



The IEEE

Newsletter

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

NJ MTT/AP Chapter:

Applications of Microwaves in Wireless and Wired Systems

The topic at the February 24, 1998 meeting of the MTT/S/AP-S Chapter will be "Applications of Microwaves in Wireless and Wired Systems." The speaker will be Dr. Chandra Gupta.

About the Talk

This presentation will cover the merits and characteristics of microwaves and the reasons why it has found wide spread applications in modern system designs. Propagation of microwaves in guided medium, as well as in free space will be discussed. Numerous wired and wireless system applications will be presented, such as communication systems, intelligent highway and automobile controls, medical applications, household uses and industrial processes and sensors. The purpose of this presentation is to bring about a general awareness of microwave technology to the engineering community which is shaping today's lifestyle.

About the Speaker

Dr. Chandra Gupta is an Engineering Project Manager at GEC-Marconi Hazeltine CNI Division in Wayne, NJ. He has over twenty years of experience in the design, development, production and engineering management of components, subsystems and systems covering RF, microwave and millimeter wave frequency ranges. Dr. Gupta received a PhD (EE) degree from University of Wales, UK in 1978. Dr. Gupta has several publications in journals and conference proceedings. Dr. Gupta is a Senior Member of IEEE, Member of Who's Who Worldwide, Member of Old Crows Association, Chair of the IEEE North Jersey Section MTT & AP Chapter and 2nd Vice Chair of the local IEEE EXCOM.

All Welcome!

You do not have to be an IEEE member to attend. Free refreshments will be available at 6:00 PM.

Time: 6:30 PM, Tuesday, February 24, 1998.

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

Information: Dr. Edip Niver (973) 596-3542 (NJIT), Willie Schmidt (973) 492-0371, or Dr. Chandra Gupta (973) 872-4605 (GEC-Marconi).

Newly Elected IEEE Fellows

The North Jersey Section IEEE congratulates the following members who were elected to the Fellow grade:

Dr. Young-Kai Chen

"For contributions to ultra-short pulse generation using semiconductor lasers, integrated laser-modulators, and high frequency InP HBTs"

Mr. Fred L. Katzmann

"For leadership and innovation in developing a new generation of cost-effective precision instrumentation"

Dr. Louis J. Lanzerotti

"For outstanding contributions to geophysics, space plasma physics, planetary magnetospheres, and energetic solar particles"

Dr. Mark Richard Pinto

"For contributions to computer-aided design of electronic devices"

Mr. Jay G. Wilpon

"For leadership in the development of automatic speech recognition algorithms"

Vehicular Technology Society:

CDMA Evolution and System Performance

The IEEE North Jersey Chapter of the Vehicular Technology Society will host a talk by Dr. Wen-Yi Kuo on March 10, 1998. The topic will be "CDMA Evolution and System Performance."

About the Talk

The talk will cover CDMA evolution and IMT-2000 trends and status. CDMA system performance, with details on power control, soft handoff, etc. will also be described.

About the Speaker

Dr. Kuo is a member of the technical staff, CDMA Radio Performance Group, at Lucent Technologies, Bell Labs Innovations in Whippany.

All Welcome!

You need not be an IEEE member to attend. There is no charge for admission and registration is not necessary. Light refreshments will be provided.

Time: Tuesday, March 10, 1998 (See <http://megahertz.njit.edu/~ieeenj> or March Newsletter for exact time).

Place: See <http://megahertz.njit.edu/~ieeenj> or March Newsletter.

Information: Mel Lewis (201) 337-4767 (m.lewis@ieee.org) or Art Greenberg (973) 492-1207 (a.h.greenberg@ieee.org).

FEBRUARY 1998

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NEWSLETTER STAFF

EditorTheresa 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.

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a.galarowicz@ieee.org
Dr. Timothy Chang
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 Keith Saracinello (973) 515-8829.

Chairman's Message

It is a great honor to be elected Chair of the IEEE North Jersey Section. As we start the new year I look back on the accomplishments of Art Greenberg, my predecessor, as well as his predecessors and hope I can do as well. Under Art's forward thinking leadership, the section added several society chapters, provided a successful and diverse educational program, maintained the section's net worth (in spite of increased expenses), brought the next Region 1 meeting to North Jersey, experimented with the first all-electronic newsletter, and much more.

The section's success is dependent on its officers, and we have a highly skilled and dedicated slate for 1998. I look forward to the support of all the EXCOM chapter and committee volunteers who give so generously of their time. I hope to be responsive to the needs of you, the membership. You can expect to see several chairman's messages in the newsletter and on the web-site during what promises to be an exciting, busy, and rewarding year, a year which provides even more services beneficial to you, the membership.

This is an excellent time for me to be assuming the chairmanship, in light of the explosive evolution of information and communications in particular and technology in general. The North Jersey section can secure for each of us the advantages of change, and help provide you, our members, with a forward looking set of skills, helping you to realize your career aspirations. Being an active IEEE member can help your career.

Specifically, for 1998, I foresee that we will improve the Section's internet "web" site, (<http://megahertz.njit.edu/~ieeenj>) making it more relevant to and useful for the visiting section member.

Many of you have no access to the internet, but do have email capability. Well, a lot can be done with just email, beyond communicating with your friends and specific individuals in the IEEE infrastructure. We can send the newsletter by email, in fact we have done that for several issues. We'll be running an article on that in the paper newsletter shortly. For those of you without email, there is at least one free email provider (Juno) --there was an article on this in the North Jersey Section newsletter a few months ago.

The section can and must increase income in order to expand the services provided to the membership, services such as the newsletter (paper and

electronic) and technical meetings with speakers. One way of doing that is by providing the local arrangements for a society conference. Most conferences will earn money for the section, as did the highly successful (and profitable) Vehicular Technology Conference in 1993. We are actively proposing to ComSoc that we run one of their symposia.

We will redouble our efforts to recruit new committee members for the section's activities. Committees run the chapter meetings, organize awards dinners, provide educational courses, etc. Each active IEEE chapter serves the section's members of that society, as well as interested non-members. Technical speakers provide insight into the latest goings-on in the field and the meetings provide a venue for one to connect/network with fellow engineers with similar professional interests.

The section also must nurture and develop the student branches. We can do this by working with the faculty advisor, participating in their activities, providing or helping them find speakers, hosting student paper contests, and the like.

GOLD (Graduates of the Last Decade) is a program run by and for recent graduates, at the national and North Jersey level. We hope to have another successful year responding to the needs and interests of our younger members. We've started an Industry Liaison committee, and a Life Member committee for 1998. We also added the position of finance officer. And somewhat innovatively, we've arranged for some committees to have two co-chairs, alternating in their running of the committee.

I have highlighted some of the areas where I hope to personally play a part, of course with the help of the responsible committees and chapters. There are many more areas where we can and should spend more time and effort and their absence from this chairman's message is certainly not intended to suggest that they are not important. I will rely on the good efforts of all those involved to make 1998 a progressive and successful year. Perhaps you'd like to join us?

Melvin Lewis

1998 Chair, North Jersey Section, IEEE

For a full text version of Mr. Lewis' speech, please see the web site, mentioned above.

Volunteer Math Tutors Needed

The Upper Montclair school district is seeking volunteers to tutor eighth grade students in first year algebra. This is an opportunity to share some of your math knowledge with a child or small group of children who are experiencing difficulty in their first encounter with algebra. To participate in this program you need not be a certified teacher although some prior teaching experience (not necessarily paid) would be desirable. What is important is that you will be willing and able to share your knowledge of mathematics and that you have some time available to do this during the regular school week. For further information please communicate with the following math tutors coordinator:

Dr. Frederick Chichester, Chair
IEEE North Jersey Section Education Committee
56 Gordonhurst Ave
Upper Montclair, NJ 07043
Telephone: (973) 744-3065

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.

North Jersey Section Activities February 1998

Feb. 4—"NJ Section Executive Committee Meeting" – 7:00PM, ITT, 100 Kingsland Road, Clifton, NJ. Keith Saracinello (973) 515-8829 or k.saracinello@ieee.org.

Feb. 24-April 28—"C/C++ Windows Programming" – North Jersey Section, Tuesday Evenings, 10 sessions, 6:30-9:00PM, Smiths Industries, 7-9 Vreeland Road, Florham Park, NJ. Dr. Fred Chichester (973) 744-3065 (leave message) or Art Greenberg (973) 492-1207.

Feb. 24-May 12—"Visual Basic 5.0" – North Jersey Section, Tuesday Evenings, 12 sessions, 6:30-9:00PM, ITT Avionics, 100 Kingsland Road, Clifton, NJ. Dr. Fred Chichester (973) 744-3065 (leave message) or Art Greenberg (973) 492-1207.

Feb. 19—"Synthetic Human Chromosomes as Gene Therapy Vectors"—NY/NJ/LI EMBS, 7:30 PM, Rockefeller University, Weiss Building, Room 305, 1200 York Ave, NY, NY. Joel H. Levitt (212) 479-7805 (24 hr voice mail) or Edna Feher (212) 757-0610.

Feb. 24—"Applications of Microwaves in Wireless and Wired Systems" – MTT/S/AP-S Chapter, 6:30 PM, NJIT, Room 202, ECE Building, Newark, NJ. Dr. Edip Niver (973) 596-3542 (NJIT), Willie Schmidt (973) 492-0371, or Dr. Chandra Gupta (973) 872-4605 (GEC-Marconi)

Upcoming Meetings

Mar. 4—"NJ Section Executive Committee Meeting" – 7:00PM, ITT, 100 Kingsland Road, Clifton, NJ. Keith Saracinello (973) 515-8829 or k.saracinello@ieee.org.

Mar. 10—"CDMA Evolution and System Performance" – NJ Chapter VTS, see <http://megahertz.njit.edu/~ieeenj/> or contact information below for time and location. Mel Lewis (201) 337-4767 (m.lewis@ieee.org) or Art Greenberg (973) 492-1207 (a.h.greenberg@ieee.org).

Mar. ?—"What? Me Worry?" – NJ Section PACE and GOLD, see <http://megahertz.njit.edu/~ieeenj/> or March Newsletter for exact date and location. Amy Galarowicz (201) 818-3740 (a.galarowicz@ieee.org).

Members and Non-Members Welcome PLEASE POST

North Jersey Section Student Paper Contest

We are proud to announce that the North Jersey Section will be holding a presentation night scheduled for mid-February. The main focus of the presentation night is to give students an opportunity to sharpen their communication skills and help prepare for real life situations as practicing engineers and researchers.

The contest at the Section level is also supplemented by awarding cash prizes of \$40/\$60/\$100 to the three best presentations. If winners choose to move forward to the area and regional competitions, two papers from each participating school can be allowed to enter the next qualifying round of Area B, to be held in mid March.

An abstract of 100-150 words is required on the topic to be presented. It should be submitted as early as possible and no later than Friday, February 6, 1998. This is to ensure that enough time is available for all presenters. The abstracts should be forwarded via mail/e-mail (preferred) to the following address :

Amit Patel
ITT A/CD Dept 8537
100 Kingsland Road
Clifton, NJ 07014
(973) 284-2708
email: a.j.patel@ieee.org

All the local contest rules and deadline information, as well as regional contest information can be found on the web at the following address or with branch counselors.

<http://menger.eecs.stevens-tech.edu/~apatel9/ieee.html>

The Section Presentation Night is being hosted by Stevens Institute of Technology in Hoboken, NJ. It will be held on Tuesday February 17 1998 at 6:30-9:30 PM in the Bissinger Room of the Howe Center. All schools of the North Jersey Section are invited to participate.

Additionally, there is also a need for volunteer judges. Any non-student who shows up that night can be a judge. Student presentations will be judged on a 100 point scale and written comments from judges is encouraged. Students will get the tally sheets back so they can improve their papers and presentations. Any interested volunteers should contact Amit Patel (see contact information above) as soon as possible.

Engineers Week Celebrates Turning Ideas into Reality

This year, February 22-28 is Engineer's Week. Banquets are held to honor engineering achievement, open houses and plant tours abound, and engineers flock into schools. Myriad educational outreach programs try to foster the fascination and intrigue with math and science that most of us feel everyday on the job. Fun, hands-on demonstrations challenge kids to think outside the box and to NOT be afraid of math and science. Are you interested in participating?

Current: area schools have signed up for the Faraday Lecture. This well-done, lively presentation uses professional actors portraying our electrical engineering forefathers. They tell interesting stories about electromagnetic concepts, targeted at junior high school students. This year's lecture titled "But What's the Use of It, Mr. Faraday?" will take place February 3rd and will cover the diverse applications of Faraday's discoveries. It is satellite linked from England every year the first week of February. England's IEE sponsors it, and IEEE-USA coordinates getting American IEEE members to go to schools the afternoon of the broadcast to be available for follow-up questions.

Ongoing: The North Jersey Section is in need of a Pre-College Education Coordinator. This person will build and maintain a local list of interested volunteers who can be available for judging science fairs, making classroom presentations, working with teachers, etc. as needs arise in the area. Currently, IEEE now only does something each February. Any effort to expand this will be welcome, and at your discretion. You will receive a wealth of information from IEEE headquarters about the many programs and offerings that exist, should you want to tap into those resources.

Interested in becoming North Jersey Section Coordinator? Interested in getting on our list of volunteers to help out occasionally? Interested in attending the 1998 Faraday Lecture? For any of these, contact interim Pre-College Education Chair Amy Galarowicz at (201) 818-3740 or a.galarowicz@ieee.org.

NJ Section GOLD/PACE:

What? Me Worry?

During the 2nd or 3rd week in March, the IEEE North Jersey Section Graduates of the Last Decade (GOLD) and Professional Activities Committee for Engineers (PACE) will present a talk titled "What? Me Worry?" The speaker will be Barbara Coburn

About the Talk

What? Me Worry? You bet. Not a single person or entity is more responsible for your career growth than YOU. Gone are the days of paternalistic, career-long employers with nice pensions and all. It's each man for himself. Are you ready to compete in this world? The good news is that the economy is strong and there's more and more means and tools available every day to 'help one help oneself.' Getting active in technical societies that carry your voice to Congress (like IEEE or AEA) is one way. Another tool, more personal and immediate, is coming to a doorstep near you soon! Start planning now for the March GOLD/PACE meeting.

The speaker will discuss the importance of career self-management for engineers in today's increasingly global and competitive environment. The Career Asset Manager (CAM) is a tool developed by IEEE's Educational Activities staff with the assistance of a volunteer working group. It is an exciting and effective way to help any technical person with record keeping and resume generation. CAM also adds insight to one's individual goals and aspirations. The speaker will go through a "hands-on" exercise from CAM at the meeting. We guarantee all attendees will learn something valuable from the experience. Additionally, samples of IEEE publications and services useful for career management and job hunting will be available.

About the Speaker

Barbara Coburn is the Manager of Career Development Programs for IEEE Educational Activities. She has worked for IEEE for 7 years and her staff is responsible for publishing continuing education self-study courses and books as well as career management tools. In addition, Barbara is managing the pre-college education activities and directs outreach and public relations efforts for Educational Activities. Before coming to IEEE Barbara was a school teacher for 13 years and worked as an instructional designer and editor of corporate training materials and K-8 textbooks.

All Welcome!

You need not be a member of the IEEE to attend and there is no charge for admission. Sandwiches, chips and soda will be served will be served prior to the meeting.

Time: 2nd or 3rd week in March (Check <http://megahertz.njit.edu/~ieeenj> or March Newsletter for exact date and time).

Place: TBA (Check <http://megahertz.njit.edu/~ieeenj> or March Newsletter for location).

Information: Contact Amy Galarowicz (201) 818-3740 (a.galarowicz@ieee.org).

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Place: TBA (Check <http://megahertz.njit.edu/~ieeenj> or March Newsletter for location).

Information: Contact Amy Galarowicz (201) 818-3740 (a.galarowicz@ieee.org).

NY/NJ/LI EMBS:

Synthetic Human Chromosomes as Gene Therapy Vectors

On Thursday, February 19, 1998, the Metropolitan Chapter of the Engineering in Medicine and Biology Society of the Institute of Electrical and Electronics Engineers announce "Synthetic Human Chromosomes as Gene Therapy Vectors." The speaker will be Dr. Gil Van Bokkelen.

About the Talk

Viral gene therapy vectors, in their current form, have severe limitations that significantly inhibit their clinical efficacy, including immunogenicity, inconsistent gene expression, cytopathicity, and limited packaging capacity. For these reasons, increased attention has been focused on development of non-viral gene therapy vectors. However, due to the lack of essential genetic elements that are

sure the functional stability of normal human chromosomes, such as a centromere, typical non-viral factors do not segregate during cell division and are rapidly lost in dividing cells. Athersys has developed prototype synthetic human chromosomes constructed from telomeric, centromeric, and other genomic sequences. Upon introduction into human cells as naked DNA, these elements adopt a functional chromatin confirmation, allowing them to exit within the cell as separate mitotically stable units. In long-term cell culture experiments, these "Synthetic Microchromosomes" exhibit genetic stability and long-term, regulated gene expression. Cytogenetic analysis confirms that these Synthetic Microchromosomes contain functional kinetochores, segregate in a related manner during mitosis, and exhibit normal stability in the absence of any selective pressure. The lack of viral sequences, the large cloning capacity, and the ability to facilitate long-term regulated gene expression and dividing cells make these vectors ideal for many gene therapy applications.

About the Speaker

Dr. Van Bokkelen received his PhD in Genetics from Stanford University in 1994 and earned degrees in Economics and Molecular Biology from the University of California at Berkeley in 1987. He currently holds the position of President and CEO of Athersys, Inc. As one of the founders of the company, Dr. Van Bokkelen has played a fundamental role in the development of the Synthetic Microchromosome gene therapy technology, and has directed the strategic business development of the company since it began operations, including negotiation of sponsored research and licensing agreements, securing operating capital for the company, and management of the company's financial resources.

Time: 7:30-9:30 PM, Thursday, February 19, 1998.

Place: Rockefeller University, Weiss Building, Room 305, 1200 York Ave, NY, NY. Free parking available – entrance gate at 66th St.

Information: Joel H. Levitt (212) 479-7805 (24 hr voice mail) or Edna Feher (212) 757-0610.

Getting to Know Your Section...

Do you know that the North Jersey Section is just about 5,000 strong? This approximately breaks down into the following groups by member grade:

5% Student Member
10% Associate Member
65% Member
12% Senior Member
3% Fellows
17% are Life Members (when age + years in IEEE \geq 100)

Our 5,000 members enjoy just over 4,000 society memberships. Some of the most active Chapters in North Jersey include:

- Computer Society - over 1,000 members
- Communications-nearly 650 members
- Power Engineering/Industry Applications Society - nearly 400
- Electron Devices/Circuits & Systems - over 260
- Signal Processing - about 250 members
- Microwave Techniques & Theory/Antennas & Propagation - over 160

Since roughly a third of our members have not joined any society at all, that indicates many have joined several. Have you made a career change recently? Maybe there's a society that better meets your needs out there. Check out the over 36 different societies and myriad publications.

This information is taken from our local section database, as of July 97, and presented by Membership Development Committee member Amy Galarowicz. Contact her at a.galarowicz@ieee.org for questions.

Advance to a Higher Grade

If you are in Associate Member, you may be eligible to advance to Member or Senior Member grade. Members could apply for senior member grade. The dues are the same for all three grades. You can get an application and information on advancing 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.

IT PAYS TO ADVERTISE IN THE NEWSLETTER

Almost 5000 readers who are influential in the electrical, electronics, and computer industry receive the IEEE Newsletter each month (except July).

These readers represent many companies in the North Jersey area.

Included are manufacturers, consultants, sales representatives, universities, and colleges.

You can reach this targeted professional audience with your advertisement in the Newsletter.

For information about advertising in the IEEE Newsletter, contact the North Jersey Section business at (973) 515-8829.



IEEE North Jersey Section Seminar C/C++ WINDOWS PROGRAMMING

Tuesday Evenings, February 24 – April 28, 1998

Smiths Industries

7-9 Vreeland Road, Florham Park, NJ

The IEEE is offering an evening course entitled "C/C++ Windows Programming." This course will cover the creation of Microsoft Windows programs without needing the large compilers or the object libraries for Windows. You will require only Windows 3.1 or 95 and any Windows-compatible compiler. All programs will be compatible with C but C++ will also be used to simplify the interface.

This is a Windows course, not a programming course. Knowledge of C or C++ is a prerequisite. The emphasis is on other aspects of Windows application: standard look-and-feel, the design of help and make files, graphics (creating icons and cursors), program interlinking (cut and paste, DDE and OLE), and program installation (DDL's, INI, REG). We will also develop software tools to tame the complicated Windows environment interface and simplify the repetitive aspects of the development job. There will be 10 weekly lectures which will be quite interactive. Homework will be assigned and corrected. The specific topics listed below will be covered.

TOPICS

1. Review of Microsoft Windows from a developer perspective: The desktop metaphor. Constituents of a window. The mouse. Characteristics of different kinds of window objects. Use of the file manager. Use of the application window.
2. Nature of an interactive Windows program: winMain, event handlers. Files that make up a Windows program package. Constraints on a Windows program. Microsoft variable naming conventions.
3. Kinds of boxes: The dialog box, menu, accelerator keys, buttons (radio, check boxes, bitmapped buttons). Designing your own control boxes.
4. Other aspects of a Windows program package: creating icons. Creating Help. Concept of hypertext. Creating new cursor shapes. Saving program state from one execution to the next.
5. Creating output in your program: The device context. Print output. Pixel output. Bitmap files. Choosing, sizing, and using fonts.
6. Communication between tasks or applications: Passing data, the clipboard. More general communications, Dynamic Data Exchange (DDE). Using parts of one Windows program in another. Object Linking and Embedding (OLE).
7. Creating software tools to help development: Getting help on the windows interface itself. Creating repetitive code automatically.
8. How to create an install package for your Windows program. Special Windows 95 topics. Introduction to use of object libraries.

Class size will be limited to a maximum of 25 with a minimum of 15. Early registration is recommended. Phone reservations will NOT be accepted. Reservations accepted after February 14 will require a late fee of \$25. No reservations will be accepted after Feb. 24.

WHERE: Smiths Industries, 7-9 Vreeland Road, Florham Park, NJ.

WHEN: 10 Sessions, Tuesday, February 24 through April 28, 1998, 6:30-9:00PM.

COST: With text book only: IEEE members \$235; Non-IEEE members \$335.

CONTACT: Dr. Fred Chichester (973) 744-3065 (leave message) or Art Greenberg (973) 492-1207.

REGISTRATION: C/C++ WINDOWS PROGRAMMING

To: Mr. Naz Simonelli, 68 Woodmont Drive, Randolph, NJ 07869-3740

Name: _____ IEEE No.: _____

Affiliation: _____ Phone No.: _____

Address: _____

Please enclose required fee payable to: **North Jersey Section IEEE**

Signature: _____

IEEE North Jersey Section Seminar on **VISUAL BASIC 5.0**

Tuesday Evenings, February 24 – May 12, 1998
ITT Avionics
100 Kingsland Road, Clifton, NJ

The IEEE is offering an evening course entitled "Visual BASIC 5.0." This comprehensive course is intended for programmers migrating from procedural languages to "Visual BASIC." Prerequisites for the course are a familiarity with Windows 95, knowledge of a procedural language, such as BASIC or C, and programming concepts, access to Microsoft Visual BASIC as well as Microsoft Windows 95. Upon completion, students will understand event driven programming; standard control objects and their associated properties, methods and events; have the ability to design application solutions. The course will run for 12 weeks. A textbook with CD ROM and all text materials required will be provided.

TOPICS

1. Introduction to Visual BASIC; Naming conventions; Creating a Graphical User Interface (GUI); Properties, Events and Methods for forms, Text Boxes, Command buttons and labels; Event procedures; variable declarations; environment options; saving programs.
2. Scope: Code modules; variables and constants; Built-in functions; Expressions and Statements; Finite and dynamic arrays; Static variables; Procedures and functions; passing data by reference or value; Program flow constructs.
3. Debug tools; Properties, events and methods for lines, shapes, check boxes, Option buttons, Frames, Picture boxes and images; Toolbar; Status bar; Z Order; Control arrays.
4. Properties; Events and methods for List boxes and combo boxes.
5. Properties, events and methods for Horizontal/Vertical Scroll Bars and Timers.
6. Multiple Form Projects; Error trapping and handling.
7. Data Manager and the Data Control; Data-aware controls; Grid control.
8. Multiple Document Interface (MDI) Forms; Menu Design.
9. Keyboard Events; Dynamic Link Libraries (DLL).
10. Clipboard; Shell Function; Dynamic Data Exchange (DDE).
11. Object Linking and Embedding (OLE), OLE automation.

Class size will be limited to a maximum of 25 with a minimum of 15. Early registration is recommended. Phone reservations will NOT be accepted. Reservations accepted after February 14 will require an additional fee of \$25. No reservations will be accepted after February 24.

WHERE: ITT Avionics, 100 Kingsland Road, Clifton, NJ.
WHEN: 12 classes, Tuesday, February 24 through May 12, 1998, 6:30-9:00 PM.
COST: IEEE members \$220; Non-IEEE members \$335. Text book included.
CONTACT: Dr. Fred Chichester (973) 744-3065 (leave message) or Art Greenberg (973) 492-1207.

REGISTRATION: VISUAL BASIC 5.0

To: Mr. Naz Simonelli, 68 Woodmont Drive, Randolph, NJ 07869-3740

Name: _____ IEEE No.: _____

Affiliation: _____ Phone No.: _____

Address: _____

Please enclose required fee payable to: **North Jersey Section IEEE**

Signature: _____