



# IEEE Crosstalk



The Monthly Newsletter of the Mid-Hudson Section of the IEEE

Volume XLI, No 3, September 2002

## Chairman's Corner

I have been privileged to serve as Mid-Hudson Section Chair for over a year and a half, and at this point I am stepping aside. Dr. Jean R.S. Blair, our Vice Chair, will be stepping in to serve as Section Chair.

The Mid-Hudson Section represents a good cross-section of industry and academic professionals with 3 active societies, 2 active student chapters, a PACE representative, and now an active Affiliate Group of Women-in-Engineering. We hope to continue to provide an interesting agenda of programs and meetings with speakers on a broad range of topics. We strive to encourage participation from our 900 plus members and hope that you each can support and benefit from the section's activities.

*William F. McCarthy, Past Chair*  
[wfmcc@ieee.org](mailto:wfmcc@ieee.org)

*Dr. Jean R.S. Blair, Chair*  
[Jean.Blair@usma.edu](mailto:Jean.Blair@usma.edu)

Look inside for meeting notices for October and November.

## Mid-Hudson Section Website

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

## Mid-Hudson Section Leadership



**Chair:** Jean R.S. Blair

**Immediate Past Chair:** William F. McCarthy

**Vice-Chair:** Casimer M. DeCusatis Jr.

**Treasurer:** David J. Dittmann, II

**Secretary:** Robert Sadowski

**Members-at-Large:**

George M. Krembs

James Loy

Lawrence J. Prescott

**Program Chair:** Thor Larsen

**Membership Chair:**

**Publicity Chair:** Dale F. Sorenson

**Newsletter Editor:** Lawrence J. Boland

**Associate Editors:** George A. Nowak

**PACE Chair:** Larry Winkler

**Section WebMaster:** Larry Winkler

**Student Activities Chair:** Michael Otis

**Engineer's Week Coordinator:** Vic Melville

**Librarian:**

**Historian:**

**Corporate Relations:**

**Women in Engineering:** Visda Vokhshoori

**Life Members:**

**Graduates of the Last Decade:**

**Society Chapter Chairs:**

**Power Society:** Hal Turner

**Electron Devices Society:** Michael Hargrove

**Computer Society:** Paul S. Basile

**Education Society:**



## Contact Information

**General:** [wfmcc@ieee.org](mailto:wfmcc@ieee.org) (845) 297-7738

[Jean.Blair@usma.edu](mailto:Jean.Blair@usma.edu)

# October Meeting: Fiber Optics and the Future of the Computing Industry: Technology, Trends and directions

Co-Sponsored with Mid-Hudson Chapter Electron Devices Society

**CONTACT:** Michael Hargrove  
Electron Devices Society Chair,  
Mid-Hudson Section <mailto:mrhargrove@erd.epson.com>

**DATE:** Tuesday, October 22nd, 2002

**TIME:** 7:30 PM

**LOCATION:** Room 109, Resnick Hall, SUNY New Paltz

**SPEAKER:** Dr. Casimer DeCusatis  
IBM Corporation

**ABSTRACT:** Although the basic concepts of fiber optics were understood as early as the 1920s, it took several decades until the technology had advanced sufficiently for optical communication to become practical. Since its earliest applications in the 1970s, fiber optics has become a pervasive element in both telephone networks and computer systems. In particular, most people don't realize that optical networks form a critical part of the infrastructure for modern-day mainframes, supercomputers, and multi-terabyte storage networks, or that advances in this technology are helping change the architecture of the Internet, grid computing, and future data processing systems. In fact, optical networking has become as important as advances in microprocessor speeds, memory density, or software to the next generation of computers.

Following a brief introduction to the fundamentals and history of fiber optics, we will describe some of the large computer systems which have been developed around this technology. We will see how trends in storage networking, parallel processing, and clustering of servers rely on the ever-increasing bandwidths and longer network distances that can only be provided by optical communications. We will also discuss some examples of real world applications involving arrays of parallel optical devices, wavelength multiplexing, and other devices which were not technically possible or economically feasible to implement only a few years ago. We will also present some of the more recent developments in this field, including efforts to teleport laser beams or achieve faster than light speed propagation of optical pulses. Taken together, these exciting new optical technologies hold the potential to dramatically change our daily lives, including the ways in which we entertain ourselves, educate our children, manage our finances, and defend our country in the not too distant future.

**SPEAKER BIO:** Dr. Casimer M. DeCusatis is a senior technical staff member for IBM Corporation, eServer Network Hardware Development Laboratory, Poughkeepsie, N.Y., where he develops technology for optical data communication, storage networking, disaster recovery, and electronic commerce. He is the recipient of several industry awards, including the 2002 IEEE Kiyoo Tomiyasu Award for innovative applications of fiber optic technology to computer systems, the 2000 EDN Innovator of the Year Award, and the 1999 Outstanding Young Electrical Engineer award from Eta Kappa Nu, the national electrical engineering honor society (including a citation from the President of the United States and an American flag flown in his honor over the U.S. Capitol building). He is an IBM Master Inventor, co-inventor of 40 issued patents, and co-author of over 75 technical papers. He is the editor of the *Handbook of Fiber Optic Data Communication* (Academic Press; 2nd edition, 2002) and its companion volume *Fiber Optic Data Communication: Technological Advances and Futures* (2002). He has also authored and edited material for various other books, including the *Handbook of Optics vol IV* (Optical Society of America), the *Handbook of Applied Photometry* (American Institute of Physics/Springer-Verlag), and the *Encyclopedia of Electrical and Electronics Engineering* (Wiley and Sons). He also serves on the editorial board of the SPIE journal *Optical Engineering*. Dr. DeCusatis received the M.S. and Ph.D. degrees from Rensselaer Polytechnic Institute (Troy, N.Y.) in 1988 and 1990, respectively, and the B.S. degree magna cum laude in the Engineering Science Honors Program from the Pennsylvania State University (University Park, PA) in 1986. He is a senior member of the IEEE, and a member of the Optical Society of America, SPIE, AIP, Sigma Xi Research Society, Mensa, and 10 academic honor societies including Tau Beta Pi and Eta Kappa Nu; he has also been profiled by various biographical publications including *Who's Who in Science and Engineering* and *Who's Who in the World*.

**The Public is Invited**

# **November Meeting: Investing In These Troubled Times**

Sponsored by Mid-Hudson Section PACE

- CONTACT:** Larry Winkler  
PACE Chair, Mid-Hudson Section    lwinkler@localnet.com
- DATE:** Tuesday, November 19<sup>th</sup>, 2002
- TIME:** 7:30 PM
- LOCATION:** Central Hudson Gas & Electric  
South Road Auditorium  
Poughkeepsie, NY
- SPEAKERS:** Mr. Albert J. Aguiar, Product Manager, Merrill Lynch Investment Managers  
With an introduction by: Mr. Eric Johnson, Assistant Vice President, Merrill Lynch

**PRESENTATION:** Investing In These Troubled Times.

Emphasizing the technology sector, the roll of individual stocks, mutual funds and bonds in the context of retirement and financial planning. What is the outlook for the Tech sector and the entire market over a 5 to 10 year period.

A short Q and A will follow the presentation.

## **PROFESSIONAL PROFILES:**

Albert Aguiar joined MLIM in March 2002 as an Assistant Vice President and Equity Product Manager. He works closely with the portfolio management teams and represents the Growth Equity investment products, including investment process and current portfolio strategy to financial advisors, clients, and outside organizations. Prior to joining MLIM, he held numerous positions at Merrill Lynch & Co., including Sr. Product Specialist in Structured Product sales, as well as Sr. Equity Specialist in the Global Equity Markets group. Albert's investment career began at Merrill Lynch Investment Partners Inc., where he worked on fund administration and finance of commodity/financial futures funds and managed futures. He received a B.S. degree in business, management and finance, with a concentration in mathematics from Brooklyn College. Albert is currently a level III candidate in the Chartered Financial Analyst program.

Eric Johnson is an Assistant Vice President and Senior Financial Advisor in the Merrill Lynch Kingston NY office. Eric joined Merrill Lynch in 1981. Eric assists clients in developing long term financial plans. Eric utilizes various investment strategies, including asset allocation models and professional money management to help clients meet long term wealth accumulation goals. Also, Eric helps high net worth clients review estate planning techniques including trust work and charitable gifting.

**Directions:** From the north, take route 9 south to the Academy Street exit. Veer to the right at the end of the off ramp onto Central Hudson property. Make a right into the parking area. Walk up the inclined walkway (not the stairs) at the end of the lot – you'll be facing the side of the auditorium building. The doors to the auditorium are around to the left side of the building.

From the south, take route 9 north to the Academy Street exit. Make a left at the stop sign. Veer to the right after the overpass onto Central Hudson property. Make a right into the parking area. Walk up the inclined walkway (not the stairs) at the end of the lot – you'll be facing the side of the auditorium building. The doors to the auditorium are around to the left side of the building.

**The Public is Invited**



*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.*

IEEE, Mid-Hudson Section  
L. Boland, *Crosstalk* Editor  
42 Colburn Drive  
Poughkeepsie, New York 12603

**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 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](http://www.engr.newpaltz.edu).