



IEEE Crosstalk



The Newsletter of the Mid-Hudson Section of the IEEE

Volume XLIII, No 4, August 2004

Chairman's Corner

Welcome back from summer vacation ! I hope everyone had a chance to take a short break from work or school. Although our regular meetings won't start until this fall, your IEEE officers have been hard at work over the summer planning an exciting schedule of activities. Check our website for the latest information so you won't miss any of the great events we have planned.

I'm pleased to announce the formation of a new Life Member Chapter in the Mid-Hudson Section ! We've been given approval by the IEEE Region 1 activities center to establish this chapter, which we hope will serve the needs of the 130 Life Members, Fellows, Senior, and Associates in our section. I'm very excited about this, and would like to thank all of the founding members who petitioned to form this group, (**L. Boland, G. Mahoney, W. McCarthy, V. Melville, and L. Winkler**) as well as our temporary chair **George Krembs** for his efforts in making this chapter a reality. Life members represent an invaluable repository of personal experiences involving the history of our profession. Remember, our LM chapter activities are open to everyone in the section, be sure to join us for the kickoff meeting on October 6.

I'd also like to remind everyone that our section is an affiliate of the Mid-Hudson Technology Council (MHTC), and we will be joining them for various events this fall. Visit www.midhudsontechnology.com, or contact Asha Upadhyay (ashau@dcedc.com). We will also be inviting the Vassar College chapter of Sigma Xi, the scientific research society, to join us at this fall's meetings. Finally, the Region 1 Board of Governor's meeting will be held in late August; **C. DeCusatis** and **J. Blair** plan to represent our section.

Dr. Casimer DeCusatis, Chair
decusat@us.ibm.com

Upcoming Events

September 21, 2004: LTC Rob Sadowski on his experiences in post-war Iraq, see enclosed meeting announcement

October 6, 2004 (daytime event): Kickoff meeting for Life Member Chapter, Locust Grove (Samuel Morse historic site); see enclosed announcement or contact **George Krembs** (krembsg1@hotmail.com)

October 21, 2004: Save this date for a joint MHTC speaker event, details coming soon on www.midhudsontechnology.com

November 5, 2004 (all day event): Nanotechnology Workshop at SUNY New Paltz; contact Casimer DeCusatis (decusat@us.ibm.com)

Coming Attractions: check our website for other events, travel directions for scheduled events, or last minute cancellations due to poor weather conditions.

Mid-Hudson Section Leadership

Chair: Casimer DeCusatis

Immediate Past Chair: Jean R.S. Blair

Vice-Chair: Robert Sadowski

Treasurer: David J. Dittmann, II

Secretary: Robert Atkins

Members-at-Large:

Lawrence J. Boland

George Krembs

William McCarthy

Program Chair: TBD

Publicity Chair: Dale F. Sorenson

Newsletter Publicist: Brett Arteta

Associate Editor: TBD

PACE Chair: Larry Winkler

Section WebMaster: Larry Winkler

Student Activities Chair: Michael Otis

Engineer's Week Coordinator: Vic Melville

Women in Engineering: Rebecca M. Gott

GOLD Chair: Dmitriy Shneyder

Industry Liaison: Asha Upadhyay

Society Chapter Chairs:

Power Society: Hal Turner

Electron Devices Society: Michael Hargrove

Computer Society: TBD

Education Society: Michael Otis

Life Member Society: George Krembs (acting)

Mid-Hudson Section Website

<http://www.ewh.ieee.org/r1/mid-hudson/index.htm>

Mid-Hudson Section General Contact

Decusat@us.ibm.com (845) 435-7232

September Meeting : Engineering Challenges in Iraq

CONTACT: Robert Sadowski (robert.sadowski@usma.edu)
DATE/TIME: Tuesday, September 21, 2004 – 8:00 PM
LOCATION: U.S. Military Academy, West Point, Thayer Hall room 144

ABSTRACT: LTC Robert Sadowski recently returned from Central Iraq where he served as the Iraq country lead for the Kuwait Iraq C4 Commercialization (KICC) program for deployed US and coalition forces. He will give a multimedia presentation of his experiences. The KICC program is overseeing the build out of the Global Information Grid to support military operations. The goals of the program are to reduce deployment of signal units in the future, to support communications infrastructure, and oversee programmatic investment and technical management in order to stabilize C4 systems (Command, Control, Computers and Communications). Project oversight included long haul microwave, strategic satellite, technical control facilities, voice switches, and outside cable plant construction in a dynamic environment.

Enter West Point through the main gate on Thayer Road in Highland Falls. Thayer Hall is located one mile north of security on the right side of the road. Parking is available on the roof of Thayer Hall.

THE PUBLIC IS INVITED TO ATTEND !

November Meeting : Workshop on Nanotechnology

CONTACT: Casimer DeCusatis (decusat@us.ibm.com)
DATE/TIME: Friday, November 5, 2004 – all day event (9 AM – 4 PM)
COST: approx. \$20 per person; attendees may be eligible to receive Continuing Education Units for NY State PE License renewal (details/cost to be finalized in a later announcement)
LOCATION: SUNY New Paltz campus

Mark your calendars NOW for the first annual nanotechnology workshop, sponsored by Mid-Hudson IEEE, SUNY New Paltz, and IBM. This all-day event will feature invited speakers on various topics in nanotechnology; registration includes a copy of the speaker's presentation materials, lunch and coffee breaks (watch our website and next issue of Crosstalk for advance registration details). Within the past few years, nanotechnology has emerged as a promising interdisciplinary technical field, which borrows from advances in such fields as physics, biology, chemistry, electrical and mechanical engineering to create a wide range of exciting new opportunities. The goal of this workshop is to educate and inform interested researchers, engineers, and students by sharing information through a series of invited lectures given by experts in the field. These lectures will present tutorial information on recent developments in nanotechnology, as well as insight into current research directions and potential applications. The presentations will include examples which illustrate basic research concepts, simulations, and case studies regarding the commercialization of specific nanotechnology applications. A panel discussion on issues & concerns with the future of nanotechnology will feature participation from all of the invited speakers.

PLANNED SPEAKERS:

Dr. Casimer DeCusatis, IBM Corporation, "Introduction to nanotechnology and nanoscale optical fibers"
Dr. Robert Geer, Director, The Albany Nanotechnology Center
Dr. Ken Shepard, Prof. of Engineering, Columbia University, "CMOS biochips"
Dr. Gregory Kirk, Vice-President of Technology, Semzyme Corporation,
Dr. Kathryn Guarini, Thomas J. Watson Research Center, IBM Corp., "Self-assembly in semiconductors"
Dr. Robert Filkins, General Electric Corporation, "Multi-photon fluorescence and nanostructure bar codes"
Lieutenant Colonel George Nowak, United States Military Academy, West Point, "Photonic crystal fibers"
Panel Discussion, "The Future of Nanotechnology: Issues and Obstacles to Success"

October Meeting

Life Member Section Kickoff

CONTACT: George Krembs, Acting Chair (krembsg1@hotmail.com)

DATE /TIME: Wednesday, October 6, 2004 (lunch from noon-1:00 PM, speakers 1:00-3:00, tour 3:00-4:00 PM)

COST: \$10 (registration & tour of Locust Grove), optional \$15 for cold buffet lunch

RSVP: Reserve 1 or more seats in advance before October 1 via email to krembsg1@hotmail.com

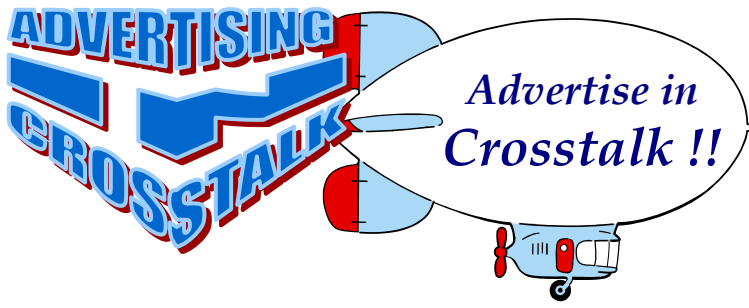
Payment will be accepted at the event from 11:00 AM – noon

LOCATION: Locust Grove (Samuel Morse Historic Site), Route 9, Poughkeepsie, NY

ABSTRACT: Join us for the kickoff of the Mid-Hudson section's newly formed Life Member chapter! We'll meet at the historic Locust Grove site for lunch, a guided tour of the Morse estate, and two exciting speakers. First, **Dr. Julian Bussgang**, member of the IEEE Life Members Committee and Region 1 Life Members Coordinator, will discuss the benefits of being an IEEE Life Member, activities of the institutional IEEE Life Members Committee, and the issues currently under discussion by the IEEE, such as the definition of who can become a Life Member, support and involvement of Life Members in some IEEE educational programs, and sponsorship of historical research. Then **Dr. Edward Altshuler**, chair of the Boston Life Members Chapter, and former member of the IEEE Life Members Committee and former Region 1 Life Members Coordinator, will discuss the Life Members Chapter program, which he initiated in Boston. He will review some of the topics presented by the Boston Life Members Chapter, which is one of the most active and should serve as an excellent model for our section.

ABOUT THE SPEAKERS: **Edward E. Altshuler** (LF) received the B.S. degree in physics from Northeastern University in 1953, the M.S. degree in physics from Tufts University in 1954, and the Ph.D. degree in applied physics from Harvard University in 1960. Before joining Air Force Cambridge Research Labs, he was employed by Arthur D. Little, Massachusetts Institute of Technology, Sylvania Electric, and Northeastern University. He is currently conducting electromagnetics research for the Air Force Research Laboratory at Hanscom Air Force Base, MA. Dr. Altshuler has served as Chairman of the IEEE Boston Section Antennas and Propagation Society; Chairman of the 1968 IEEE AP-S /URSI Symposium; Chairman of the IEEE Boston Section Fellows and Awards Committee; Chairman of the IEEE Boston Section; Region 1 Board of Governors Chairman of the Life Members Chapters; and is currently Chairman of the IEEE Boston Section Life Members Chapter. He was Associate Editor of *Radio Science* from 1976 - 1978 and is a member of Commissions B and F of the International Radio Scientific Union (URSI). He has served on the Air Force Scientific Advisory Board and was Chairman of the NATO Research Study Group on Millimeter Wave Propagation and Target/Background Signatures from 1974 - 1993. He received the IEEE Harry Diamond Memorial Award in 1997 and was awarded an IEEE Millennium Medal in 2000. He was selected to be a Fellow of the Air Force Research Laboratory in 2000. Dr. Altshuler has over 120 scientific publications, patents and presentations.

Dr. Julian J. Bussgang (LF) received his B.S. (Engineering) degree from University of London, UK, in 1949, the S.M.E.E. degree from M.I.T. in 1951, and the Ph.D. degree in Applied Physics from Harvard University in 1955. Julian was born in Poland. Before coming to England, he served in the Free Polish Forces, with the British Eighth Army, in Italy. He finished wartime Polish Officer's School, and after WWII ended, completed first year of engineering at the Turin Polytechnic. After graduating from M.I.T. he was employed at the Lincoln Laboratory where he participated in the development of early pulse Doppler radar. In 1955, he joined RCA Aerospace Division first in Waltham, MA. In 1962, he founded Signatron, Inc., an R&D company, in Lexington, MA, specializing in digital communications for difficult radio links. He has many scientific publications, patents and presentations, and discovered the "Bussgang Theorem" about cross correlation functions. Bussgang was Visiting Lecturer at Harvard University, and Lecturer at Northeastern University. He was a USA member of Commission C of URSI and served as Associate Editor for Communications of *Radio Science*. He authored a chapter in the MIT Press book *How to Start Your Own Business*. Bussgang served as Chairman of the IEEE Boston Section, 1993-1995. He was Chairman of Boston Section's Fellows and Awards Committee, 1988 – 1993; serves on the Region 1 Coordinator of the Life Members Chapters; and is a member of the IEEE Life Members Committee. He was awarded IEEE, USAB, Region 1 Professional Leadership Award (1995) and IEEE Millennium Medal (2000).



Reach over 900 engineers and professionals in the Mid-Hudson Valley. Place an ad with the Editor:

<i>Business Card:</i>	<i>\$ 30.00</i>
<i>1/4 Page:</i>	<i>\$ 50.00</i>
<i>1/2 Page:</i>	<i>\$100.00</i>
<i>Full-Page:</i>	<i>\$200.00</i>

Discounts available for long-term advertising.

**State University of New York
at New Paltz
Department of Electrical and
Computer Engineering
(BS and MS degrees)**

Offers Master of Science degree in Electrical Engineering with thesis and non-thesis options, and ABET accredited Bachelor of Science degrees in Electrical and Computer Engineering. Department offers a wide variety of courses in Electrical and Computer Engineering.

Prospective full and part time students, please call the Engineering Department at (845) 257-3720 or visit our web site: www.engr.newpaltz.edu.

IEEE, Mid-Hudson Section
Brett Arteta, *Crosstalk* Publicist
109 Church Street
Wallkill, New York 12589