



The IEEE

Newsletter

PUBLICATION OF THE NORTH JERSEY SECTION OF THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

NJ Communications Society:

Emerging High-Speed Internet Services and Applications over xDSL Access Loops

On December 4, 1997, the IEEE Communications Society North Jersey Chapter together with NJIT's ECE Graduate Student Club and the Electrical & Computer Engineering Department will present a talk on "Emerging High-Speed Internet Services and Applications over xDSL Access Loops." The speaker will be Vijay Bhagavath.

About the Talk

This presentation will focus on harnessing the multimegabit bandwidth provided by equipping ordinary telephony loops with ADSL technologies for emerging high-speed services delivery. Specifically, we will discuss the implementation of new service concepts employing open Internet protocols over ADSL access loops. We will also discuss the detailed end-to-end services delivery architecture, to enable invention and implementation of new service concepts over ADSL loops.

In addition, we will discuss the important technical issues that need to be addressed prior to a large-scale new services deployment over ADSL loops. Of particular interest is the emergence of Internet protocols (IP dialtone) as a ubiquitous technology to interconnect disparate networks and deliver amazing new services (especially web-based) to end-users. In this context, we will describe specific ADSL IP/Ethernet and IP/ATM services delivery architectures, including appropriate core network and multi-ISP connectivity issues and possible solutions to key issues.

We will also discuss simple practical means to provision the future Internet to provide reasonable real-time QOS for multimedia applications.

About the Speaker

Vijay Bhagavath received his PhD, MS, and BE (valedictorian with distinction) degrees in Electrical Engineering from the University of Texas, Arlington, and Osmania University in 1995, 1992, and 1989, respectively. Dr. Bhagavath is currently a Senior Member of Technical Staff at AT&T Laboratories, Holmdel, NJ.

He is a principal investigator and founder of the xDSL IP-based multimedia services and applications laboratory. He has authored over 21 technical publications and has 5 US patents pending.

Time: 3:15 PM, Thursday, December 4, 1997 (refreshments start at 3:00 PM).

Place: NJIT, 202 ECE Center, Newark, NJ.

Information: Nirwan Ansari (973) 596-3670. Please check <http://megahertz.njit.edu/~ieeenj/comm.html> for latest update.

A GOLDen Opportunity!

This month's meeting of G.O.L.D. (Graduates of the Last Decade) shall be on Thursday, December 4 and will be partnered with the AIAA Young Members Group. Festivities will begin at 6:00 and will be held at Doc's in the Holiday Inn, Totowa, NJ, just off of Rt. 46 West (after Little Falls and before Wayne). If anyone needs directions, or has questions, contact North Jersey Section GOLD Chair Amy Galarowicz at a.galarowicz@ieee.org or by phone at work at (201) 818-3740. Looking forward to seeing everyone there!

How to Become a Senior Member!

You may be qualified for Senior Member Grade. Get information on becoming a Senior Member by contacting Don Weinstein, Kulite Semiconductor, One Willow Tree Road, Leonia, NJ 07605-2239, (201) 461-0900 ext. 234 mornings or Amy Galarowicz, Glatt Air Techniques Inc., 20 Spear Road, Ramsey, NJ 07446-1288, (201) 818-3740, FAX (201) 825-0389, e-mail: a.galarowicz@ieee.org.

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NEWSLETTER STAFF

Editor.....Theresa Saracinello
Business Manager.....Keith Saracinello

Deadline for receipt of material is the 1st of the month preceding the month of publication. All communications concerning editorial and business matters, including advertising, should be sent to the Business Manager via e-mail at k.saracinello@ieee.org or to *The IEEE Newsletter*, c/o Keith Saracinello, 96 Everett Rd, Parsippany, NJ 07054-3164, (973) 515-8829.

IEEE NJ SECTION HOME PAGE

<http://megahertz.njit.edu/~ieeenj>

IEEE NJ SECTION NEWSLETTER HOME PAGE

<http://www.ece.stevens-tech.edu/~nar/inews>

REPORT ADDRESS CHANGES TO:

IEEE Service Center, 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331, (732) 981-0060. It is not necessary to inform the North Jersey Section when you change your mailing address. "The IEEE Newsletter" and other section mailings use a list provided by IEEE's national headquarters.

SECTION OFFICERS

Chairman.....Arthur Greenberg
a.h.greenberg@ieee.org (973) 492-1207
Vice-Chairman-1.....Melvin Lewis
m.lewis@ieee.org (914) 968-2500 Ext. 2304
Vice-Chairman-2.....Dr. Fred Chichester
(973) 744-7340
Treasurer.....Dr. Chandra Gupta
Secretary.....Alan Stolpen
(973) 822-1300, ext. 2416

Members-at-Large:

Amy Galarowicz (201) 818-3740
a.galarowicz@ieee.org
Dr. Haim Grebel
Dr. Nirwan Ansari

The North Jersey Section Executive Committee usually meets the first Wednesday (except holidays and December) of each month at 7:00 PM. Meetings are open to all members. For information on meeting agenda call Secretary Alan Stolpen (973) 822-1300, ext. 2416.

HTML Instructors Wanted!

The North Jersey Section Education Committee seeks applications from potential instructors for an HTML course to be offered evenings in the spring of 1998. Since the advance preparations for the course require substantial lead time, interested candidates should submit promptly a course proposal accompanied by a resume emphasizing their experience with HTML and in teaching to:

Dr. Frederick Chichester, Chair
IEEE North Jersey Section Education Committee
56 Gordonhurst Avenue
Upper Montclair, NJ 07043

Further information can be obtained by calling the IEEE North Jersey Section Education Committee information line at (973) 744-3065.

NJ Section PACE:

Section Chairman Forum

On January 8, 1998 the IEEE North Jersey Section Professional Activities Committee for Engineers (PACE) will host a forum for the incoming North Jersey Section Chairman Mel Lewis.

About the Talk

Mr. Lewis will present an outline of his plans for the North Jersey Section in 1998 and answer questions from the members.

About the Speaker

Mr. Lewis is a Senior Staff Engineer at Lockheed Martin Fairchild Systems (formerly Loral) in Yonkers, NY, with 34 years experience designing circuits and systems including sophisticated test equipment for defense applications.

All Welcome!

You need not be a member of the IEEE to attend and there is no charge for admission. Light refreshments will be served.

Time: 6:30 PM, Thursday, January 8, 1998.

Place: Clifton Memorial Library, 292 Piaget Ave, Clifton, NJ, (973) 772-5500 or see Newsletter web page.

Information: Contact Rodney Cole (973) 299-9022, ext. 2257.

IEEE LEO Chapter:

Bragg Solitons

On Wednesday, the 3rd of December 1997, the IEEE Laser and Electro Optics Chapter will present a talk on "Bragg Solitons." The speaker at this meeting will be Benjamin J. Eggleton.

About the Talk

Bragg solitons are an exciting new class of soliton experimentally observed for the first time in 1995. These solitons arise through the balancing of the third order optical nonlinearity and the strong artificial dispersion provided by the grating. Possibly the most intriguing feature of these solitons is that they can travel at a fraction of the speed of light.

This talk concentrates more on the physical interpretation of Bragg solitons and the experimental realization rather than on a detailed mathematical description. In the first half of the talk basic properties of fiber gratings are reviewed. The second half of the talk will concentrate on the nonlinear optics of fiber gratings and will show that solitons are ubiquitous in Bragg gratings. Finally to be discussed are the experimental realization of several novel nonlinear fiber grating devices with potential application in future all-optical networks and future directions for this work.

About the Speaker

Benjamin Eggleton received a Bachelors Degree with honors in physics from the University of Sydney, Sydney, Australia, in 1992 and the PhD degree from the School of Physics in 1996. His Doctoral research focussed on linear and nonlinear effects in fiber Bragg gratings.

In 1996, he joined the Department of Optical Physics at Bell Laboratories, Lucent Technologies, Murray Hill, NJ. His research interests include nonlinear optics, fiber gratings, photonic bandgap structures, all-optical switching devices, soliton propagation and WDM technologies.

Time: 5:00-6:00 PM, Wednesday, December 3, 1997. Free pizza and soda will be served at 4:45PM.

Place: NJIT, Room 202, ECE Building, Newark, NJ.

Information: Haim Grebel (973) 596-3533.

North Jersey Section Activities

December 1997

Dec. 2—"NJIT Career Day" – 10:00AM-1:30PM, New Jersey Institute of Technology, Newark, NJ. Make reservations at (973) 596-3524.

Dec. 3—"Bragg Solitons" – IEEE LEO Chapter, 5:00-6:00PM (refreshments and pizza at 4:45PM), NJIT, 202 ECE Center, Newark, NJ. Haim Grebel (973) 596-3533.



Dec. 4—"Emerging High-Speed Internet Services and Applications over xDSL Access Loops" – NJ Communications Society, 3:15PM (refreshments at 3:00), NJIT, 202 ECE Center, Newark, NJ. Nirwan Ansari (973) 596-3670.

Upcoming Meetings

Jan. 7—"NJ Section Executive Committee Meeting" – 7:00PM, Location TBD, Alan Stolpen (973) 822-1300, ext. 2416.

Jan. 8—"Section Chairman Forum" – NJ Section PACE, 6:30 PM, Clifton Memorial Library, 292 Piaget Ave, Clifton, NJ. Rodney Cole (973) 299-9022, ext. 2257.

Members and Non-Members Welcome
PLEASE POST

*NJIT Department of Electrical and Computer Engineering
Presents*

Career Day

*Tuesday, December 2, 1997
from 10AM-1:30PM*

FOR: *High school students, guidance counselors, teachers, and parents.*

WHY: *To learn about the exciting and lucrative opportunities that exist in the fields of electrical engineering and computer engineering.*

WHERE: *New Jersey Institute of Technology, Newark, NJ.*

ACTIVITIES

Career Opportunities 10:00-11:00

- ☒ Department Chairperson's Welcome
- ☒ Speakers from Industry

NJIT's Role-Preparing Students for the Profession 11:00-12:00

- ☒ Current Student's Perspective
- ☒ A Graduate's Perspective
- ☒ Faculty Perspective

Lunch Provided for School Groups 12:00-12:45

Video and Lab Demonstrations 12:45-1:30

To reserve a space, please reply to the Department of Electrical and Computer Engineering at (973) 596-3524.

ECE Career Day is a free public service event.