### 2025년 2월 12일(수)-14일(금) | 강원도 하이원리조트

### Future Normal in Semiconductor

2025년 2월 14일(금), 15:10-17:10 Room B(그랜드볼룸III), 4층

# G. Device & Process Modeling, Simulation and Reliability 분과 O68\_[FB3-G] Carrier Transport & Quantum Simulation

좌장: 홍성민 교수(GIST), 신흥식 수석(DB하이텍)

초청 FB3-G-1 15:10-15:40	Advances in Understanding Chemical Bonding in Amorphous and Crystalline Chalcogenide Semiconductors  Tae Hoon Lee <sup>1</sup> and Stephen R. Elliott <sup>2</sup> ¹Kyungpook National University, ²University of Oxford, UK
FB3-G-2 15:40-15:55	Tackling Multi-dimensional Poisson Equations with Mixed Boundary Conditions Using Variational Quantum Algorithm  Minjin Choi <sup>1</sup> and Hoon Ryu <sup>2</sup> ¹Center for Quantum Information R&D, KISTI, ²Department of Artificial Intelligence Engineering, Kumoh National Institute of Technology
FB3-G-3 15:55-16:10	First-Principles Modeling of Non-Equilibrium Behavior in Oxide Ferroelectric Tunnel Junctions Kaptan Rajput, Ryong Gyu Lee, Tae Hyung Kim, Hyeonwoo Yeo, Juho Lee, and Yong-Hoon Kim School of Electrical Engineering, KAIST
FB3-G-4 16:10-16:25	Quantum Transport Simulation for the Nanosheet FET Including Surface Roughness Scattering Phil-Hun Ahn and Sung-Min Hong School of Electrical Engineering and Computer Science, GIST
FB3-G-5 16:25-16:40	Evaluation of the Effect of Metal Contact Geometry on S/D Junction Resistance in Si/InGaAs FinFETs Using Semi-Classical Monte Carlo Carrier Transport Simulation  Jae Yeon Kim <sup>1,3</sup> , Dong Hyeok Lee <sup>2</sup> , Suk Hyeong Youn <sup>2</sup> , and Jiwon Chang <sup>1,3</sup> ¹Department of System Semiconductor Engineering, Yonsei University, ²Department of Materials Science and Engineering, Yonsei University, ³BK21 Graduate Program in Intelligent Semiconductor Technology, Yonsei University



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FB3-G-6 16:40-16:55	Four-coupled Multi-physics Simulations of Multi-layer Ferroelectric Field Effect Transistors with Polar Topological States Yangjin Jung, Seokwon Lee, and Mincheol Shin Department of Electrical Engineering, KAIST
FB3-G-7 16:55-17:10	Extremely Low-Power Topological Transistors  Yosep Park <sup>1</sup> , Yungyeong Park <sup>2</sup> , Subeen Lim <sup>2</sup> , and Yeonghun Lee <sup>1,2</sup> ¹Department of Intelligent Semiconductor Engineering, Incheon National University,  ²Department of Electronics Engineering, Incheon National University