chips and Beyond

Time: 13:45 - 15:25, Tuesday, January 23, 2018
Location: Room 402A
Chairs: Mehdi Tahoori (Karlsruhe Inst. of Tech., Germany), John Kim (KAIST, Republic of Korea)

2D Timing Exploration: Modeling, Analysis and Optimization

Time: 13:45 - 15:25, Tuesday, January 23, 2018
Location: Room 402B
Chairs: Ting-Chi Wang (National Tsing Hua Univ., Taiwan), Sheldon Tan (Univ. of California, Riverside, U.S.A.)

3A Machine Learning Architecture Design and Its Applications

Time: 15:55 - 17:35, Tuesday, January 23, 2018
Location: Room 302
Chairs: Tsung-Yi Ho (National Tsing Hua Univ., Taiwan), Donghwa Shin (Yeungnam Univ., Republic of Korea)

3B Advanced Memory Architecture

Time: 15:55 - 17:35, Tuesday, January 23, 2018
Location: Room 401
Chairs: Hyung Gyu Lee (Daegu Univ., Republic of Korea), Hoeseok Yang (Ajou Univ., Republic of Korea)

3C Advanced Testing and Diagnosis Techniques

Time: 15:55 - 17:35, Tuesday, January 23, 2018
Location: Room 402A
Chairs: Jin-Fu Li (National Central Univ., Taiwan), Jing-Jia Liou (National Tsing Hua Univ., Taiwan)

3D Split Manufacturing, Logic Obfuscation and Camouflaging

Time: 15:55 - 17:35, Tuesday, January 23, 2018
Location: Room 402B
Chairs: Sandip Kundu (UMASS Amherst, U.S.A.), Yier Jin (Univ. of Florida, U.S.A.)

2K Keynote II

Time: 9:00 - 10:00, Wednesday, January 24, 2018
Location: Halla Hall
Chair: Youngsoo Shin (KAIST, Republic of Korea)

4A University Design Contest

Time: 10:30 - 12:10, Wednesday, January 24, 2018
Location: Room 302
Chairs: Minkyu Je (KAIST, Republic of Korea), Ikjoon Chang (Kyung Hee Univ., Republic of Korea)

4B System Architectures

Time: 10:30 - 12:10, Wednesday, January 24, 2018
Location: Room 401
Chairs: Sri Parameswaran (Univ. of New South Wales, Australia), Jing-Jia Liou (National Tsing Hua Univ., Taiwan)

4C Emerging Technologies for Energy Efficient Computing

Time: 10:30 - 12:10, Wednesday, January 24, 2018
Location: Room 402A
Chairs: Shigeru Yamashita (Ritsumeikan Univ., Japan), Wujie Wen (Florida International Univ., U.S.A.)

4D Design for Manufacturability and Reliability

Time: 10:30 - 12:10, Wednesday, January 24, 2018
Location: Room 402B
Chairs: Masanori Hashimoto (Osaka Univ., Japan), Martin D. F. Wong (Univ. of Illinois, Urbana-Champaign, U.S.A.)

5A (IS) Machine/Deep Learning for Semiconductor Design, EDA Technologies, and Application

Time: 13:40 - 15:45, Wednesday, January 24, 2018
Location: Room 302
Organizer: Kyu Myung Choi (Seoul National Univ., Republic of Korea)

5B System Design Methodologies

Time: 13:40 - 15:45, Wednesday, January 24, 2018
Location: Room 401
Chairs: Naehyuck Chang (KAIST, Republic of Korea), Akash Kumar (Tech. Univ. Dresden, Germany)

5C Synthesis, Routing and Timing

Time: 13:40 - 15:45, Wednesday, January 24, 2018
Location: Room 402A
Chairs: Jason C. Verley (Sandia National Laboratory, U.S.A.), Mark Po-Hung Lin (National Chung Cheng Univ., Taiwan)

5D Advanced Placement and Routing Techniques

Time: 13:40 - 15:45, Wednesday, January 24, 2018
Location: Room 402B
Chairs: Yasuhiro Takashima (Univ. of Kitakyushu, Japan), Ting-Chi Wang (National Tsing Hua Univ., Taiwan)

6A (SS-3) Training Deep Neural Networks: Algorithms and Architectures

Time: 16:15 - 17:30, Wednesday, January 24, 2018
Location: Room 302
Organizer: Kiyoung Choi (Seoul National Univ., Republic of Korea)

6B Emerging Memory Management Techniques

Time: 16:15 - 17:30, Wednesday, January 24, 2018
Location: Room 401
Chairs: Minsoo Rhu (POSTECH, Republic of Korea), Pi-Cheng Hsiu (Academia Sinica, Taiwan)

6C Intelligent System Designs with Neuromorphic and Stochastic Technologies

Time: 16:15 - 17:30, Wednesday, January 24, 2018
Location: Room 402A
Chairs: Deliang Fan (Univ. of Central Florida, U.S.A.), Bing Li (Duke Univ., U.S.A.)

6D New Flavors of Logic and Arithmetic Synthesis

Time: 16:15 - 17:30, Wednesday, January 24, 2018
Location: Room 402B
Chairs: Shouyi Yin (Tsinghua Univ., China), Jaeyong Chung (Incheon National Univ., Republic of Korea)

3K Keynote III

Time: 8:30 - 10:00, Thursday, January 25, 2018
Location: Halla Hall
Chair: Youngsoo Shin (KAIST, Republic of Korea)

3K-1 (Time: 8:30 - 9:15)
(Keynote Address) CAE Challenge on High Capacity/High Bandwidth Memory Design
Woojong Han (SK Hynix, Republic of Korea)

3K-2 (Time: 9:15 - 10:00)
(Keynote Address) TeraByte/s Bandwidth 2.5D HBM (High-bandwidth Memory Module) Designs for Deep Learning Artificial Intelligent Servers
Joungho Kim (KAIST, Republic of Korea)

7A Multiplier Design: From Accurate to Approximate

Time: 10:30 - 11:45, Thursday, January 25, 2018
Location: Room 302
Chairs: Kazuyoshi Takagi (Kyoto Univ., Japan), Youngjoo Lee (POSTECH)

7A-1 (Time: 10:30 - 10:55)

7A-2 (Time: 10:55 - 11:20)

7A-3 (Time: 11:20 - 11:45)

7B (SS-4) Reliability and Aging-Aware Designs for sub-10nm ICs

Time: 10:30 - 11:45, Thursday, January 25, 2018
Location: Room 401
Organizer: Sheldon Tan (UC Riverside, U.S.A.)

7B-1 (Time: 10:30 - 10:55)

7B-2 (Time: 10:55 - 11:20)

7B-3 (Time: 11:20 - 11:45)

7C (SS-5) Design Automation and Methodology for Flexible Electronics

Time: 10:30 - 11:45, Thursday, January 25, 2018
Location: Room 402A
Organizers: Mehdi Tahoori (Karlsruhe Inst. of Tech., Germany), Jim Huang (Hewlett Packard Labs)

7D Novel Synthesis Techniques for Quantum Circuits

Time: 10:30 - 11:45, Thursday, January 25, 2018
Location: Room 402B
Chairs: Kyu-Myung Choi (Seoul National Univ., Republic of Korea), Sangdo Park (Samsung Electronics, Republic of Korea)

8A Energy Efficient System Design

Time: 13:15 - 14:30, Thursday, January 25, 2018
Location: Room 302
Chairs: Jae-Joon Kim (POSTECH, Republic of Korea), Jaeyong Chung (Incheon National Univ., Republic of Korea)

9A Hardware Security Primitive Design and Implementation

Time: 15:00 - 16:15, Thursday, January 25, 2018
Location: Room 302
Chairs: Wujie Wen (Florida International Univ., U.S.A.), Taewhan Kim (Seoul National Univ., Republic of Korea)

10A Deep Learning and Architectural Security

Time: 16:45 - 18:00, Thursday, January 25, 2018
Location: Room 302
Chairs: Taewhan Kim (Seoul National Univ., Republic of Korea), Ji-Hoon Kim (Seoul National Univ. of Science and Tech., Republic of Korea)