



Dallas Section

Direction

Volume 50, Number 3

November 2006

Executive Committee

Chair

Dr. Kaijian Shi (972) 776-7490

Kaijian.Shi@synopsys.com

Vice Chair

Dr. Gerry Burnham (972) 883-6755

Administrative Chair

Robert Shapiro (214) 448-4818

Treasurer

Dr. Cornelius van Rensburg (972) 761-7970

Activities Chair

Mr. William Lumpkins (214) 543-0858

Secretary

Dr. Y. Alp Aslandogan (817) 272-3334

Past Chair

Dane Watson (214) 473-6771

Committee Chairpersons

Awards Chair

Dr. Gerry Burnham (972) 883-6755

Membership Chair

Vijay Angerai (972) 244-5148

Student Activities Chair

Dr. Raphael S. Grayfer (972) 612-4622

PACE Chair

Maura Schreier-Fleming (972) 380-0200

Industrial Relationship Officer

Dr. Don Shaver (214) 480-4349

Graduates of the Last Decade (GOLD) Chair

Atul A. Aranke (817) 271-6559

Government Relations

Ed Carrales (903) 457-6065

Direction Editor

Biron Timothy Pickens (972) 824-8284

WWW Coordinator

Robert Shapiro (214) 448-4818

Life Member Affiliate Officer

Bob Bishop (940) 898-2166

From the Chair

by Kaijian Shi

Holiday spirits are going strong as we approaching to the end of the year, looking forward to Thanksgiving, Christmas and New Year. After a year of hard work, it is time to take time to be with your family and friends to make most out of the holidays and to enjoy your happy life which we work hard to build and keep.



Looking back, we have made great accomplishments in 2006. We have formed four new chapters (Education, Power Electronics, Engineering in Medicine and Biology and Computer Intelligence) and re-activated Industrial Application chapter. Now, we have 20 active chapters! We also have the full scale section officers including a newly created Industrial Relation Officer. With that, IEEE Dallas has made a record growth thanks to all of you: our officers and members.

To help our members, we organized a senior member drive which helped over 70 members being upgraded to senior members, thanks to our Membership Chair Vijay Angerai and all those officers and senior members who came to help. We also held two PACE seminars "Fine Tune Your People Skills and Be More Successful at Work" and "SoC Next Decade", thanks to Maura Schreier-Fleming and Don Shaver. The section monthly seminars were going well too, thanks to Will Lumpkin.

The professional activities in IEEE Dallas section and chapters have reached a record high. We organized four conferences including "DCAS workshop", "EMC Colloquium", "Wireless Multimedia Symposium", and "Emerge Technology Conference", thanks to the conference organization teams for their outstanding work! We also technical sponsored two international conferences "Parallel and Distributed Computing and System" and "The Sixth Annual Emerging Information Technology Conference" held in Dallas, and co-sponsored an IEEE Distinguished Lecture "Nonlinear Output Regulation: Theory and Application" held at UTA. We continued our strong support and sponsorship in "Future City" competition and "National Engineer Week". In our reaching-out effort, Bob Shapiro (Administrative Chair) gave a speech on IEEE's Code of Ethics to students at DeVry University.

Our efforts and accomplishments have been recognized by IEEE Region 5. We have won four of the fifteen Region 5 awards! including "Outstanding Large Section Award" to Dallas section, "Outstanding Large Student Branch Award" to UT Dallas, "Outstanding Student Member Award" to John Heatherly, and "Outstanding Large Company Award" to Texas Instruments nominated by IEEE Dallas. UTA robotic team also won the 3rd place in IEEE Region 5 Robotic Competition.

This has been indeed a great year. All the successes and accomplishments are due to our outstanding section and chapter officers and all of you who have been supporting and participating in IEEE activities in Dallas. Thank you!

P.S. Dallas Section is co-sponsoring an IEEE Distinguished Lecture "Nonlinear Output Regulation: Theory and Application" given by IEEE Fellow Prof. Jie Huang and organized by Prof. Lewis at UTA on December 7 at UTA. http://arri.uta.edu/acs/VisitingLectures/JieHuang06.doc

Finally, we'd like to hear your comments on our services in 2006 and your suggestions on IEEE Dallas in 2007.

DALLAS SECTION NOVEMBER 2006 MEETING

The IEEE Dallas Section meeting is held on Tuesday, November 14, 2006 from 7 pm to 8 pm and we are pleased to have Dr Robert Marks this month and he will present:

"Computational Intelligence: Getting Smarter"

For additional info contact Dallas IEEE Section Activities Chair Will Lumpkins at (214) 543-0858

Aerospace And Electronics Systems (AES)

Chair Tim D. Reichard (972) 205-8411

Antennas & Propagation (AP)

Chair Dr. Choon Sae Lee (214) 768-3257

Circuits & Systems (CAS)

Chair Liming XIU (214) 480-4930

Communications & Technology (CVT)

Chair Steven Simmons (972)250-1289

Computer (C)

Chair Don Shaver (214) 480-4349

Consultants Network (CN)

Chair Jerry Bylander (903) 893-6437

Consumer Electronics (CE)

Chair Sam Broyles (214) 480-3232

Computational Intelligence (CI)

Chair Robert J. Marks II (254) 710-7302

Education (E)

Chair William M. Riley (214) 478-4065

Electromagnetic Compatibility (EMC)

Chair William E. Paschetag (972) 530-7853

Electron Devices (ED)

Chair Zeynep Celik-Butler (817) 272-1309

Engineering Management (EM)

Chair Bob Bishop (903) 482-5320

Engineering in Medicine and Biology (EMBS)

Chair Shekar Rao (214) 480-1756

Laser & Electro-Optics (LEO)

Chair Duncan MacFarlane (972) 883-2165

Microwave Theory & Techniques (MTT)

Chair Robert Eye (972) 994-5818

Power Electronics (PELS)

Chair Don Marabell (469) 330-9100 x230

Reliability (RL)

Chair Lon Chase (972) 952-3138

Signal Processing (SP)

Chair Nasser Kehtarnavaz (972) 883-6838

Solid State Circuits (SSC)

Chair Xiaopeng Li (214)480-4175

Aerospace & Electronic Systems

"The Cell Broadband Engine – Applications, Performance and Architecture"

Date: Tuesday, November 14th, 2006
Refreshments 6:30 p.m. / Program 7:00 p.m.

Cover: All our society meetings are free of charge, and open to all interested in attending. Our programs start at 6:30 PM with a social, networking, snack and refreshment period, followed by the program at 7:00 PM. Please mark your calendars and be sure to attend our very informative programs.

Place: Holiday Inn Select, 1655 North Central Expressway, Richardson, TX

Speaker: John Brickman, Director, Performance Computing Group, Mercury Computer Systems

Program Summary: Architects of high-performance processors which power today's computers are at a crossroads. Approaches applied over the past two decades for increasing performance are now failing to deliver. The basic design of these general-purpose processors has not changed from the traditional von Neuman model, which can be described as a sequential instruction stream operating on data from a single memory hierarchy.

Three primary techniques have been applied to this model to accelerate performance. Instruction-level parallelism is achieved by implementing superscalar cores capable of multiple instructions per clock cycle and out-of-order execution. Higher clock frequencies are achieved by pipelining less complex instructions. Finally, data-level parallelism is achieved by SIMD vector processing like that found in PowerPC AltiVec or Intel SSE.

The architecture of the Cell Broadband Engine is quite different. The Cell processor achieves very high levels of instruction and data parallelism by employing a number of independent "synergistic processing elements" or SPEs along with a traditional "Power Processing Element" or PPE. This architecture resembles a heterogeneous, distributed-memory multicomputer on a single die. Mercury Computer Systems has more than a decade of experience designing and delivering heterogeneous multicomputer hardware and software, and has leveraged this experience into many of their Cell-based products.

John Brickman is the director and business manager of the Performance Computing Group at Mercury Computer Systems. John has been with Mercury for nine years and has held positions in system applications engineering and engineering management before assuming his current role. Before joining Mercury, John worked as an embedded systems development engineer for companies such as E-Systems, Raytheon and DNA Enterprises, and has a total of 18 years experience in this field.

Visit the IEEE AESS Dallas Chapter web site at
<http://ewh.ieee.org/r5/dallas/aes>

For information, please contact Tim D. Reichard (972) 344-7512
Tim_D_Reichard@raytheon.com, Boyd Gallatin (903) 457-6689
Boyd.Gallatin@L-3Com.com, or Mark Gober (903) 457-5122 Mark.D.Gober@L-3Com.com

Antennas & Propagation

For more information, please contact:
Dr. Choon Sae Lee, AP Chairman, 214-768-3257, cslee@engr.smu.edu
Anand Lakshmanan, AP Secretary, 469-499-6789, anand.em@gmail.com

Circuits & Systems

Please visit our Website listed below for latest updates, abstract of talk and seminar details <http://ewh.ieee.org/soc/cas/dallas/>

Communication & Vehicular Technology

"A Nanotechnology-based System for Highly-parallel, Ultra-dense Data Storage"

Date: Tuesday, November 28th, 2006
Luncheon 11:00 a.m./Program 12:00 p.m. –1:00 p.m.

Cover: \$5 for IEEE Members, \$10 for non-IEEE Members/Guests (includes lunch)

Place: Holiday Inn Select, 1655 North Central Expressway, Richardson, TX

Speaker: Giovanni Cherubini, Research Staff Member, IBM Zurich Research Laboratory

Program Summary: Ultrahigh storage densities of up to 1 Tb/in² or more can be achieved by using atomic force microscope (AFM) techniques to write, read back, and erase data in very thin polymer films. The thermomechanical scanning-probe-based data-storage concept combines ultrahigh density, small form factor, and high data rates. High data rates are achieved by parallel operation of large 2D arrays with thousands of micronanomechanical cantilevers/tips that can be batch-fabricated by silicon-surface micromachining techniques. The very high precision required to navigate the AFM probes over the storage medium is achieved by MEMS-based x/y actuators that position the large arrays of probe tips for parallel write/read/erase operations. In this presentation the fundamental elements of a probe-storage system will be discussed, and various system aspects, including read-back channel characteristics and control architectures for the navigation of the probe array over the storage medium, will be addressed.

Giovanni Cherubini received the Dr. Ing. degree in EE (summa cum laude) from the University of Padova, Italy, in 1981, and M.S. and Ph.D. degrees in EE from the University of California, San Diego, in 1984 and 1986, respectively. In 1984 he received a scholarship from M/A-COM Linkabit, San Diego, for his work on the synchronization of spread-spectrum systems. Since 1987 he has been with the IBM Zurich Research Laboratory, Rüschlikon, Switzerland. His research interests comprise high-speed data transmission and data-storage systems. He participated and contributed to the work of several standards bodies, including IEEE802, ATM Forum, Committee T1, and ITU-T. From 1995 to 1996 he was co-editor of the 100BASE-T2 Standard for Fast Ethernet transmission over voice-grade cables. More recently, he contributed to the realization of the first fully functional atomic force microscope (AFM)-based data-storage prototype system, including signal shaping, detection, and synchronization functions for the read channel, and micro-scanner control methods for fast positioning of read/write AFM probes over the storage medium. Dr. Cherubini was Editor of the *IEEE Transactions on Communications* in the area of CDMA Systems from 1999 to 2004. He was Guest Editor of the Special Issues of the *IEEE Journal on Selected Areas in Communications* on Copper Wire Access Technologies for High Performance Networks, and on Multiuser Detection Techniques with Application to Wired and Wireless Communications Systems. In 2003 he was a co-recipient of the Leonard G. Abraham Prize Paper Award. He holds over 20 patents (granted and pending applications) in the areas of data-transmission and data-recording technologies, has co-authored *Algorithms for Communications Systems and their Applications*, is a Fellow of the IEEE, and a Distinguished Lecturer of the IEEE Communications Society.

For further information contact Steve Simmons at: sms_1961@yahoo.com.

Meeting details for Communication & Vehicular Technology Dallas Chapter can be found on their web site. Visit <http://www.cvt-dallas.org/>

Computer

Remember to visit <http://chapters.computer.org/dallas/> for updates, to download presentations, or view upcoming calendar!

Consultants Network

"How to Manage and Promote Your Business Career and Move Forward"

Date: Monday, November 13th, 2006,
Social/Networking/Dinner 6:15 pm
Program 6:45 pm.

Cover: \$5 for IEEE Members, \$15 for non-IEEE Members/Guests (includes light supper buffet)

Place: Holiday Inn Select, 1655 North Central Expressway, Richardson, TX

Speaker: Valerie Warm-Pelan, Integrated Focus

Program Summary: This program discusses the four areas that need to be integrated to propel a business career and reputation forward. The presentation also covers tools and metrics to develop and design a business career roadmap.

Valerie Pelan started Executive and Career Coaching after successful management careers at AT&T and EDS. Valerie works with business leaders, professionals and managers to improve their execution, personal effectiveness, and productivity. She works with teams and organization using group coaching techniques encourage team cohesiveness.

Valerie's business background in strategic marketing, sales, and product management gives her a unique perspective on the challenges facing leaders and their teams to achieve results in today's impersonal, highly competitive, global and fast moving business environment. Valerie is also a contributing columnist and motivational speaker on coaching topics.

Coaching focuses on the specific developmental areas of the client; research indicates coaching improves skills training six-fold and that coaching improves business results

after six to nine months. The coaching objectives are driven by the client's desire to leverage their strengths and improve areas that positively impact their effectiveness. Coaching workshops and training concentrate on business results for the individual and teams. Team coaching energizes a team and uncovers hidden obstacles that may impact team performance to the stated objectives.

Clients say that Valerie's coaching made them "more confident to implement critical decisions, such as terminating an employee, and to take positive steps to increase sales". Another client reported, "The coaching sessions have helped to focus them on being more prepared for critical client: Valerie has forced me to clarify my thinking and to "think ahead".

Integrated Focus is a certified Women Owned Business. Valerie is a member of the International Coaching Federation. Valerie is a graduate of the University of Texas Dallas Graduate School of management Graduate Coaching Certificate Program and is an Executive coach for University of Texas Dallas Executive MBA program. Valerie has an MBA in Economics from Lubin Graduate School of Business at Pace University.

For more information contact: Maura Schreier-FLeming 972 380 0200 or info@bestatselling.com or visit Chapter website at <http://ieeedallas.org>

Consumer Electronics

"Essential Technologies for Consumer Electronics Test"

Date: Tuesday, November 14th, 2006
Lunch/Chapter business: 11:15 am – 11:45 am
Program: 11:45 am - 12:45 PM

Place: Holiday Inn Select, 1655 North Central Expressway, Richardson, TX

Speaker: Robert Berger, National Instruments Applications Engineer

For additional information, please contact Dr. Baowei Ji at (972) 761-7167 baowei.ji@samsung.com, LaReil Nielsen lareil@airmail.net, or Sam Broyles at (214) 480-3232 sam.broyles@ti.com

To download presentations, view upcoming calendar, etc. check out our web site at: <http://www.DallasCES.org>

Electromagnetic Compatibility

"Addressing EMI Issues During the PCB Design Process"

Date: Tuesday, November 21st, 2006
Refreshments & Networking: 6:00 PM / Program : 7:00 PM
RSVP to Bill Paschetag, bpaschetag@IEEE.org

Place: Holiday Inn Select, Richardson
1655 N. Central Expressway (US 75), Richardson, TX 75080

Speaker: Mr. Tony Dunbar, Applications Engineer Consultant, Mentor Graphics, Dallas

Program Summary: In order to comply with the various EMC regulations around the world, most companies that design electronic systems implement rules aimed at ensuring the physical aspects of the printed circuit board do not act as EMI sources. Some rules might be considered as standard practice but different restrictions need to be applied based on varying criteria, as stipulated by the company EMC Engineer. The problem is how to apply the rules and check for compliance on a consistent, accurate and productive basis. The often-employed visual scan by the EMC or design engineer can easily fail to meet these standards. A design rule check (DRC) approach is presented, which provides for the EMC Engineer's expertise to be "written in" to the rules and applied on a consistent basis with much greater accuracy and productivity than a visual inspection of the CAD layout of the board. Additionally, the EMC Engineer's advice on how to fix violations of the DRCs can be included.

Tony Dunbar is an Applications Engineer Consultant with Mentor Graphics Corporation. He holds an Honors B.S. degree in Electrical Engineering from the University of Salford, Manchester, England. Including 10 years at Mentor Graphics, he has 18 years experience in signal integrity and EMC applications with Interconnectix and Zuken-Redac, formerly Racal-Redac, in the USA and Europe. In his early career, he was a Design Engineer in the defense electronics industry in the U.K. Tony is a fervent soccer fan and coach and a life-long supporter of his hometown, English Premier League team, BlackburnRovers.

For more information, visit the Dallas IEEE/EMC Chapter Website (<http://www.DallasEMC.org>), or contact Bill Paschetag, bpaschetag@ieee.org

Electron Devices

Fall 2006 DISTINGUISHED SPEAKER SERIES ***MICRO & NANO-SYSTEMS***

Application of Amorphous Silicon Thin Films in Uncooled Infrared Detection Technology

A.J. Syllaios, Ph.D.
L-3 Communications Infrared Products, Dallas, TX
November 14, 2006 3:30 – 5:00 PM Nedderman Hall 105

Nanoscale Phonon Engineering: From the Concept to Device Applications

Alexander Balandin, Ph.D., Professor, Electrical Engineering
University of California – Riverside, Riverside, CA
November 21, 2006 3:30 – 5:00 PM Nedderman Hall 105

An Electrothermally Actuated MEMS Microengine Capable of Precise Bi-Directional Motion

Ed Kolesar, Ph.D. P.E., Professor, Department of Engineering
Texas Christian University, Fort Worth, TX
November 28, 2006 3:30 – 5:00 PM Nedderman Hall 105

Complementary Tunnel Transistors vs. Complementary CMOS: Lowering Transistor Power Dissipation

Alan Seabaugh, Ph.D., Professor, Electrical Engineering
University of Notre Dame, Notre Dame, IN
November 30, 2006 3:30 – 5:00 PM Nedderman Hall 105

More information can be found at:

<http://ee.uta.edu/Online/cbutler/MEMSWebpage/SpeakersFall2006.htm>

RSVP to Susan Stoltje at stoltje@uta.edu or 817-272-1536. This series is in conjunction with EE 5344 – Introduction to MEMS, which is offered by UTA. Information about this course and microsensor activities at UTA can be obtained from Professor Z. Celik-Butler at zbutler@uta.edu.

For program information please contact Zeynep Celik-Butler, (817) 272-1309, zbutler@uta.edu

Engineering Management

"Lessons Learned in Engineering Management, based on industry experience."

Date: Friday, November 10th, 2006
Lunch/Chapter Business: 11:30 AM

Place: Holiday Inn Select, Richardson
1655 N. Central Expressway (US 75), Richardson, TX 75080

Speakers: Mr. Patrick Hicks, Engineering Management and Information Systems Department at the SMU School of Engineering.

For program information and to RSVP, please contact Bob Bishop, 903.482.5320 or r_bishop@ieee.org

Industry Applications

For further info contact Dallas IEEE Section Activities Chair Will Lumpkins at (214) 543-0858.
Please send RSVP to xillia@ieee.org

Lasers & Electro-Optics

Details for IEEE-LEOS Dallas Chapter seminar series are listed on our website at <http://www.engr.smu.edu/leos/>

Microwave Theory & Techniques

For additional information contact Chapter Vice Chair Larry Zhang at (972) 948-4980.

Power Engineering [Fort Worth, TX]

For Program information please contact Julio Chavarria at jchavar1@txued.com, or telephone number 214-743-6681.

Reliability

" Software Reliability Facts and Fiction "

Date: Tuesday, November 21st, 2006
Program: 6:30 p.m.

Place: UTD, Waterview Science and Technology Center (WSTC Bldg), Room CSEPI, Richardson, TX

Speaker: Ann Marie Neufelder, SoftRel, LLC

Program Summary: In the last 30 years, there has been more fiction concerning software engineering and reliability than there has been fact. Many practices executed today are based on fiction that has been repeated so many times that it has become fact despite little or no supporting evidence. Fiction costs money and wastes time. This presentation will reveal just a few of the many facts uncovered by years of quantitative benchmarking of more than 600 software development characteristics at more than 90 organizations. You will see how to apply the facts and avoid the fiction to optimize development cost, time and latent defects.

Ann Marie Neufelder is the director of SoftRel, LLC. She has been applying software reliability on real world applications for more than 20 years. She has measured more than 600 software characteristics at more than 90 organizations in order to determine what's important and what's not. Her research has resulted in a software reliability model that not only predicts defect density but also predicts cost effective alternatives for reducing defects. Ann Marie has taught software reliability to more than 2000 people. She has published a hardback book on the subject as well as a military guidebook. Ann Marie is a 1983 graduate of Georgia Tech and resides in Lewisville, TX with her husband Tom and daughter Rachel.

For Program information please contact please contact Lon Chase (972) 952-3138.

Signal Processing

"Cooperative Communication where Network meets the Channel"

Date: Wednesday, November 8th, 2006

Cover: All our chapter meetings are free of charge and open to all.

Place: UTD, Engineering Building South, Room ECSS 2.203

Speaker: Professor Behnaam Aazhang, Chair of Department of Electrical and Computer Engineering and Director of Center for Multimedia Communications, Rice University

Program Summary: Within the last ten years, there has been a cultural shift from wired landlocked connectivity to pervasive wireless information access. Most mobile devices are now equipped with some form of embedded wireless radio. The market demands for high data rates and increased battery longevity have put tremendous pressure on all aspects of wireless system design. To meet the challenges of next generation wireless system, we need fundamentally new methods to exploit all available dimensions of communication channels as well as network.

Over the last few years, our research group at Rice has focused on emerging systems and network level techniques to increase spectral and power efficiency of communication systems, and extend coverage of wireless networks. The cooperative communication paradigm pools distributed resources of different nodes, such that the nodes act like a collaborative system instead of greedy adversarial participants. In this talk, I will first introduce Rice's Electrical and Computer Engineering Department, and then will talk briefly about various research activities in the Center for Multimedia Communication, and finally I will present the cooperative communication methodology and discuss its merits and challenges. The approach will be information theoretic and will consider coding, channel state information, and feedback. I will conclude by presenting our research and development plans to demonstrate feasibility of cooperation in the context of a scalable experimental wireless system for mobile broadband Internet.

Behnaam Aazhang received his PhD in Electrical and Computer Engineering from University of Illinois at Urbana-Champaign in 1986. He is the J.S. Abercrombie Professor, Chair of the Department of Electrical and Computer Engineering, and also the Director of Center for Multimedia Communications at Rice University. His research

interests are in the areas of communication theory, information theory, and their applications with emphasis on multiple access communications, cellular mobile radio communications, and wireless communication networks. He is a distinguished lecturer of IEEE Communication Society and has received numerous awards for his contributions. He has been listed in the Thomson-ISI Highly Cited Researchers and has been keynote and plenary speaker of several conferences. He is currently serving as the general chair of the 2006 Communication Theory Workshop, Dorado, Puerto Rico. Dr. Aazhang is a Fellow of IEEE.

"Genomic Signal Processing: The Key to Systems Medicine"

Date: Thursday, November 16th, 2006

Cover: All our chapter meetings are free of charge and open to all.

Place: UTD, Engineering Building South, ECSS 2.102 (TI Auditorium)

Speaker: Professor Edward Dougherty, Director of Genomic Signal Processing Lab at Texas A&M University, and Director of Computational Biology Division of Translational Genomic Research Institute in Phoenix

Program Summary: Two terms now in use should awaken electrical engineers to the major role they have to play in the life sciences: *systems biology* and *systems medicine*. Systems biology involves understanding the manner in which the parts of an organism interact in complex networks, and systems medicine is the application of systems biology to medicine. Genomics, a key driver of systems biology, involves the study of large sets of genes and proteins, with the goal of understanding systems, not simply components. In this vein, Genomic Signal Processing (GSP) has been defined as *the analysis, processing, and use of genomic signals for gaining biological knowledge and the translation of that knowledge into systems-based applications*. A major goal of translational genomics is to discover families of genes whose products (messenger RNA and protein) can be used to classify disease, thereby leading to molecular-based diagnosis and prognosis. A second major goal is to characterize genetic regulation, and its effects on cellular behavior and function, thereby leading to a functional understanding of disease and the development of systems-based medical solutions. GSP requires the development and use of novel models and methods specifically designed to capture the biological mechanisms of operation and distributed regulation at work within the cell. In particular, it is necessary to develop nonlinear dynamical models that adequately represent genomic regulation and to develop mathematically grounded diagnostic and therapeutic tools based on these models. This talk discusses the salient issues of GSP, their relevance to translational genomics, and some of the key obstacles that must be overcome.

Edward R. Dougherty is a Professor in the Department of Electrical and Computer Engineering at Texas A&M University in College Station, TX, Director of the Genomic Signal Processing Laboratory at Texas A&M University, Director of the Computational Biology Division of the Translational Genomics Research Institute in Phoenix, AZ, and Adjunct Professor in the Department of Pathology of the University of Texas M. D. Anderson Cancer Center. He holds a Ph.D. in mathematics from Rutgers University and an M.S. in Computer Science from Stevens Institute of Technology. He is author of twelve books, editor of five others, and author of two hundred journal papers. He is an SPIE fellow, is a recipient of the SPIE President's Award, and has served as editor of the Journal of Electronic Imaging. Prof. Dougherty has contributed extensively to the statistical design of nonlinear operators for image processing and the consequent application of pattern recognition theory to nonlinear image processing. His current research is focused in genomic signal processing, with the central goal being to model genomic regulatory mechanisms for the purposes of diagnosis and therapy.

For Abstracts and directions to UTD, please see the chapter website at <http://www.utdallas.edu/~kehtar/iee-sp>

Solid State Circuits

For Program information please contact Chapter Chair.



Announcements



The Dallas Section of the **Institute of Electrical and Electronic Engineers (IEEE)** for the benefit of its members publishes **Direction** monthly from September through May. Articles and information for publication should be submitted to: Biron Pickens, Editor, 5015 Moss Point Rd., Dallas, TX 75232, Phone (972) 824-8284, Fax (972) 263-6710, Email: drbtimothy@sbcglobal.net. Special announcements must first be submitted to Bob Shapiro, Administrative Chairman, Phone (214) 448-4818, Email: rcshapiro@comcast.net, and will be published on a space-available basis. Deadline for submission of materials is no later than the first of the month prior to the month of publication.

Advertising: **Direction** is distributed to approximately 7,200 members in the Greater Dallas area. Camera-ready copy must be submitted by the first of the month prior to the month of publication to the Editor at the above address.

Invoicing and/or contractual agreements for advertising are administered by Biron Pickens, Editor, and Gerry Burnham, Administrative Chairman. All ad insertions must be cleared through Biron Pickens or Dr. Gerry Burnham before being submitted for publication. Advertising rates are as follows:

	Per Insertion	
Full Page	\$800.00	Quarter Page \$200.00
Half Page	\$400.00	Bus. Card \$120.00

International Joint Conferences on Computer, Information and Systems Sciences and Engineering

(CIS²E 06)

<http://www.cisse2006.org>



December 4th – December 14th, 2006

Technically Co-sponsored by:

Institute of Electrical & Electronics
Engineers (IEEE)

University of Bridgeport



Chairpersons

Prof. Toshio Fukuda

Depts. of Micro System Engineering,
Mechano-Infomatics & Systems

Nagoya University

Furo-cho, Chikusa-ku

Nagoya 464-8603, Japan

Phone: +81-52-789-4478

Fax: +81-52-789-3115

fukuda@mein.nagoya-u.ac.jp

<http://www.mein.nagoya-u.ac.jp/staff/fukuda-e.html>

Prof. Tarek Sobh

Vice Provost for Graduate Studies &
Research

Dean, School of Engineering

University of Bridgeport

221 University Avenue

Bridgeport, CT 06604, USA

Phone: +1 (203) 576-4116

Fax: +1 (203) 576-4766

sobh@bridgeport.edu

<http://www.bridgeport.edu/~sobh>

Prof. Khaled Elleithy

Associate Dean, School of Engineering
Department of Comp Sc & Eng.

University of Bridgeport

221 University Avenue

Bridgeport, CT 06604, USA

Phone: +1 (203) 576-4703

Fax: +1 (203) 576-4766

elleithy@bridgeport.edu

<http://www.bridgeport.edu/~elleithy>

Main Theme

CISSE 06 provides a **virtual** forum for presentation and discussion of the state-of-the-art research on Engineering Education, Instructional Technology, Assessment and E-learning. The virtual conference will be conducted through the Internet using web-conferencing tools, made available by the conference. Authors will be presenting their PowerPoint, audio or video presentations using web-conferencing tools without the need for travel. Conference sessions will be broadcast to all the conference participants, where session participants can interact with the presenter during the presentation and (or) during the Q&A slot that follows the presentation. This international conference will be held entirely on-line. The accepted and presented papers will be made available after the conference both on a CD and as a book publication. Conference participants - authors, presenters and attendees - only need an internet connection and sound available on their computers in order to be able to contribute and participate in this international ground-breaking conference. The on-line structure of this high-quality event will allow academic professionals and industry participants to contribute work and attend world-class technical presentations based on rigorously refereed submissions, live, without the need for investing significant travel funds or time out of the office. Potential non-author conference attendees who cannot make the on-line conference dates are encouraged to register, as the entire joint conferences will be archived for future viewing.

CISSE 2006 is the second conference of the CISSE series of e-conferences. CISSE 2005 (www.cisse2005.org) was the World's first Engineering/Computing and Systems Research E-Conference. CISSE 2005 was the first high-caliber Research Conference in the world to be completely conducted online in real-time via the internet. CISSE 2005 received 255 research paper submissions and the final program included 140 accepted papers, from more than 45 countries. The concept and format of CISSE 2005 were very exciting and ground-breaking. The PowerPoint presentations, final paper manuscripts and time schedule for live presentations over the web had been available for 3 weeks prior to the start of the conference for all registrants, so they could choose the presentations they want to attend and think about questions that they might want to ask. The live audio presentations were also recorded and were part of the permanent CISSE archive, which also included all power point presentations and papers. [Springer](#), the official publisher for CISSE, published the 2005 proceedings in 2 books. [[Book 1 \(Flyer\)](#) and [Book 2 \(Flyer\)](#)]

The CISSE conference audio room provided superb audio even over low speed internet connections, the ability to display PowerPoint presentations, and cross-platform compatibility (the conferencing software runs on Windows, Mac, and any other operating system that supports Java). In addition, the conferencing system allowed for an unlimited number of participants, which in turn granted us the opportunity to allow all CISSE participants to attend all presentations, as opposed to limiting the number of available seats for each session.

CISSE 2006 is composed of the following e-conferences:

International Conference on Telecommunications and Networking (TeNe 06): <http://www.cisse2006.org/tena.aspx>

International Conference on Industrial Electronics, Technology & Automation (IETA 06): <http://www.cisse2006.org/ieta.aspx>

International Conference on Systems, Computing Sciences & Software Engineering (SCSS 06): <http://www.cisse2006.org/scss.aspx>

International Conference on Engineering Education, Instructional Technology, Assessment & E-learning (EIAE 06): <http://www.cisse2006.org/eiae.aspx>

Paper Submission

Prospective authors are invited to submit full papers electronically in Microsoft Word format through the website of the individual conferences at <http://www.cisse2006.org>. Accepted papers must be presented in the virtual conference by one of the authors. To submit your paper, visit <http://www.cisse2006.org/authors/submit.aspx>

Paper submission Deadline:	October 13 th , 2006
Notification of Acceptance:	November 7 th , 2006
Final Manuscript and Registration:	November 24 th , 2006