

ISLPED04: PROCEEDINGS OF THE 2004 INTERNATIONAL SYMPOSIUM ON LOW POWER ELECTRONICS AND DESIGN pdf

1: Publication List

*Islped' Proceedings of the International Symposium on Low Power Electronics and Design: Newport Beach Marriott Hotel, New [International Symposium on Low Power Ele] on www.enganchecubano.com *FREE* shipping on qualifying offers.*

Exploiting synchronization properties of correlated electron devices in a non-boolean computing fabric for template matching. Synchronization of pairwise-coupled, identical, relaxation oscillators based on metal-insulator phase transition devices: Tschanz, and Arijit Raychowdhury. A 32nm embedded, fully-digital, phase-locked low dropout regulator for fine grained power management in digital circuits. *Journal of Solid State Circuits*, 11, Synchronized charge oscillations in correlated electron systems. *Nature Scientific reports*, 4, Sttram scaling and retention failure. *Intel Technology Journal*, 17 1: All-digital circuit-level dynamic variation monitor for silicon debug and adaptive clock control. *Circuits and Systems I: Khellah, Arijit Raychowdhury, Bibiche M. Geuskens, Carlos Tokunaga, Chris B. Wilkerson, Tanay Karnik, and Vivek K. Most downloaded paper of Theory and Applications, March, Theory and Applications, Vol. Refereed Conference Articles 1. On limit cycle oscillations of discrete time digital linear regulators. Nasir and Samantak Gangopadhyay and A. A nm fully digital linear drop-out regulator with adaptive control and reduced dynamic stability for wide dynamic range of operation. Pairwise coupled hybrid vanadium dioxide-mosfet hvfet oscillators for non-boolean associative computing. Neuro inspired computing with coupled relaxation oscillators. Modeling and analysis of system stability in a distributed power delivery network with embedded digital linear regulators. Modeling and analysis of digital linear dropout regulators with adaptive control for high efficiency under wide dynamic range digital loads. Kulkarni, Yi-Chun Shih, S. Bowman, A Raychowdhury, M. A graphics execution core in 22nm cmos featuring adaptive clocking, selective boosting and state- retentive sleep. Beyond charge based computation: Design space exploration of spin transfer torque based mrams for embedded applications. Pulsed read in spin transfer torque stt memory bitcell for lower read disturb. Spin torque devices in embedded memory: Best paper Award Raychowdhury, Jeong Il Kim, D. Nominated for best paper award Best Paper Award This has been used by researchers world-wide and has been used as the benchmarking tool in the Nanoelectronics Research Initiative NRI Program. Issued and Pending 1. Doyle, Arijit Raychowdhury, R. Gueskens, Arijit Raychowdhury, T. Arijit Raychowdhury, Ali Keshavarzi, J. Thesis, Purdue University Awarded: Chorafas Award and the Best Thesis Award, Invited Talks and Tutorials 1. Spintronics for Embedded Memory: Designing with Subthreshold logic:*

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2: dblp: International Symposium on Low Power Electronics and Design

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Donmez and Andrew C. Singer, "Sequential prediction of individual sequences in the presence of computational errors," Signals, Systems and Computers, 48th Asilomar Conference on, Pacific Grove, CA, , pp. Singer, "Towards a video-capable wireless underwater modem: Doppler tolerant broadband acoustic communication," Underwater Communications and Networking UComms , p 5 pp. Singer, "Statistics gathering converters: Singer, "I want my voice to be heard: Singer, "Broadband Doppler Compensation: Jun Won Choi, T. Riedl, Kyeongyeon Kim; A. Daly, Kyeongyeon Kim, A. IV - IV K. IV - IV J. Shanbhag, and Andrew C. Kozat and Andrew C. Sen Gupta and A. Singer, "Low-Power Turbo equalizer architecture," in Proc. Design and Implementation, pp. Koetter, "Hybrid equalization strategies for iterative equalization and decoding," Proceedings of the International Symposium on Information Theory, Singer, "System and method for broadband doppler compensation," filed Mar. US Patent Number 9,, Janovetz, "Method and apparatus for delayed recursion decoder," U. Patent Number 8,, granted, December 27, Janovetz, "Method and apparatus for delayed recursion decoder," Filed on Jun.

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3: ISLPED ACM/IEEE International Symposium on Low Power Electronics and Design

Low Power Electronics and Design, International Symposium on () Newport Beach, California, USA. Aug. 9, to Aug. 11,

Predictable Scheduling Algorithms and Applications 2nd edn, Liu, Real-Time Systems, Ramos, An optimal algorithm for scheduling soft-aperiodic tasks in fixed-priority preemptive systems, [] Proceedings Real-Time Systems Symposium, p. Silly-chetto, The edl server for scheduling periodic and soft aperiodic tasks with resource constraints. Buttazzo, Scheduling aperiodic tasks in dynamic priority systems, Real-Time Systems, vol. Stankovic, Misconceptions about real-time computing: Silly, The edl server for scheduling periodic and soft aperiodic tasks with resource constraints, The Journal of Real-Time Systems, vol. Hopcroft, The design and analysis of computer algorithms, p. Jackson, Scheduling a production line to minimize maximum tardiness. Research report 43, management science research project, p. Serlin, Efficient aperiodic service under earliest deadline scheduling, Proceedings of the Joint Computer conference, pp. Rosier, Algorithms and complexity concerning the preemptive scheduling of periodic real-time tasks on one processor. Real-Time Systems 2, pp. Baker, Aperiodic servers in a deadline scheduling environment, Real-Time Systems, vol. Sensini, Optimal deadline assignment for scheduling soft aperiodic tasks in hard real-time environments, IEEE Transactions on Software Engineering, vol. Kulkarni, Energy Harvesting Sensor Nodes: Fisher, Towards an autonomous selftuning vibration energy harvesting device for wireless sensor network applications, Journal of Smart Materials and Structures, vol. Worthington, Design and testing of piezoelectric energy harvesting devices for generation of higher electric power for wireless sensor networks, IEEE Sensors, pp. Divan, A scoping study of electric and magnetic field energy harvesting for wireless sensor networks in power system applications, IEEE Energy Conversion Congress and Exposition, pp. Golubovic, Power management and energy harvesting techniques for wireless sensor nodes, 9th International Conference on Telecommunication in Modern Satellite, Cable, and Broadcasting Services, pp. Yeatman, Flexible substrate electrostatic energy harvester, Electronics Letters, vol. Amatucci, Small-scale energy harvesting through thermoelectric, vibration, and radio frequency power conversion, Journal of Applied Physics, vol. Webster, The measurement, instrumentation, and sensors handbook. The electrical engineering handbook series, p. Abbaspour, A practical approach to powering wireless sensor nodes by harvesting energy from heat flow in room temperature, International Congress on Ultra Modern Telecommunications and Control Systems, pp. Li, wind-flutter energy converter for powering wireless sensors. Sensors and Actuators A: Van-schajjk, Harvesting energy from airflow with a michromachined piezoelectric harvester inside a Helmholtz resonator, Journal of Micromechanics and Microengineering, vol. Recent advances and applications, Biosensors and Bioelectronics, vol.

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4: RICHARD B BROWN - Research - Faculty Profile - The University of Utah

Get this from a library! ISLPED' proceedings of the International Symposium on Low Power Electronics and Design, Newport Beach Marriott Hotel, Newport Beach, California, USA, August ,

All Papers T. Arbabian, "Fully packaged millimetre-wave dielectric waveguide with multimodal excitation," *Electronics Letters* - August Microwave Theory and Techniques, M. Lee, "Optical switching based on highspeed phased-array optical beam steering," *Applied Physics Letters* , 92, [Paper] M. Jarrahi, J Danielson and T. Lee, "From Oxymoron to Mainstream: Opportunities and Challenges," *Electroanalysis* 19, pp. Micro- and Nano-Bioengineering, Volume , pp. Verma, Junfeng Xu, T. Dutton, "Lumped, Inductorless Oscillators: How Far Can They Go? Ergun, Ching-Hsiang Cheng, J. Dawson and Thomas H. Ladwig, Zhiping Yu, Thomas H. Lee, and Robert W. Next-generation Arrays for Acoustic Imaging? Dawson, "Power Amplifier Linearization Techniques: Lee, "1-GHz and 2. Boyd, and Thomas H. Lee, Hiran Samavati, Derek K. Shaeffer, Steven Walther, "Method and apparatus for a lateral flux capacitor," U. Boyd and Thomas H. Shaeffer, Steven Walther, "Lateral flux capacitor having fractal-shaped perimeters," U. Lee, "Oscillator Phase Noise: Mohan and Thomas H. Rategh, Hiran Samavati, and Thomas H. Limotyarakis, and Thomas H. Rategh and Thomas H. Rategh, and Thomas H. Nasserbakht, and Thomas H. Patrick Yue and S. Betancourt-Zamora and Thomas H. Ahrens and Thomas H. Maria del Mar Hershenson, Stephen P. Mohan, Hiran Samavati, Hamid R. Patrick Yue, Daniel J. Eddleman, and Thomas H. Lee, "A mW, 0. Horowitz, and Thomas H. Simon Wong and Thomas H. Shaeffer, and Thomas H. Shaeffer and Thomas H. Ahrens, Ali Hajimiri, and Thomas H. Lee From the Publisher: This comprehensive book sets out in detail how to design gigahertz-speed radio-frequency integrated circuits in CMOS technology. Starting with a history of radio to establish a foundation and to differentiate the discrete era from the IC age, the book reviews passive RLC networks, the characteristics of IC components, and transistor models. The design of high-frequency tuned and broadband amplifiers follows, with an emphasis on approximate methods that provide important design insight as a complement to simulation results. Key RF building blocks, such as low-noise amplifiers LNAs , mixers, power amplifiers, high spectral purity oscillators, and frequency synthesizers are studied in detail. The book closes with an examination of transceiver architectures. With over circuit diagrams and illustrations, and many homework problems, this will be an ideal textbook for anyone taking graduate or advanced undergraduate courses in RF electronics, as well as a useful reference for practicing engineers. Planar Microwave Engineering Thomas H. Modern wireless communications hardware is underpinned by RF and microwave design techniques. This insightful book contains a wealth of circuit layouts, design tips, and practical measurement techniques for building and testing practical gigahertz systems. The book covers everything you need to know to design, build, and test a high-frequency circuit. Microstrip components are discussed, including tricks for extracting good performance from cheap materials. Connectors and cables are also described, as are discrete passive components, antennas, low-noise amplifiers, oscillators, and frequency synthesizers. Practical measurement techniques are presented in detail, including the use of network analyzers, sampling oscilloscopes, spectrum analyzers, and noise figure meters. Throughout the focus is practical, and many worked examples and design projects are included. The book is packed with indispensable information for students taking courses on RF or microwave circuits and for practising engineers. Lee Improving the performance of the power amplifier is the most pressing problem facing designers of modern radio-frequency RF transceivers. Linearity and power efficiency of the transmit path are of utmost importance, and the power amplifier has proven to be the bottleneck for both. High linearity enables transmission at the highest data rates for a given channel bandwidth, and power efficiency prolongs battery lifetime in portable units and reduces heat dissipation in high-power transmitters. Cartesian feedback is a power amplifier linearization technique that acts to soften the tradeoff between power efficiency and linearity in power amplifiers. Despite its compelling, fundamental advantages, the technique has not enjoyed widespread acceptance because of certain implementation

difficulties. Feedback Linearization of RF Power Amplifiers introduces new techniques for overcoming the challenges faced by the designer of a Cartesian feedback system. The theory of the new techniques are described and analyzed in detail. The book culminates with the results of the first known fully integrated Cartesian feedback power amplifier system, whose design was enabled by the techniques described. Feedback Linearization of RF Power Amplifiers is a valuable reference work for engineers in the telecommunications industry, industry researchers, academic researchers. Lee The tremendous growth in wireless and mobile communications has placed stringent requirements on channel spacing and phase noise of oscillators. There is a need for a deep understanding of the fundamental mechanisms governing the process by which device, substrate, and supply noise turn into jitter and phase noise. Existing models offer only qualitative insights. The Design of Low Noise Oscillators offers a new time-variant phase noise model. This model is capable of making quantitative predictions of the phase noise and jitter of different types of oscillators. The model also takes into account the effect of cyclostationary noise sources in a natural way. The Design of Low Noise Oscillators will be of interest to both analog and digital circuit as well as RF circuit designers. Schaeffer and Thomas H. Lee The primary goal of this book is to explore techniques for implementing wireless receivers in an inexpensive CMOS technology. Although the techniques developed apply somewhat generally across many classes of receivers, the specific focus of this work is on the Global Positioning System GPS. Of particular interest in the context of this book are embedded GPS applications where a GPS receiver is just one component of a larger system. Widespread proliferation of embedded GPS capability will require receivers that are compact, cheap and low-power. The Design and Implementation of Low-Power CMOS Radio Receivers will be of interest to professional radio engineers, circuit designers, professors and students engaged in integrated radio research and other researchers who work in the radio field. New frequency bands are allocated and new standards are being developed to accommodate higher data rates. Frequency synthesizers are one of the main building blocks of wireless transceivers. The high frequency digital frequency dividers in a phase-locked loop PLL based frequency synthesizer are among the most challenging blocks to design and usually account for a large percentage of the synthesizer total power dissipation. The successful design and integration of a high frequency PLL demands a comprehensive understanding of wireless systems, RF circuits, and loop stability issues. Additionally, the book investigates different analog and digital frequency division techniques and introduces injection-locked frequency dividers ILFDs as an alternative for conventional frequency dividers. This book will be of interest to RF and high-speed analog circuit designers and students as well as wireless engineers.

5: Nanoelectronics Research Laboratory - Purdue University

The International Symposium on Low Power Electronics and Design (ISLPED) is the premier forum for presentation of innovative research in all aspects of low power electronics and design, ranging from process technologies and analog/digital circuits, simulation and synthesis tools, system-level design and optimization, to system software and applications.

Full Text Badeau, R. In particular, she is working on developing new approaches to reduce power dissipation and improve reliability in high-performance processors, including embedded multiprocessors and nanocomputing systems. In addition, she is working on methods to improve the accuracy of timing analyzers used for verifying circuits designs. Her recent interests have led her to consider robotic system design, and how these systems can benefit from energy-efficient design techniques. Research Statement The following is a summary of some of Dr. Energy Efficient Transactional Memory Techniques for Embedded Architectures Because many embedded devices run on batteries, energy efficiency is perhaps the single most important criterion for evaluating hardware and software effectiveness in embedded devices. In this project, we are developing energy-efficient implementations using transactional memory on an embedded platform. Most recently, we have explored how the transactional memory framework can be used to support error recovery caused by aggressive use of voltage over-scaling. We also explored implementing more effect memory allocation methods that may be used on top of transactional memory. This work is being supported by NSF. PIM modules are best viewed as accelerators, providing powerful yet specialized enhancements to existing systems running existing software. Modeling Thermal Noise Effects in Nanoscale Circuits and Designing Noise Tolerant Circuits Electrical noise will play an increasingly critical role in future nanoscale CMOS circuit operation characterized by lower supply voltages and smaller device sizes. Both of these downscaling approaches reduce the margin of immunity to thermal noise, alpha particle strikes, and threshold voltage variations. This project investigates noise effects in electronic circuits. The project also explores new approaches for noise-immune circuit design. Robust Robot Perception The goal of this project is to implement new algorithms in hardware and software to support accurate and energy-efficient robot perception. In particular, perception is a critical capability to enable purposeful goal-directed manipulation for autonomous robots. Object detection and recognition techniques used for robot perception have greatly improved over the past few years. However, these improvements have often come at the expense of significant energy consumption and computational inefficiency. In order to achieve real-time energy-efficient computing for these autonomous robots, we need to rethink not just the perception algorithms themselves, but also how they are implemented in hardware and the computational resources allocated to their execution. Building Design Exploration and Analysis Tool for Vision-based Robotic Systems The goal of this project is to implement a modeling framework for the development of specialized system-on-chip SoC modules for lightweight autonomous sensor-based robotic systems. Such a tool will be able to guide in the design of architectures for general purpose processors and graphics processors as well as dedicated or reconfigurable hardware modules optimized to meet the specific performance and system requirements of the robotic system. However, they are also difficult to test and assemble, leading to yield issues. This project investigates the use of unused resources within the 3D stack to replace defective portions of a die. In particular, we are exploring techniques for error detection, different levels of granularity for replacement, and optimal use of reconfigurable logic to repair the errors. This work has received support from NSF. Funded Research Current Grants: Bahar PI , A. Bahar PI , S. Bahar PI and T. Reda PI and R. Bahar PI , M. Herlihy co-PI , and T. Moreschet co-PI, Swarthmore College. Dworak PI , R. Bahar co-PI , and K. Nepal co-PI, Bucknell University. Bahar PI , J. Exploring Nanodevices for Probabilistic Computing Architectures. Designs for the Future. Microsoft Grant for Teaching and Research. The goal of this grant was to become familiar with Windows-based real-time operating systems by using it for operating a life-like robotic head for speech recognition experiments.

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6: SMIRc Lab - Publications

Welcome to the International Symposium on Low Power Electronics and Design (ISLPED)! This year ISLPED moves back to California after a very successful year in Asia. ISLPED started as a workshop on low-power design in and is in its tenth year. This year we received papers in all aspects of.

7: Andrew Singer :: ECE ILLINOIS

The following topics are dealt with: low power electronics; low power design.

8: Publications - Cho's Circuits & Systems Lab

Proceedings of the International Symposium on Low Power Electronics and Design, ISLPED , San Francisco Airport, CA, USA, August 08 - 10,

9: Publications "Suh Research Group

Proceedings of the International Symposium on Low Power Electronics and Design. Wydawca. IEEE. Rocznik. ZawartoÅ− czasopisma.

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V. 1. Acid rain bacteria The trauma of Kashmir Death be not proud book by john gunther Your medical records digitized Barrier containment technologies for environmental remediation applications Dont I Know You? Sea otters and nearshore benthic communities S.A. Levin Nft aquaponics system design Use of Fort McHenry Military Reservation. African Americans Respond to Conservatism Fee coding standard. Dermot OBrien; Or The Taking Of Tredagh Playing the odds nora roberts The Mysterious Island (Secrets of Droon, 3) Microwave cooking recipes in tamil La Pollera Traje Nacional de Panama Eight modern masterpieces Author and critic Stonebrook Cottage The house on foster hill Suicide and life threatening behavior Bonding with baby. Everything You Can Do With Your Apple IIE At midnight on the 31st of March From danger to danger An autumn reverie Commentary on Books I and II. Monitoring Elder Compliance and Response Lasting summer kailin gow Bird with a broken wing The elements of style william strunk jr First Steps Shapes Fitness the dynamic gardening way Manual of Sclerotherapy Lighten up on the way to enlightenment. Home folks old-fashioned slow-cooker recipes. Corriendo bajo la lluvia Running Back Through the Rain Employee training and development noe 6th edition Nonstop to London Research and monitoring plan for the kiwi sanctuaries