



Jae-Joon Kim

Associate Professor,
Pohang University of Science and Technology
(POSTECH)

VLSI
Device Physics
Computer Architecture

	All	Since 2013
Citations	2335	1306
h-index	22	16
i10-index	55	38

TITLE	CITED BY	YEAR
A 32 kb 10T sub-threshold SRAM array with bit-interleaving and differential read scheme in 90 nm CMOS IJ Chang, JJ Kim, SP Park, K Roy IEEE Journal of Solid-State Circuits 44 (2), 650-658	440	2009
Double gate-MOSFET subthreshold circuit for ultralow power applications JJ Kim, K Roy IEEE Transactions on Electron Devices 51 (9), 1468-1474	132	2004
A forward body-biased low-leakage SRAM cache: device, circuit and architecture considerations CH Kim, JJ Kim, S Mukhopadhyay, K Roy IEEE Transactions on Very Large Scale Integration (VLSI) Systems 13 (3), 349-357	121	2005
Back-gate controlled read SRAM cell JJ Kim, K Kim US Patent 7,177,177	100	2007
Impacts of NBTI and PBTI on SRAM static/dynamic noise margins and cell failure probability A Bansal, R Rao, JJ Kim, S Zafar, JH Stathis, CT Chuang Microelectronics reliability 49 (6), 642-649	76	2009
A forward body-biased low-leakage SRAM cache: device and architecture considerations CH Kim, JJ Kim, S Mukhopadhyay, K Roy Proceedings of the 2003 international symposium on Low power electronics and ...	67	2003
Capacitive sensor for sensing tactile and proximity, and a sensing system using the same S Kang, M Kim, E Yoon, HK Lee, SI Chang, J Choi US Patent 7,679,376	60	2010
SRAM write-ability improvement with transient negative bit-line voltage S Mukhopadhyay, RM Rao, JJ Kim, CT Chuang IEEE transactions on very large scale integration (VLSI) systems 19 (1), 24-32	58	2011
High-performance SRAM in nanoscale CMOS: Design challenges and techniques CT Chuang, S Mukhopadhyay, JJ Kim, K Kim, R Rao Memory Technology, Design and Testing, 2007. MTD T 2007. IEEE International ...	57	2007
PVT-aware leakage reduction for on-die caches with improved read stability CH Kim, JJ Kim, IJ Chang, K Roy IEEE Journal of Solid-State Circuits 41 (1), 170-178	54	2006
A completely digital on-chip circuit for local-random-variability measurement R Rao, KA Jenkins, JJ Kim Solid-State Circuits Conference, 2008. ISSCC 2008. Digest of Technical ...	39	2008
Impact of NBTI and PBTI in SRAM bit-cells: Relative sensitivities and guidelines for application-specific target stability/performance A Bansal, R Rao, JJ Kim, S Zafar, JH Stathis, CT Chuang Reliability Physics Symposium, 2009 IEEE International, 745-749	37	2009

TITLE	CITED BY	YEAR
Robust level converter for sub-threshold/super-threshold operation: 100 mV to 2.5 v IJ Chang, J Kim, K Kim, K Roy IEEE Transactions on Very Large Scale Integration (VLSI) Systems 19 (8 ...	36	2011
Asymmetrical SRAM cells with enhanced read and write margins K Kim, JJ Kim, CT Chuang VLSI Technology, Systems and Applications, 2007. VLSI-TSA 2007 ...	33	2007
Asymmetrical memory cells and memories using the cells CT Chuang, JJ Kim, K Kim US Patent 7,362,606	32	2008
Robust level converter design for sub-threshold logic IJ Chang, JJ Kim, K Roy Proceedings of the 2006 international symposium on Low power electronics and ...	31	2006
On-chip process variation detection using slew-rate monitoring circuit A Ghosh, RM Rao, J Kim, CT Chuang, RB Brown VLSI Design, 2008. VLSID 2008. 21st International Conference on, 143-149	28	2008
Relaxing conflict between read stability and writability in 6T SRAM cell using asymmetric transistors JJ Kim, A Bansal, R Rao, SH Lo, CT Chuang IEEE Electron Device Letters 30 (8), 852-854	27	2009
Ring oscillator circuit structures for measurement of isolated NBTI/PBTI effects JJ Kim, R Rao, S Mukhopadhyay, CT Chuang Integrated Circuit Design and Technology and Tutorial, 2008. ICICDT 2008 ...	24	2008
Vocal process granulomas: a systematic review of treatment PD Karkos, M George, J Van Der Veen, H Atkinson, RC Dwivedi, D Kim, ... Annals of Otology, Rhinology & Laryngology 123 (5), 314-320	23	2014
A local random variability detector with complete digital on-chip measurement circuitry R Rao, KA Jenkins, JJ Kim IEEE Journal of Solid-State Circuits 44 (9), 2616-2623	23	2009
Circuits and design structures for monitoring NBTI (negative bias temperature instability) effect and/or PBTI (positive bias temperature instability) effect CTK Chuang, JJ Kim, TH Kim, PF Lu, S Mukhopadhyay, RM Rao, S Wang US Patent 7,642,864	22	2010
Capacitive coupling based transient negative bit-line voltage (Tran-NBL) scheme for improving write-ability of SRAM design in nanometer technologies S Mukhopadhyay, R Rao, JJ Kim, CT Chuang Circuits and Systems, 2008. ISCAS 2008. IEEE International Symposium on, 384-387	22	2008
A leakage tolerant high fan-in dynamic circuit design technique JJ Kim, K Roy Solid-State Circuits Conference, 2001. ESSCIRC 2001. Proceedings of the 27th ...	22	2001
Back-gate controlled asymmetrical memory cell and memory using the cell CT Chuang, JJ Kim, K Kim US Patent 7,313,012	21	2007
Column-selection-enabled 8T SRAM array with SP Park, SY Kim, D Lee, JJ Kim, WP Griffin, K Roy Proceedings of the 17th IEEE/ACM international symposium on Low-power ...	19	2011
PBTI/NBTI monitoring ring oscillator circuits with on-chip Vt characterization and high frequency AC stress capability JJ Kim, RM Rao, J Schaub, A Ghosh, A Bansal, K Zhao, BP Linder, ... VLSI Circuits (VLSIC), 2011 Symposium on, 224-225	19	2011

TITLE	CITED BY	YEAR
Reliability monitoring ring oscillator structures for isolated/combined NBTI and PBTI measurement in high-k metal gate technologies JJ Kim, BP Linder, RM Rao, TH Kim, PF Lu, KA Jenkins, CH Kim, ... Reliability Physics Symposium (IRPS), 2011 IEEE International, 2B. 4.1-2B. 4.4	18	2011
FINFET drive strength de-quantization using multiple orientation fins JJ Kim, RM Rao US Patent App. 11/505,224	18	2008
Self-Assembled, Millimeter-Sized TIPS-Pentacene Spherulites Grown on Partially Crosslinked Polymer Gate Dielectric H Yoo, HH Choi, TJ Shin, T Rim, K Cho, S Jung, JJ Kim Advanced Functional Materials 25 (24), 3658-3665	17	2015
Self-repairing SRAM using on-chip detection and compensation NN Mojumder, S Mukhopadhyay, JJ Kim, CT Chuang, K Roy IEEE transactions on very large scale integration (VLSI) systems 18 (1), 75-84	17	2010
Photochemical generation of nitric oxide from 3, 4-bis-2'-chlorophenylfuroxan KJ Hwang, SK Kim, SC Shim Chemistry letters 27 (8), 859-859	16	1998
Comparison of damped oscillations in solar and stellar X-ray flares IH Cho, KS Cho, VM Nakariakov, S Kim, P Kumar The Astrophysical Journal 830 (2), 110	15	2016
Preservation of greater auricular nerve during parotidectomy: sensation, quality of life, and morbidity issues. A systematic review M George, PD Karkos, RC Dwivedi, SC Leong, D Kim, C Repanos Head & neck 36 (4), 603-608	15	2014
Vertical kink oscillation of a magnetic flux rope structure in the solar corona S Kim, VM Nakariakov, KS Cho The Astrophysical Journal Letters 797 (2), L22	14	2014
Statistical description of low-latitude plasma blobs as observed by DMSP F15 and KOMPSAT-1 J Park, KW Min, VP Kim, H Kil, HJ Kim, JJ Lee, E Lee, SJ Kim, DY Lee, ... Advances in Space Research 41 (4), 650-654	14	2008
BRAF V600 co-testing in thyroid FNA cytology: short-term experience in a large cancer centre in the UK DN Poller, S Glaysher, A Agrawal, S Caldera, D Kim, C Yiangou Journal of clinical pathology 67 (8), 684-689	13	2014
Intratendinous ganglion cyst of the semimembranosus tendon SK Kim, JM Park, JE Choi, SK Rhee, SI Shim The British journal of radiology 83 (988), e79-e82	13	2010
Method and circuit for reducing leakage and increasing read stability in a memory device H Kim, JJ Kim, K Roy US Patent 7,328,413	13	2008
Back-gate controlled READ SRAM with improved stability JJ Kim, K Kim, CT Chuang SOI Conference, 2005. Proceedings. 2005 IEEE International, 211-212	13	2005
Alteration of sex hormone levels and steroidogenic pathway by several low molecular weight phthalates and their metabolites in male zebrafish (<i>Danio rerio</i>) and/or ... J Sohn, S Kim, J Koschorreck, Y Kho, K Choi Journal of hazardous materials 320, 45-54	12	2016

TITLE	CITED BY	YEAR
Slew-rate monitoring circuit for on-chip process variation detection A Ghosh, RM Rao, JJ Kim, CT Chuang, RB Brown IEEE Transactions on Very Large Scale Integration (VLSI) Systems 21 (9 ...	12	2013
Usage-based degradation of SRAM arrays due to bias temperature instability A Bansal, JJ Kim, R Rao Reliability Physics Symposium (IRPS), 2012 IEEE International, 2F. 6.1-2F. 6.4	12	2012
Preflare eruption triggered by a tether-cutting process S Kim, YJ Moon, YH Kim, YD Park, KS Kim, GS Choe, KH Kim The Astrophysical Journal 683 (1), 510	12	2008
P-111: Voltage and Rubbing Angle Dependent Behavior of the Single Cell Gap Transflective Fringe Field Switching (FFS) Mode YH Jeong, HY Kim, JB Park, MS Kim, GH Kim, SM Seen, DH Lim, SY Kim, ... SID Symposium Digest of Technical Papers 36 (1), 723-725	12	2005
Identification of key sensory attributes for consumer acceptance and instrumental quality of aseptic-packaged cooked rice HS Kwak, M Kim, Y Lee, Y Jeong International Journal of Food Science & Technology 50 (3), 691-699	11	2015
The ingredients in Saengshik, a formulated health food, inhibited the activity of α-amylase and α-glucosidase as anti-diabetic function M Kim, E Kim, HS Kwak, Y Jeong Nutrition research and practice 8 (5), 602-606	11	2014
Quality characteristics of spirits by different distillation and filtrations Y Lee, T Eom, C Cheong, H Cho, I Kim, Y Lee, M Kim, S Yu, Y Jeong Journal of the Korean society of food science and nutrition 42 (12), 2012-2018	11	2013
Enhanced static random access memory stability using asymmetric access transistors and design structure for same A Bansal, CTK Chuang, JJ Kim, SH Lo, RM Rao US Patent 8,139,400	11	2012
Independent-gate controlled asymmetrical SRAM cells in double-gate MOSFET technology for improved READ stability J Kim, K Kim Solid-State Device Research Conference, 2006. ESSDERC 2006. Proceeding of ...	11	2006
Solution-Processed Vertically Stacked Complementary Organic Circuits with Inkjet-Printed Routing J Kwon, S Kyung, S Yoon, JJ Kim, S Jung Advanced Science 3 (5), 1500439	10	2016
Welding deformation analysis based on improved equivalent strain method considering the effect of temperature gradients TJ Kim, BS Jang, SW Kang International Journal of Naval Architecture and Ocean Engineering 7 (1), 157-173	10	2015
Effect of calcined eggshell on fractional distribution and plant uptake of Cd, Pb and Zn in contaminated soils near mine RY Kim, JK Sung, SC Kim, BC Jang, YS Ok 19th World Congress of Soil Science, Soil Solutions for a Changing World 16	10	2010
A conceptual design of an integrated tactile display device SW Son, KU Kyung, GH Yang, DS Kwon, MS Kim 제어로봇시스템학회 국제학술대회 논문집, 2753-2758	10	2003
Characterization of Nanostructure and Electronic Properties of Catalytically Grown Carbon Nanofiber MS Kim, WJ Woo, HS Song, YS Lee, JC Lee J. Kor. Ceram. Soc 37 (4), 345-353	10	2000

TITLE	CITED BY	YEAR
Separating NBTI and PBTI effects on the degradation of ring oscillator frequency BP Linder, JJ Kim, R Rao, K Jenkins, A Bansal Integrated Reliability Workshop Final Report (IRW), 2011 IEEE International, 1-6	9	2011
Tactile mouse interface system K Kyung, S Son, D Kwon, M Kim, G Yang US Patent App. 10/955,426	9	2005
Double gate MOSFET subthreshold logic for ultra-low power applications JJ Kim SOI Conference, 2003. IEEE International, 97-98	9	2003
Physicochemical characteristics of Korean traditional spirits brewed with Phellinus linteus by different Nuruks M Kim, Y Lee, I Kim, T Eom, SH Kim, N Jo, S Yu, Y Jeong Journal of the Korean Society of Food Science and Nutrition 42 (12), 2042-2048	8	2013
Lee & Ko KB Park	8	2012
저탄소 도시관리를 위한 탄소배출과 토지이용변화 분석 어재훈, 김기태, 정길섭, 유환희 한국지형공간정보학회지 18 (1), 129-134	8	2010
Control of reverse twist domain near a pixel edge using strong vertical electric field in the fringe-field switching liquid crystal device MS Kim, SM Seen, SH Lee Applied physics letters 90 (13), 133513	8	2007
Radiofrequency myolysis: New conservative management of myoma HH Jo, JE Jung, SJ Hwang, MR Kim, JH Kim, YT Lim, JH Kim Korean Journal of Obstetrics and Gynecology 48 (9), 2166-2171	8	2005
Photophysical properties of pyrazinopsoralen, a new monofunctional psoralen GS Han, DJ Yoo, SK Kim, SC Shim, HK Kang Photochemistry and photobiology 64 (3), 525-530	8	1996
Reconfigurable complementary logic circuits with ambipolar organic transistors H Yoo, M Ghittorelli, ECP Smits, GH Gelinck, HK Lee, F Torricelli, JJ Kim Scientific Reports 6, 35585	7	2016
Long-term change in consumer acceptance for salt-reduced 'udon noodle soup' over repeated intake at home HS Kwak, M Kim, Y Lee, Y Jeong International Journal of Food Science & Technology 50 (2), 541-548	7	2015
Avoiding fatal damage to the top electrodes when forming unipolar resistance switching in nano-thick material systems SB Lee, DH Kwon, K Kim, HK Yoo, S Sinn, M Kim, B Kahng, BS Kang Journal of Physics D: Applied Physics 45 (25), 255101	7	2012
Two-step reconnections in a C3. 3 flare and its preflare activity observed by Hinode XRT S Kim, YJ Moon, KH Kim, YH Kim, T Sakurai, J Chae, KS Kim, G Choe Publications of the Astronomical Society of Japan 59 (sp3), S831-S836	7	2007
Dynamic stability of liquid crystal depending on shape of pixel edge in the fringe field switching mode MS Kim, SM Seen, YH Jung, HY Kim, SY Kim, KH Lee, YJ Lim, SH Lee Japanese journal of applied physics 44 (11R), 8082	7	2005
Lowpass temporal filter using motion adaptive spatial filtering and its systolic realization JH Kim, GW Song, SD Kim IEEE transactions on consumer electronics 38 (3), 452-459	7	1992

TITLE	CITED BY	YEAR
Development of bellows design software using MATLAB S Kim, B Jang Indian Journal of Science and Technology 8 (S8), 201-206	6	2015
Quality characteristics of Korean traditional rice wine with glutinous rice Y Lee, H Kim, T Eom, SH Kim, GP Choi, M Kim, S Yu, Y Jeong Journal of the Korean Society of Food Science and Nutrition 42 (11), 1829-1836	6	2013
Two types of extreme-ultraviolet brightenings in AR 10926 observed by Hinode/EIS KS Lee, YJ Moon, S Kim, GS Choe, KS Cho, S Imada The Astrophysical Journal 736 (1), 15	6	2011
Computer-readable medium encoding a memory using a back-gate controlled asymmetrical memory cell CT Chuang, JJ Kim, K Kim US Patent 7,492,628	6	2009
Administration of national antimicrobial resistance experts and public campaign activities K Kwon, IG Hwang, HS Kwak, JS Park, MG Kim, G Lee The Annual Report of KFDA 9, 133-134	6	2006
Effect of horizontal electric field generated by data signal on disclination lines near pixel edge in fringe field switching mode MS Kim, SM Seen, YH Jeong, HY Kim, SY Kim, YJ Lim, SH Lee Japanese journal of applied physics 44 (9R), 6698	6	2005
Modeling and analysis of gate leakage in ultra-thin oxide sub-50nm double gate devices and circuits S Mukhopadhyay, K Kim, JJ Kim, SH Lo, RV Joshi, CT Chuang, K Roy Quality of Electronic Design, 2005. ISQED 2005. Sixth International ...	6	2005
Balancing hole and electron conduction in ambipolar split-gate thin-film Transistors H Yoo, M Ghittorelli, DK Lee, ECP Smits, GH Gelinck, H Ahn, HK Lee, ... Scientific reports 7 (1), 5015	5	2017
Asymmetric Split-Gate Ambipolar Transistor and Its Circuit Application to Complementary Inverter H Yoo, ECP Smits, AJJM van Breemen, JLPJ van der Steen, F Torricelli, ... Advanced Materials Technologies 1 (4), 1600044	5	2016
Independent-gate controlled asymmetrical memory cell and memory using the cell CT Chuang, JJ Kim, K Kim US Patent 7,417,889	5	2008
3-D Filter Realized in the Spatial Domain HS Kang, SD Kim, JH Kim Signal Processing of HDTV, 319-326	5	1994
IMPACT OF THE ICME-EARTH GEOMETRY ON THE STRENGTH OF THE ASSOCIATED GEOMAGNETIC STORM KS Cho, K Marubashi, RS Kim, SH Park, EK Lim, SJ Kim, P Kumar, ... Journal of the Korean Astronomical Society 50 (2), 29-39	4	2017
Are the faint structures ahead of solar coronal mass ejections real signatures of driven shocks? JO Lee, YJ Moon, JY Lee, KS Lee, S Kim, K Lee The Astrophysical Journal Letters 796 (1), L16	4	2014
Systematic microwave source motions along a flare-arcade observed by Nobeyama Radioheliograph and AIA/SDO S Kim, S Masuda, K Shibasaki, SC Bong Publications of the Astronomical Society of Japan 65 (sp1), S2-S2	4	2013

TITLE	CITED BY	YEAR
Evaluation of hybrid PET/CT gastrography in gastric cancer J Jeong, I Cho, E Kong, K Chun, B Jang, T Kim, S Kim, S Song Nuklearmedizin 52 (03), 107-112	4	2013
Dependence of vascular damage on higher frequency components in the rat-tail model S Goenka, SV Peelukhana, J Kim, KF Stringer, RK Banerjee Industrial health 51 (4), 373-385	4	2013
Healthcare-associated infection surveillance in small and medium sized hospitals ES Park, HY Jin, SY Jeong, OM Kweon, SY Yoo, SY Park, SR Kim, ... Korean Journal of Nosocomial Infection Control 16 (2), 54-62	4	2011
Image Sticking Resistant Liquid Crystal Display Driven by Fringe Electric Field for Mobile Applications SM Seen, MS Kim, SH Lee Japanese Journal of Applied Physics 49 (5R), 050208	4	2010
Design and analysis of a self-repairing SRAM with on-chip monitor and compensation circuitry NN Mojumder, S Mukhopadhyay, JJ Kim, CT Chuang, K Roy VLSI Test Symposium, 2008. VTS 2008. 26th IEEE, 101-106	4	2008
Suppression Effect of Upstream Installed Ring-Shaped Obstacle Plate on Cavitation Surge in Pump Inducers JH Kim, K Ishizaka, M Ishizaki, S Watanabe, A Furukawa Journal of Fluid Science and Technology 3 (1), 1-10	4	2008
Performance of MTM in 2006 typhoon forecast JH Kim, GM Choo, BJ Kim, SH Won, HJ Kwon Atmosphere 17 (2), 207-216	4	2007
The development of yellow layer cake with cuttlefish ink AJ Kim, YH Lim, MH Kim, MW Kim The Korean Journal of Food And Nutrition 20 (3), 311-316	4	2007
Dynamic stability of disclination lines in fringe-field switching mode with a wedge-shaped common electrode MS Kim, SM Seen, YH Jeong, HY Kim, SY Kim, YJ Lim, SH Lee Japanese journal of applied physics 45 (2R), 883	4	2006
Development of the software for 30inch telescope control system at KHAO BS Mun, SJ Kim, M Jang, SW Min, KH Seol, KS Moon Publications of The Korean Astronomical Society 21 (2), 81-86	4	2006
Supersonic base flow predictions using second-moment closure models of turbulence MH Kim, SO Park COMPUTATIONAL FLUID DYNAMICS JOURNAL 6 (4), 561-576	4	1998
An Effective Lowpass Temporal Filter Using Motion Adaptive Spatial Filtering JH KIM, SH JANG, SD Kim IEICE TRANSACTIONS on Fundamentals of Electronics, Communications and ...	4	1992
Plasma upflows and microwave emission in hot supra-arcade structure associated with AN M1. 6 limb flare S Kim, K Shibasaki, HM Bain, KS Cho The Astrophysical Journal 785 (2), 106	3	2014
Welding distortion analysis of hull blocks using equivalent load method based on inherent strain YT Kim, TJ Kim, TY Park, CD Jang Journal of Ship Research 56 (2), 63-70	3	2012

TITLE	CITED BY	YEAR
Asymmetrical memory cells and memories using the cells CT Chuang, JJ Kim, K Kim US Patent 7,903,450	3	2011
Role of extended chemotherapy in advanced ovarian cancer patients with high posttreatment serum CA-125 levels S Kang, TJ Kim, SS Seo, BG Kim, DS Bae, SY Park Gynecologic and obstetric investigation 72 (1), 50-54	3	2011