



The IEEE

Newsletter

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

1999 Student Presentation Contest - Call for Papers !!

We are proud to announce that the North Jersey Section will be holding a presentation night scheduled for mid-February 1999. This contest has been held in years past and its overwhelming success in generating student participation and interest make it an fantastic event for up and coming engineers.

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. Additionally, the North Jersey Section contest provides an excellent chance for students to practice for the Region 1 Student Paper contest in the spring.

The contest at the Section level is also supplemented by awarding cash prizes to the three best presentations. All engineering students are encouraged to participate in submitting team or individual presentations on any project work RELATED to engineering. This LOCAL contest does NOT require students to write a full paper, just a slide-based presentation on technical or non-technical work is sufficient. Senior design projects, lab projects, personal engineering hobbies, engineering policy, etc., are great topics to submit.

The details of contest rules, judging criteria, and viable topics for presentations can be found at the North Jersey Student Activities Website:

<http://menger.eecs.stevens-tech.edu/~apatel3/ieee.html>

The exact date and location of the contest will be settled by next month. The deadline for abstracts is January 31, 1999. Any and all questions can be emailed to the contest organizer, Amit Patel - NNJ SAC, at a.j.patel@ieee.org or call 973-284-2708.

NJ Computer Chapter: Licensing of Software Engineers

The IEEE North Jersey Computer Chapter will hold a meeting on "Licensing of Software Engineers" by Dr. Edward R. (Ted) Byrne, on Wednesday, Dec. 9th.

About the Talk

The public is becoming more aware that the work of Software Engineers can adversely affect their everyday lives, particularly as Y2K problems begin to surface. Software errors have resulted in the loss of life, bankruptcies, and the shut down of utility operations.

Today there is no legal definition or certification of a Software Engineer. In fact, it is illegal in most states to refer to yourself as a Software Engineer unless you have a Professional Engineer's (PE) license. However, the State of Texas has begun proceedings to license Software Engineers and other states are expected to follow.

In the mean time, the IEEE Computer Society (CS) is taking the position that if any organization is going to certify Software Engineers, it should be them. Dr. Ted Byrne, as a member of the IEEE CS standards board, will bring us up to date with the latest developments.

About the Speaker

Edward R. (Ted) Byrne, PhD, IEEE Life & Senior Member, manages his own consulting business, Flatland Computer Specialties, Inc. He is a board member of the IEEE Computer Society, Software Engineering Standards Committee. Recently, he provided software engineering training on behalf of the IEEE Computer Society for the State of California and City of New York.

All Welcome!

You do not have to be a member of the IEEE to attend. Bring your friends.

Time: 7:30 PM, Wednesday, December 9, 1998. Free buffet starting at 6:30 PM

Place: KDI Triangle Electronics Inc., 60 South Jefferson Road, Whippany, NJ. On west side just south of Quaker State building. Park and enter from right rear of building.

Information: Howard Leach, 973-540-4485, or Venugopal Tirumalai at 973-367-8281.

NJ Consultants' Network: Materials Testing

On Thursday evening, December 3, 1998, the IEEE Consultants' Network of Northern NJ will feature a close up look at the facilities and techniques used to test materials of all kinds.

About the Speaker

International Testing Laboratories is a broad-based technological organization which has provided versatile and valuable services to a variety of industries since 1934. The laboratory offers a wide spectrum of physical testing of a variety of materials.

All Welcome!

Immediately following the tour, please join us for dinner at a local restaurant. Reservations for both tour and dinner are strongly encouraged.

Time: 3:00 PM, Thursday, December 3, 1998.

Place: International Testing, 580 Market Street, Newark, NJ (9 blocks east of Penn Station).

Information: Pat Banker, pbanker@bankercote.com, 201-307-9212.

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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, 25 Messenger Ln, Ringoes, NJ 08551, (908) 806-6898.

IEEE NJ SECTION HOME PAGE

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

IEEE NJ SECTION NEWSLETTER HOME PAGE

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

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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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 (908) 806-6898.

What Courses Would You Like to See?

The IEEE North Jersey Section is very interested in getting your feedback on what courses you would like us to offer. Here is a list of potential courses we can offer.

1. Introduction to Wireless
2. RF/MMW Wireless System Engineering
3. Practical System and RF Components Measurements
4. Principles of Digital and Analog Wireless Communications
5. Data Communication
6. DSP
7. RF Basics
8. RF Advanced
9. RADARS
10. Control Systems
11. Engineering Math-refresh Course
12. Microwave/MMW Design
13. Multi-layer Board Layout and Pitfalls to Avoid (RF, Analog, Digital and Mix Signal Application)
14. Effective Project Management for Engineers
15. Resume Writing Workshop for Electrical Engineers
16. HAM Radio
17. Analog Electronics Practical Approach – Things they don't teach you in college
18. Digital Electronics Practical approach – Things they don't teach you in college
19. Practical Antenna Theory and Design
20. Technical Documentation Writing
21. Design for Testability
22. Digital/Analog Circuit Troubleshooting
23. Understanding and Troubleshooting Today's Advanced Personal Computers
24. Becoming Proficient Using Front Page
25. Development and Use of Visual Basic Macros for Office 97 Applications
26. Understanding Failure Modes of Active and Passive Components in a COTS Environment and Developing Acceptable Reliability Predictions Therefrom.
27. Web Page Design
28. Short Circuit Analysis
29. Power Quality
30. Electrical Engineering Project Management in a Deregulated Utility Industry?
31. Introduction to HTML
32. Basic Internet Theory
33. Introduction to PLC (Programmable Logic Controllers)
34. Applied Statistics for Engineers &

Scientists

35. Test Equipment, The Theory and Use
36. Practical Application of Mitigation Equipment and Techniques for Determining Source of PQ Problems
37. Introduction to the Global Positioning System
38. UNIX
39. Microsoft C++
40. PE Exam Preparation for Part P (Specialized Training-EE)
41. List Other(s) _____

Please provide us your feedback either via email to silberman@ieee.org or US mail to:

Gabe Silberman
57 Sandford Rd
Fair Lawn, NJ 07410

PES Volunteers Winter Power Meeting NYC

Volunteers are needed to assist in various administrative duties during the 1999 Power Engineering Winter Power meeting to be held in New York City at the Hilton Hotel (6th Avenue at West 53rd St) January 31 through February 4, 1999. Volunteer services are especially needed on Monday, February 1 and Tuesday, February 2. Contact Ken Oexle, 973-386-1156, for additional information and details.

Advance to Senior Member Grade

You may be qualified for Senior Member Grade. It takes ten years of experience. A Bachelors Degree counts for three years and Masters and Doctorates each count for one year. You don't have to be an IEEE member for ten years. There is no difference in cost for the different grades.

To get information and an application, send an email request to senior-member-forms@ieee.org and an electronic version will be mailed to you. If you wish to reply also by email, you can do so by sending your completed application to senior-member@ieee.org (Do not use reply to return the application automatically to IEEE, it must be sent to senior-member@ieee.org). For more information, contact Don Weinstein, Kulite Semiconductor, One Willow Tree Road, Leonia, NJ 07605-2239, (201) 461-0900 Ext 234, mornings, email: don@kulite.com.

1998 IEEE Professional Skills Development Workshop A Success

On Saturday, November 7th, the North Jersey Section Student Activities Committee sponsored and organized a workshop on professional skills development. This workshop was organized to provide a program of seminars geared towards informing and developing those career and personal skills designed to make a successful start in engineering.

The workshop was held in Burchard Auditorium at Stevens Institute of Technology between 10AM and 4PM. It featured four speakers who spoke about the following topics:

1. IEEE as a Career Development Tool - Dr. Fred Chichester
2. Career Planning and Management: Skills, Techniques, Tools - Amit Patel
3. Personal Growth and Success: Don't be Stopped by FILL - George Aline.
4. Mastering Presentation Skills for Technical Professionals – Rohan Rambaran

The event was well attended with students from several local schools. Attendees included local Stevens students, Rutgers University, Hudson County College, and Union County College. The crowd at one point swelled to 45 people. The dynamic speakers used a combination of slide-based seminars mixed with interactive exercises to illustrate the main points of their seminars.

The feedback was positive and will help shape the workshop for next time. The next workshop will feature additional seminars focusing on topics like: project planning and time management.

If you would like more information about the workshop just held or future plans for the next one, please contact the Workshop Organizer and IEEE NNJ SAC Chair Amit Patel at a.j.patel@ieee.org.

North Jersey Section Activities December 1998

Dec. 3-“Materials Testing” - NJ Consultants’ Network, 3:00 PM, International Testing, 580 Market Street, Newark, NJ (9 blocks east of Penn Station). Pat Banker, pbanker@bankercote.com, 201-307-9212.

Dec. 9-“Licensing of Software Engineers” - NJ Computer Chapter, 7:30 PM, KDI Triangle Electronics Inc., 60 South Jefferson Road, Whippany, NJ. Howard Leach, 973-540-4485, or Venugopal Tirumalai at 973-367-8281.

Upcoming Meetings

Jan. 6-“NJ Section Executive Committee Meeting” - 7:00 PM, ITT, 100 Kingsland Road, Clifton, NJ. Keith Saracinello (732) 562-6472 or k.saracinello@ieee.org.

Jan. 14-“Embedded IEEE 488 Solutions” - NJ Computer Chapter, 7:30 PM, KDI Triangle Electronics Inc., 60 South Jefferson Road, Whippany, NJ. Howard Leach, 973-540-4485, or Venugopal Tirumalai at 973-367-8281.

Feb. ?-“1999 Student Presentation Contest - Call for Papers !!” - NJ Section, time and location TBD. Amit Patel (973) 284-2708, a.j.patel@ieee.org.

Feb. ?-“Microwave Manufacturing Techniques” - MTT/S/AP-S Chapter, time and location TBD. Dr. Edip Niver (973) 596-3542 (NJIT), Willie Schmidt (973)492-0371, or Dr. Chandra Gupta (973) 633-4469 (GEC-Marconi).

Feb. ?-“The Process and Impediments to the Process of Successfully Developing New Products” - Product Development Management Association, Saddlebrook Marriott Hotel, cost TBD. Peter Schutz, 908-277-4100, schutze@compuserve.com.

Members and Non-Members Welcome PLEASE POST

PES Officer Nominations

The following PES members have been nominated to lead the Power Engineering Chapter in 1999.

Chair - Vittal Rebbapragada

Vice Chair - Tom Piascik

Elections will occur at the first technical meeting in 1999.

IAS Officer Nominations

The following IAS members have been nominated to lead the Industrial Applications Chapter in 1999.

Chair – Ken Oexle

Vice Chair – Won Kim

Elections will occur at the first technical meeting in 1999.

New Fellow Nomination Kits Available

Fellow Nominations forms for candidates to be announced in December 1999 are now available from IEEE in Piscataway, NJ. Contact Sandy Schumacher at 732-562-3843. All Fellow nomination and endorsement forms must be submitted to IEEE prior to March 15, 1999.

AN AFTERNOON WITH GEORGE GILDER

December 10, 4 to 7 PM

Stevens Institute of Technology
Hoboken, New Jersey

For more info: see <http://isen.com/njtt>, email robin@isen.com, call 908-389-0177



LETTERS TO THE EDITOR



Attention: Keith Saracinello, Secretary

The following is a response to the article "Engineers Have Few Friends in Washington" by Richard F. Tax, published in the November, 1998 issue of "The IEEE Newsletter"

I have listened to the rather one-sided arguments put forth by Mr. Tax on the subject of H1-B visas for over one year. In the interest of fairness, it is time to examine the process to which our profession is subjected, in accordance with which our profession is renewed....and by which our profession is thereby perfected. It is a process that teaches us to be smarter, if we can't be stronger or faster. In economic terms, that means be smarter if you can't be cheaper. The process to which I am referring is known as "competition".

Let's consider what can happen if either the residents of the board room or of the drawing board room ignore this very fundamental process, which in biological circles is otherwise known as "evolution". What happens is known as "migration"..... of the manufacturing process from the unsupportable location or process to one more economically preferable. It can happen because an organization does not retool in the production line, in the credit line....or in the intellectual line. It is in the job description of the engineer to recommend the production line retooling (which implies investigation of the credit line by the executive function), and most certainly, to keep up in the intellectual line. This is what competition forces one to do: Keep up, get smarter, work more efficiently. Being subject to the human condition, we all are apt to procrastinate and take it easy (I speak from personal experience, really but assume homology with others), without some additional stimulus applied to move us to action. We are most apt to act on such a stimulus when it is perceived as a threat to our homeostasis.

The steel business is an example of what happens when the retooling and re-thinking processes are ignored. The business is no longer an American one, except for a few small specialty areas. This could have been avoided with the infusion of new blood, i.e. new thinking brought in from wherever it was found, even if that meant the import of Asian engineers.....because that is where the business is now based. Excess confidence...."we are the best, no one else can do it better".....led to a rude awakening and a hasty flight of the business to areas more desirable. In my area, the microwave field, the basic materials business (dielectrics, ferrites, most semiconductors) have escaped our shores, again due to ignoring the potential for both production and design contributions from engineers educated here (in many cases) and then sent packing, back to their own shores. What do we think they do when they get home....open dry cleaning shops or is it possible that the 4 to 8 years of training received here will be used to design high tech processes or materials back in their newly-enforced "homeland"?

We are still a very strong nation, both technically and economically. I'm sure we are all proud of the American engineering approach; the hands-on, can-do history of our profession in this country has been, and continues to be, legendary the world over. People who work here become a part of the process solution, not the process problem. People cannot work here unless there are jobs. Organizations hire (or try to hire) the best people they can, when they have needs. Engineering is most efficiently employed when in physical proximity to production, and thus if production flees, engineering must seek new venues. The contrary is true as well, where engineering goes, so goes production and the many, many jobs associated therewith. As engineers, therefore, we have great influence on company structures. Without us, nothing happens....but if nothing happens, they don't need us at all. If we are inefficient, so will be the other company operations and failure is right around the corner.

I say ABSORB the competition, don't ignore it. Bring in competent workers as required, subject to the same laws and requirements faced by current practicing engineers. Perhaps examinations of qualifications such as P.E. exams would serve to remove all incompetents from the profession, thus enabling the evolution of the profession to ever higher levels. I am grateful that some of our Congress people recognize the need to import new ideas and realize that these new ideas will result in American production, American prosperity and indeed, American dominance in the world market place.....which as an American, I think is just great! Let's ask Congress to help level the playing field for everyone....so that only the best need apply, whether native or simply eager to contribute to our land and therefore to our collective American prosperity.

Let's stop this nonsense about surveys that purport to show only that other surveys are wrong. "Survey says"... outside of television land, who cares? As hard-headed engineers, it is our job to deal with the facts as they are presented and the facts are that we are not alone in this world. To continue our pre-eminent national role, we must continually get downloads from wherever they can be found....downloads of data, of brawn.... and of brains!

Richard V. Snyder
IEEE Fellow