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IEEE Dallas Section: Direction

December 2008

Volume 52, Number 4

From the Chair

By Robert Shapiro

Hello IEEE Dallas Section Colleagues,

Well, now that we are slowly burning off our Thanksgiving meal, and looking towards the Holiday season and 2009, I want to say "thank you" to the IEEE Dallas Section members and ExCom for allowing me to serve as the Chair for the past year.

We had a great year with an Awards Luncheon, 9 very well attended monthly meetings co-located with the Consultants' Network, 2 Senior Member Elevation events, 1 Officer Training meeting with 1 more planned for December, a 2009 Budget Planning meeting in December, and a Holiday Networking event with the Consultants' Network on Monday, December 8.

IEEE Dallas ExCom members represented the IEEE Dallas Section at the IEEE USA meeting in Indianapolis, the Region 5 meeting in Kansas City and at the Sections Congress in Quebec City.

Having accomplished my goals as your Chair it is now time for me to be your Past Chair. I plan to remain active and encourage you all to be IEEE volunteers for your Section, Society chapters, or in the community where you live and work. Together we can have ongoing education, networking, job enrichment and job security.

As listed in the IEEE bi-laws (and as followed through by the

IEEE Dallas Section) the Past Chair has selected the slate of officers for the next year with the recommendations from a Nominations and Elections Committee. This year the Past Chair is Dr. Gerald Burnham and he has approved the following slate of officers for 2009:

Past Chair: Bob Shapiro
Chair: Larry Zhang
Vice Chair: Dinesh Rajan
Administrative Chair: Liming Xiu
Secretary: Steve Simmons
Treasurer: Mark Swenholt

There were no objections from the members within 1 month from the posting of the list in November so these officers are approved via general consent and will start to serve their term on January 1, 2009.

Please let me know if you have any questions or concerns. Have a great month and please try to attend as many local meetings as possible.

Happy Holidays,
Best regards,
Bob Shapiro
IEEE Dallas Section
2008 General Chair
bshapiro@ieee.org



Joint meeting between IEEE Dallas Section and IEEE Consultants network

Topic: HOLIDAY PARTY!!! A WONDERFUL DINNER and Holiday Party. WE'RE LOOKING TO HAVE SOME FUN ENTERTAINMENT AT THE PARTY. MORE TO COME ON THAT.

Date: Monday, December 8, 2008
Time: Social/Networking/Dinner 6:15 pm
Location: Holiday Inn Select, 1655 North Central Expressway, Richardson, TX (South of Campbell Road, west side of Central)
Cover: \$5 for IEEE Members, \$15 for non-IEEE Members/Guests (includes light supper buffet) IEEE members who RSVP may bring a guest at no additional charge.
RSVP: http://ieeetmc.com/r5/dallas/registration/dec_meeting/



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Dallas Section

Chapter Meetings/Events

Circuits And Systems (CAS)

Topic: Techniques for Mitigation of Self-Interference in Mixed-Signal Transceiver SoCs

Date: Wednesday, December 3, 2008

Time: 6:30pm: Pizza & Drinks; 7:00pm: Presentation

Location: Dallas Texans Activities Center, Conf Room 1 (North end of Texas Instruments expressway site, 13900 N Central Expwy.; site entrance on north-bound access road, between Midpark Rd. & Spring Valley Rd.)

Speaker: Oren Eliezer
Texas Instruments, Dallas, TX.

Abstract: The increased level of integration in current system-on-chip (SoC) solutions for wireless transceivers, targeted at size and cost reduction, creates an increased potential for self-interference, which is suffered in one part of the system as a result of activity in another. The aggressing functions, where the interference originates, and the victim function, where the interference is suffered, may be digital circuits, RF circuits, or analog functions.

This seminar presents design approaches associated with the avoidance or mitigation of the impact of interference mechanisms that are inevitably encountered in the SoC environment, with the focus on allowing enough flexibility in the design to be able to implement software solutions at the post-silicon stage, thus saving the need for a hardware redesign cycle. The seminar also presents a novel phase-avoidance approach for mitigating the impact of specific types of self-interference that may be found in wireless SoCs, thus complementing the commonly used frequency and time avoidance approaches. The tutorial presents specific examples of interference mechanisms that were encountered in DRPTM-based transceiver SoCs developed at Texas Instruments, and proposes solutions to such problems.

Website URL: <http://www.ewh.ieee.org/soc/cas/dallas/>

Consumer Electronics Society (CES)

Topic: The New Dimensions of 3-Dimensional Digital Cinema Technology and DLP(r) Technology, the Next Generation: going places no MEMS has gone before..

Date: Wednesday, Dec. 3, 2008

Time: **6:15 pm - 7:00 pm:** Registration, meet and greet, demo center rooms Q&A, snacks/refreshments
7:00-8:30: Presentations
7:00-7:15: Welcome remarks from the IEEE, SID, TI Hui, Peana, Werner
7:45-8:15: DLP Catalog applications Thompson
7:15-7:45: DLP Cinema(R) 3D Werner
8:15-8:30: Q&A

Location: TI Spring Creek Facility, DLP demonstration center 6550 Chase Oaks Blvd Plano, TX 75023

RSVP: Please RSVP to Carol Wilson @ carolwilson@ti.com or 214 567 0073

Speaker 1: Jason Thompson, DLP Catalog Products - Program Manager, Texas Instruments

Title: DLP(r) Technology, the Next Generation: going places no MEMS has gone before..."

Description: This presentation will provide an overview the many exciting new applications that are being enabled by DLP technology.

Speaker 2: Bill Werner, Program Manager, DLP Cinema(r) Products, Texas Instruments

Title: The New Dimensions of 3-Dimensional Digital Cinema Technology

Description: This presentation will discuss, compare and contrast the various 3-D imaging techniques being used in digital cinema applications today.

Please reserve this evening on your calendar.

Please inform your colleagues who may be interested in this event. This is an SID, IEEE, SMPTE joint event but non-members of these organizations are also welcome to attend.

Communications & Technology (CVT)

Topic: IPTV Network Evolution

Date: December 16, 2008

Time: Networking and lunch start at 11:30a with the Technical Presentation beginning at 12noon (until 1p)

Location: Holiday Inn Select (west of Highway 75/south of Campbell Road)

Speaker: Mr. Shahbaz Rahmanian

Cover: \$5.00 for IEEE members / \$10.00 for non-members no charge just for technical program

Abstract/Program Summary: Presentation will cover end-to-end IPTV network architecture will also discussing challenges in delivery quality and interoperability.

Speakers' Biography: Shahbaz Rahmanian is a Senior Marketing Manager at Huawei Technologies Co. Ltd. and is responsible for Huawei IPTV solutions. He received his Master of Sciences in Computer Engineering from the University of Illinois.

Website URL: <http://www.cvt-dallas.org>

Contact: Steven Maxwell at smaxwell@wt.net

Microwave Theory and Techniques (MTT)

Title: 100 G? Yes, 100 G!

Date: Tuesday, December 16, 2008

Time: Lunch 11:30 AM / Program 12:00 noon

Location: Shuiwah Chinese Buffet
400 N Greenville Ave #11
Richardson, TX 75081
(972) 907-8868

Speaker: Tiejun (TJ) Xia, Ph.D.

Dallas Section

Chapter Meetings/Events

Charge: Mandatory \$5 (\$10 for non-IEEE members) includes admission and buffet. No charge for Student and Life Members. Please bring your IEEE Card to receive the reduced or free pricing.

RSVP: Please RSVP to csanabria@tqs.com by noon, December 12th, for restaurant headcount.

Abstract: Because of new bandwidth-intensive applications such as video on demand, interactive TV, multiple-user online gaming, high quality picture sharing, etc., the overall bandwidth demand is expected to grow over the next decade. Some experts suggest Internet traffic is expected to reach about 30 quintillion bytes per month in year 2011.

To accommodate the huge amount of Internet traffic, we have to develop a more powerful communication "pipe" to transport that information around the world. The majority of Internet traffic today is carried by optical channels at 10Gbps, or 10G as it is known. But 40G technology – four times faster than 10G – is becoming more and more common in backbone networks and 100G technology will eventually arrive!

In this talk we will present an overview of the latest 100G technology development. Many enabling technologies, technical challenges, and timelines to the market will be touched. We will also share the results of a series of 100G technology trials, including the world's first 100G transmission with live traffic. The talk will answer the following questions: How to generate and process the ultra-fast optical signal? How to transmit ultra-fast optical signal over the existing global fiber infrastructure? How to overcome fiber impairments to the ultra-fast optical signals? And when are we able to enjoy the benefits brought on by the ultra-fast optical communications?

In short this talk will give an overall picture of the technology and practice of the fastest ever optical communication – 100 Gb/s.

Speaker Bio: Dr. Tiejun (TJ) Xia is an expert of photonic technologies and optical communications with more than twenty years of experience in research, development, and technical innovation. He is a Distinguished Member of Technical Staff with Verizon Communications where his responsibility is optical network technology development. In 2007, Dr. Xia led the industry's first 100G transmission field trial with live traffic. Dr. Xia is also an Adjunct Professor in the School of Engineering and Computer Science at University of Texas at Dallas and a Mentor Advisor at STARTech Early Ventures. He is a co-founder of the industrial forum "Advanced Fiber Connectivity & Switching (AFCS)", which is focusing on fully automated fiber networks, and the chair of Application & Education Committee of AFCS. In recent years Dr. Xia has developed Symmetrical Innovation System (SIS) to promote invention and innovation in large corporations, and built the Verizon Innovation web site based on SIS. He is an IEEE senior member and a sub-committee member of APOC2008 and NFOEC2009. Recently he served as a Director for Network Technology Development at Chorum Technologies, where he managed advanced R&D activities for photonic system development. Prior to Chorum, he worked with MCI Communications for next generation optical transmission technologies. Before joining MCI, he was a research faculty member in the Department of Electrical Engineering at the University of Michigan. Dr. Xia holds his Ph.D. degree in Physics (Nonlinear Optics) from the University of Central Florida. He has published more than 100 technical papers and holds more than 30 granted or pending U.S. patents.

Sponsorship:

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More information at the MTT website:
<http://ewh.ieee.org/r5/dallas/mtt/>

Dallas Section

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If you are interested in volunteering/becoming an officer for this society, please contact the past chair, William Riley.

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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, special announcements and information for publication should be submitted to Dinesh Rajan (rajand@enr.smu.edu) The deadline for submission of materials is no later than the 20th of the month prior to the month of publication.

Advertising: *Direction* is distributed to approximately 7,200 members in the Greater Dallas area.

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