



김진국 Jinguok Kim

전기전자공학과 / Electrical Engineering

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Curriculum Vitae

2020~Present : Professor, UNIST
 2011~2020 : Associate/Assistant Professor, UNIST
 2009~2011 : Postdoc/ Research Professor, Missouri University of Science and Technology
 2006~2008 : Senior Engineer, DRAM Design Team, Samsung Electronics

Academic Credential

2006: Ph. D. Electrical Engineering, KAIST
 2002: M. S. Electrical Engineering, KAIST
 2000: B. S. Electrical Engineering, KAIST

Awards/Honors/Memberships

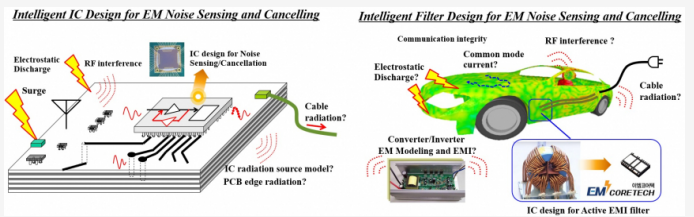
한국전자파학회 우수연구자상, 2019
 Best Paper Award, IEEE International Symposium on EMC and SI, July 2019.
 Best Student Paper Award, 2018 IEEE Electrical Design of Advanced Packaging and Systems Symposium (EDAPS), Dec 2018.
 Best Student Paper Award, 2017 Asia-Pacific International Symposium on EMC.
 Best Student Paper Award, 2016 Asia-Pacific International Symposium on EMC.
 Best Paper Award, IEEE Symposium on EMC and SI, 2015.
 Best Technical Paper Award, IEEE International EMC Symposium, 2010

Integrated Circuit and Electromagnetic Compatibility Laboratory
집적회로 및 전자기파 융합연구실

시스템이 고속화, 고집적화, 고전력화 됨에 따라 집적회로와 전자기파 영역은 서로 융합되고 함께 해석해야 한다. 본 연구실에서는 회로와 전자기파 두가지를 융합 연구하며, 특히, 전자기파 노이즈 저감 및 콘트롤을 위한 다양한 회로를 설계를 연구한다.

The research approach of IC-EMC Lab. is to acquire a broader knowledge across

sub-disciplines in high-speed silicon IC design and electromagnetics. These areas are getting more important and intertwined, as frequency goes up and systems are integrated. We design intelligent ICs and filters for EM Noise Sensing and Cancelling.



관심분야

EMC, Signal Integrity, Electrostatic discharge, transient sensor IC, Intelligent EMI filter, RF interference, Antenna, AI-assist hardware design

희망분야

EMC, Signal Integrity, Electrostatic discharge, transient sensor IC, Intelligent EMI filter, RF interference, Antenna, AI-assist hardware design

Research Keywords and Topics

Convergence between Circuit and EM domains 집적회로와 전자기장 해석의 융합
 Electromagnetic Compatibility, Signal Integrity, analog IC circuit design, Electrostatic Discharge, RF interference, intelligent ICs and EMI filters for EM Noise Sensing and Cancelling
 전자파 적합성, 신호 충실성, 아날로그 회로설계, 정전기 방전, 전자파 간섭, 노이즈 센싱 및 보상을 위한 지능반도체 설계

Research Publications

1. Sangyeong Jeong, et al., Jinguok Kim, "A Proposed Terminal-Ground EMI Filter for Reduction of Conducted Emissions Considering Cable Radiation and Safety", IEEE Transactions on Electromagnetic Compatibility, vol. 61, no. 6, pp. 1926-1934, Dec 2019.
2. Dongil Shin, et al., Jinguok Kim, "A Balanced Feedforward Current-Sense Current-Compensation Active EMI Filter for Common-Mode Noise Reduction", IEEE Transactions on Electromagnetic Compatibility, vol. 62, no 2, pp. 386-397, Apr 2020.
3. Junsik Park, et al., Jinguok Kim, "A Cost-Effective Structure for Secondary Discharge Control to Improve System-Level ESD Immunity of a Mobile Product", IEEE Transactions on Electromagnetic Compatibility, vol. 62, no. 1, pp. 285-290, Feb 2020.

Patents

1. 10-1945463, A transformer-isolated common-mode active EMI filter, 2019.01.29
2. 10-2131263 CURRENT COMPENSATION DEVICE, 2020.07.01