



The IEEE

# Newsletter

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

*NJ PES/IAS:*

## **CNG Mass Transit Vehicles**

On March 15, 2001, the IAS/PES Chapters and the North Jersey Section ASME will sponsor a program on the role of compressed natural gas in powering mass transit cruiser buses in New Jersey. The speaker will be Bill Wells.

### **About the Talk**

Running busses on CNG significantly reduces carbon monoxide emissions, reactive hydrocarbons – the principal ingredient in smog and carbon dioxide emissions, which contribute to the greenhouse effect. The program will discuss the successful partnership between NJ Transit and New Jersey Natural Gas. NJ Transit has a total of 77 CNG buses that are in daily use transporting commuters from central NJ to New York City.

### **About the Speaker**

The speaker will be Bill Wells of New Jersey Natural Gas.

**Time:** 7:00 PM, Thursday, March 15, 2001. Note: this is a dinner meeting and there is a dinner charge of \$15.00 / person.

**Place:** Afton Restaurant, Hanover Rd at Columbia Turnpike in Florham Park, NJ. Directions: Take I-287 to Exit 37 (NJ 24 East - Springfield). Take NJ 24 East to Exit 2B (Columbia Turnpike). Proceed 2.2 miles to Hanover Road (6th set of traffic lights). Turn left on Hanover Road (Afton Restaurant on the corner).

**Information:** Ken Oexle (973) 386-1156.

*NJ MTT/AP Chapter:*

## **How to Reduce and Eliminate Distortion in Power Amplifiers Using Linearization**

The IEEE NJ Section MTT/S/AP-S Chapter along with NJIT will host a talk March 8, 2001 on "How to Reduce and Eliminate Distortion in Power Amplifiers Using Linearization." The speaker will be Dr. Allen Katz.

### **About the Talk**

Our society's need to exchange greater and greater amounts of information has created an unprecedented demand for highly linear power amplifiers (PAs). High linearity is required for the spectrally efficient transmission of information. This presentation discusses techniques for the cancellation of distortion (linearization). Different methods of linearization will be introduced and compared. The linearization of solid state power amplifiers (SSPAs), traveling wave tube amplifiers (TWTAs) and klystron power amplifiers (KPAs) will be considered. Criteria for the evaluation of linearity shall be reviewed, with special attention given to problems unique to SSPAs. Predistortion is shown to be a preferred linearization approach for many applications.

### **About the Speaker**

Dr. Allen Katz is a professor of Electrical Engineering at The College of New Jersey. He has more than 25 years of experience in the microwave and satellite industries. His work spans the

frequency range from UHF through Ka-band and has involved hybrid, MMIC and photonic circuits including the design of the first practical MMIC linearizer. He holds 15 patents and has written more than 50 technical publications. He is the founder and President of Linearizer Technology, Inc., a New Jersey based company dedicated exclusively to distortion correction.

He has been the recipient of the ARRL Technical Merit Award in 1976, the John Chambers Award in 1982, an IEEE Centennial Medal in 1984, the GE ASD Technical Excellence Award in 1990, the IEEE Region I Achievement Award in 1992 and the Martin Marietta Astro Inventor of the year award in 1993. Dr. Katz is a Fellow of IEEE and its Microwave Theory and Techniques (MTT) Society. He is a member of the MTT IMS Technical Program Committee and organized MTT workshops on linearizer technology in 1988 and 1998 and on TWTA advances in 1995.

### **All Welcome!**

You do not have to be an IEEE member to attend.

**Time:** 7:00 PM, Thursday, March 8, 2001. Free dinner will be available at 6:00 PM.

**Place:** New Jersey Institute of Technology (NJIT), Room 202, ECE Center, Newark, NJ. Directions are available at [www.njit.edu](http://www.njit.edu).

**Information:** Kirit Dixit, (201) 400-2313 (RF Electronics), Willie Schmidt (973) 492-0371 or Edip Niver (973) 596-3542 (NJIT).

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**March 2001**

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**IEEE NJ SECTION HOME PAGE**

<http://www-ec.njit.edu/~ieeenj/>

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**NEWSLETTER.html**

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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 contact Secretary Wayne Owens at (201) 767-3400, ext. 226, [wowens@crestron.com](mailto:wowens@crestron.com).**

*NJ EDS, C&S Chapters:*

**Multistage Interference Cancellation for Wireless Communications - A Set-Membership Filtering Approach**

On March 14<sup>th</sup>, 2001, the IEEE NJ Section Electron Devices, and Circuits and Systems Chapters will host a talk on "Multistage Interference Cancellation for Wireless Communications - A Set-Membership Filtering Approach." The speaker will be Dr. Yih-Fang Huang.

**About the Talk**

This lecture presents a practically appealing multiuser detection scheme for mitigating multiple access interferences in wireless communication systems. It will show how optimum (in the sense of minimum mean-squared error (MMSE)) multiuser detection can be achieved at low cost with the aid of multistage interference cancellation and set-membership filtering.

The lecture will begin by presenting minimum mean-squared error multiuser detection (MMSE-MUD) as an alternative to the commonly known minimum probability of error MUD (MPE-MUD), followed by showing its equivalence to the MPE-MUD under an isometric signaling condition which covers all binary and M-ary orthogonal constellations. The MMSE-MUD is, in essence, MMSE signal estimation followed by a minimum-distance single user detection.

Iterative solutions will be presented for nonlinear MMSE estimation. It will be shown that if interferers' codes are known by the signal estimators for each user, the MMSE solution is a fixed point which is reached in one iteration, though it is computationally intractable. If interferers' codes are unknown, the resulting iterative multiuser detector is shown to be of the same order of complexity as a conventional multistage interference canceler, and that the nonlinear MMSE solution is a fixed point to it.

**About the Speaker**

Yih-Fang Huang received his PhD degree in Electrical Engineering from Princeton University in October, 1982, and has been on the Faculty at University of Notre Dame since then. He is currently Professor and Chair of the Electrical Engineering Department at Notre Dame. In Spring 1993, he received the *Toshiba Fellowship* and was Toshiba Visiting Professor at Waseda University, Tokyo, Japan.

Dr. Huang has been actively involved with IEEE activities. He served as Associate Editor for the *IEEE Transactions on Circuits and Systems* in

1989-1991, and then as Associate Editor for *Express Letters* for the same journal in 1992-1993. He was Chairman for the Digital Signal Processing Technical Committee of the IEEE Circuits and Systems Society (1995-96). He served as Vice President - Publications for the IEEE Circuits and Systems Society in 1997-98. He is a founding member of the Steering Committee for the *IEEE Transactions on Multimedia*. He received the IEEE-CAS Golden Jubilee Medal in 1999 and is currently a Distinguished Lecturer of the CAS society. Dr. Huang is a Fellow of the IEEE.

**All Welcome!**

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

**Time:** 7:00 PM, Wednesday, March 14, 2001. Free buffet will be starting at 6:00 PM.

**Place:** New Jersey Institute of Technology (NJIT), Room 202, ECE Center, Newark, NJ. Directions are available at [www.njit.edu](http://www.njit.edu).

**Information:** Dr. Richard Snyder (973) 492-1207 (RS Microwave), Dr. Durga Misra or Dr Edip Niver (973) 596-3542 (NJIT).

*NJ PES/IAS:*

**Electric Vehicle Technology**

The IEEE North Jersey Chapters of IAS/PES will sponsor a technical meeting on "Electric Vehicle Technology" on May 17<sup>th</sup>. Randy Evans will be the speaker.

**About the Talk**

The discussion will include series and parallel hybrid electric vehicles as well as, internal combustion engine/battery electric vehicles, the forerunner of fuel cell hybrid electric vehicles. Demonstration vehicle models currently available in the market place incorporating these new technologies and other alternate fuel electric vehicles will also be reviewed.

**About the Speaker**

The speaker is Randy Evans of GPU Energy. He has an extensive background in the development, testing, evaluation and application of electric vehicle technology.

**Date:** 7:00 PM, Thursday, May 17, 2001.

**Place:** GPU Energy, 300 Madison Ave, Morristown, NJ.

**Information:** Ken Oexle (973) 386-1156 ([k.oexle@worldnet.att.net](mailto:k.oexle@worldnet.att.net)).

## Consulting: Independent vs. Jobshops

On Thursday, March 29, 2001, the IEEE Consultants' Network of Northern NJ will present a talk on "Consulting: Independent vs. Jobshops." The speaker will be Helen Shapiro, Technical Recruiter with Aerotek Contract Engineering.

### About the Talk

Due to downsizing or the need for budget cuts, an increased number of companies are looking for consultants to fulfill their needs. Within the last decade, the use of consultants has increased 70%. Whether you have always wanted to be an independent consultant and operate as your own company, or just wanted to consult with different companies by being placed through a recruiting firm, this presentation is for you.

It will define the advantages and disadvantages of being an independent consultant versus consulting through a firm. Learn about the costs incurred with placing a consultant on an assignment; including how insurance, vacation and holiday time, unemployment and taxes affect rate negotiations.

### About the Speaker

Helen Shapiro is a Technical Recruiter with Aerotek Contract Engineering in Parsippany, NJ, a privately owned division of Allegis Group Companies. She specializes in the recruiting and professional placement of highly skilled software, electrical and mechanical engineers on a consulting or direct basis.

### About the Consultants' Network

The IEEE Consultants' Network of Northern NJ was founded in 1992 to encourage and promote the use of independent technical consultants by business and industry.

### All Welcome!

You do not have to be a member of the IEEE or of the Consultants' Network to attend. Networking after the meeting is encouraged. There is no charge for admission.

**Time:** 7:30 PM, Thursday, March 29, 2001.

**Place:** KDI Triangle, 60 S. Jefferson Road, Whippany, NJ.

**Information:** For directions and up-to-date meeting status, call Robert Walker (973) 728-4500 or visit our website at [www.TechnologyOnTap.org](http://www.TechnologyOnTap.org).

## North Jersey Section Activities March 2001

**Mar. 6**—"Student Paper Contest" – 7:00 PM (dinner at 6:00 PM), Fairleigh Dickinson University, Teaneck Campus, Rm 203, Muscarelle Building, NJ. Amit Patel (973) 284-2708 or [a.j.patel@ieee.org](mailto:a.j.patel@ieee.org).

**Mar. 7**—"NJ Section Executive Committee Meeting" – 7:00 PM, ITT, 100 Kingsland Rd, Clifton, NJ. Wayne Owens at (201) 767-3400 ext. 226 or [wowens@crestron.com](mailto:wowens@crestron.com).

**Mar. 8**—"How to Reduce and Eliminate Distortion in Power Amplifiers Using Linearization" - MTT/S/AP-S Chapter, 7:00 PM, NJIT, 202 ECE Center, Newark, NJ. Kirit Dixit (201) 400-2313, Willie Schimdt (973) 492-0371 or Dr. Edip Niver (973) 596-3542 (NJIT).

**Mar. 14**—"Multistage Interference Cancellation for Wireless Communications - A Set-Membership Filtering Approach" – EDS/C&S Chapters, 7:00 PM, NJIT, 202 ECE Center, Newark, NJ. Dr. Richard Snyder (973) 492-1207, Dr. Durga Misra or Dr Edip Niver (973) 596-3542.

**Mar. 15**—"CNG Mass Transit Vehicles" – NJ IAS/PES Chapters, 7:00 PM, Afton Restaurant, Hanover Rd at Columbia Turnpike, Florham Park, NJ. Ken Oexle (973) 386-1156.

**Mar. 21**—"IEEE Sarnoff Symposium 2001 - Advances in Wired and Wireless Communications" – 7:30 AM to 5:30 PM, The College of New Jersey, Ewing, NJ. Ms. Barbara J. McGivney (732) 280-2022.

**Mar. 29**—"Consulting: Independent vs. Jobshops" – NJ Consultants' Network, 7:30 PM, KDI Triangle, 60 S. Jefferson Rd, Whippany, NJ. Robert Walker (973) 728-4500 or [www.TechnologyOnTap.org](http://www.TechnologyOnTap.org).

### Upcoming Meetings

**Apr. 4**—"NJ Section Executive Committee Meeting" – 7:00 PM, ITT, 100 Kingsland Rd, Clifton, NJ. Wayne Owens at (201) 767-3400 ext. 226 or [wowens@crestron.com](mailto:wowens@crestron.com).

**Apr. 4**—"Searching, Filtering, and Adaptation of Audio-Visual Information" - NJ Signal Processing Chapter, 5:00-6:00 PM (refreshments at 4:45 PM), NJIT, 202 ECE Center, Newark, NJ. Dr. Yun-Qing Shi (973) 596-3501 or Dr. Alfredo Tan (201) 692-2324 [tan@mailbox.fdu.edu](mailto:tan@mailbox.fdu.edu).

**Apr. 5**—"Software Verification & Validation: An Overview for Practitioners" – LI Computer Chapter, 8:30-5:00 PM, Melville, NY. Babak Beheshti (516) 686-7437 or [b.beheshti@ieee.org](mailto:b.beheshti@ieee.org).

**Apr. 6**—"Management's Role in Achieving Predictable Software Development" – LI Computer Chapter, 8:30-5:00 PM, Melville, NY. Babak Beheshti (516) 686-7437 or [b.beheshti@ieee.org](mailto:b.beheshti@ieee.org).

**Apr. 22**—"NJ Section Awards Reception" – 3:00 to 6:00 PM at the Birchwood Manor, 111 North Jefferson Rd, Whippany, NJ. Anne Giedlinski (973) 377-3175.

**Apr. 24**—"Rail Rapid Transit Vehicle Innovations Forum" – NYC VTS Chapter, 6:00 to 8:00 PM, 320 Park Ave, (50<sup>th</sup> St), NY, NY. David Horn (212) 947-7110 or [david.horn@fluor.com](mailto:david.horn@fluor.com).

**Apr. 26**—"Overview of MEMS Technology with Applications to RF Communication" – EDS/C&S Chapters, 7:00 PM, NJIT, 202 ECE Center, Newark, NJ. Dr. Richard Snyder (973) 492-1207, Dr. Durga Misra or Dr Edip Niver (973) 596-3542.

**Apr. 26**—"Advances in Fuel Cell Technology" – NJ IAS/PES Chapters, 7:00 PM, PSE&G Training Center, Edison, NJ. Ken Oexle (973) 386-1156.

**May. 17**—"Electric Vehicle Technology" – NJ IAS/PES Chapters, 7:00 PM, GPU Energy, 300 Madison Ave, Morristown, NJ. Ken Oexle (973) 386-1156.

**Mar. 18**—"Induction Motor Drives & Applications Seminar" – NJ IAS/PES Chapters, 9:30 AM to 3:30 PM, Exact location TBD but will be in Morris County, NJ. R. Vittal Rebbapragada (609) 720-3209 or [r.rebbapragada@ieee.org](mailto:r.rebbapragada@ieee.org).

## Members and Non-Members Welcome

# PLEASE POST

*NJ PES/IAS:*

## Advances in Fuel Cell Technology

The IEEE North Jersey Chapters of IAS/PES will host a technical presentation on "Advances in Fuel Cell Technology" on April 26<sup>th</sup>. Arthur Quade will give this presentation.

### About the Talk

Fuel cells are projected to play an increasing role in our lives. The IAS & PES Chapters will sponsor a technical meeting on the history, recent advances and applications of fuel cell technology. The presentation will also discuss pricing trends for different types of fuel cells and

the commercial availability of fuel cells from developers.

### About the Speaker

The speaker is Arthur Quade of Somerset Energy Services. He has an extensive background in cogeneration, dispersed generation and fuel cell projects, including experience with EPRI and major fuel cell developers.

**Date:** 7:00 PM, Thursday, April 26, 2001.

**Place:** PSE&G Training Center, Edison, NJ (Intersection Routes 1 & 287) at Pierson Rd.

**Information:** Ken Oexle (973) 386-1156 ([k.oexle@worldnet.att.net](mailto:k.oexle@worldnet.att.net)).

*NJ EDS, C&S Chapters:*

## **Overview of MEMS Technology with Applications to RF Communication**

On April 26th, 2001, the IEEE NJ Section Electron Devices, and Circuits and Systems Chapters will host a talk on "Overview of MEMS Technology with Applications to RF Communication." The speaker will be Professor Mona Elwakkad Zaghoul.

### **About the Talk**

MicroElectroMechanical Systems (MEMS) have been used in the development of sensors and actuators Microsystems. Micromachining techniques such as surface and bulk micromachining are used to realize MEMS devices. The integration of MEMS devices with interface circuits to realize Microsystems provide the use of such systems in many commercial applications. This talk gives an overview of MEMS commercial applications. CMOS technology has been used in realizing MEMS devices such as gas sensors, RF – power sensors, and RF – microwave passive components. We discuss the challenges in micromachining CMOS technology to realize MEMS devices. A new monolithic CMOS micromachining approach is proposed suitable for realizing RF components for RF communications.

### **About the Speaker**

Mona Elwakkad Zaghoul has been Professor in the Department of Electrical Engineering Computer Science at the George Washington University since 1989. Since 1997 Professor Zaghoul has been director of the Institute of MEMS and VLSI technology also at GWU. Professor Zaghoul is an IEEE Fellow.

### **All Welcome!**

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

**Time:** 7:00 PM, Thursday, April 26, 2001. Free buffet will be starting at 6:00 PM.

**Place:** New Jersey Institute of Technology (NJIT), Room 202, ECE Center, Newark, NJ. Directions are available at [www.njit.edu](http://www.njit.edu).

**Information:** Dr. Richard Snyder (973) 492-1207 (RS Microwave), Dr. Durga Misra or Dr Edip Niver (973) 596-3542 (NJIT).

## **NJ Signal Processing Chapter: Searching, Filtering, and Adaptation of Audio-Visual Information**

On Wednesday, April 4, 2001, the IEEE North Jersey Section Signal Processing Society Chapter will host a presentation on "Searching, Filtering, and Adaptation of Audio-Visual Information." The speaker will be Shih-Fu Chang.

### **About the Talk**

Motivated by the popularity of multimedia content and applications, researchers have been very active in developing new techniques and standards for audio-visual content description. Such descriptions can be used to facilitate innovative ways of accessing, filtering, and delivering multimedia information, potentially from distributed on-line sources.

We will present our research and prototype results in this broad area.

First, we will present our research in searching images/videos from large archives. We will describe our works in using multimedia features in content categorization, knowledge representation networks for integrating perceptual-level and conceptual-level knowledge, and iconic templates for searching visual-oriented concepts.

Second, we will present our works in digital video structuring and summarization. We will discuss approaches to scene segmentation and skimming for generic domains using a unique computational scene model and joint audio-visual features. We will present techniques for exploring syntactic structures and production rules in videos in specific domains, such as sports and medical.

Lastly, we will briefly discuss how the content description and structuring results from above can be used to enhance streaming and transmission of digital video. One application called "content-aware resource allocation" uses content analysis techniques in classifying and predicting the rate-distortion utility functions of video streams, which in turn facilitate optimization of resource allocation among multiple streams.

### **About the Speaker**

Shih-Fu Chang is an Associate Professor of Electrical Engineering at Columbia University. He currently directs Columbia's ADVENT university-industry consortium and the Image and Advanced TV Lab. The ADVENT group conducts active research on representation, searching, transmission, and security of multimedia content. Several innovative

systems have been developed and prototyped by his group, including VideoQ, WebSEEK, MetaSEEK for image/video searching, WebClip for networked video editing, and Sari for online image authentication.

His group enjoys close interaction with other disciplines and industry partners to stimulate new ideas. The group has participated in several large-scale cross-disciplinary projects, including Columbia's Health Care Digital Library Project supported by the multi-agency DLI-2 initiative, the Digital News System, and a K-12 Art Image Education Project.

Professor Chang actively participates in professional technical activities and standardization efforts, such as MPEG-7. He has been a general co-chair of ACM Multimedia Conference 2000, an associate editor for several journals, and a consultant in several new media companies.

Professor Chang has been awarded a Navy ONR Young Investigator Award, a Faculty Development Award from IBM, a CAREER Award from National Science Foundation, and three best paper awards in the areas of multimedia manipulation and accessing. He is currently a Distinguished Lecturer for IEEE Society of Circuits and Systems.

### **All Welcome!**

You do not have to be an IEEE member to attend. Light refreshments will be served at 4:45 PM.

**Time:** 5:00 - 6:00 PM, Wednesday, April 4, 2001.

**Place:** New Jersey Institute of Technology (NJIT), Room 202, ECE Center, Newark, NJ. Directions are available at [www.njit.edu](http://www.njit.edu).

**Information:** Dr. Yun-Qing Shi, (973) 596-3501, [shi@njit.edu](mailto:shi@njit.edu) (NJIT) or Dr. Alfredo Tan, (201) 692-2324, [tan@mailbox.fdu.edu](mailto:tan@mailbox.fdu.edu) (Fairleigh Dickinson University).

## **IEEE Vehicular Technology Conference**

The IEEE Vehicular Technology Society will hold its Fall 2001 Conference on October 6-11, 2001 in Atlantic City. It is one of the major international mobile communications conferences in the world and will be hosted by the North Jersey chapter. Information about the conference is available at [www.fallvtc2001.org](http://www.fallvtc2001.org).

Companies that are interested in sponsorship should contact Steve Wilkowski at [swilkowski@lucent.com](mailto:swilkowski@lucent.com).

## **IEEE Volunteers Needed for 2001 National Scout Jamboree**

Volunteers are needed for the Electricity and Electronics Merit Badge Booths at the 15<sup>th</sup> National Scout Jamboree. IEEE is the title sponsor of the Electronics Merit Badge Booths and co-sponsor of the Electricity Merit Badge Booths. Volunteers are primarily needed for the position of merit badge instructor. While volunteers can volunteer for just one day, it is preferred that they volunteer for at least two days.

The National Scout Jamboree will be held from Monday, 23 July 2001 through Wednesday, 1 August 2001 at Fort A.P. Hill, Virginia. The Jamboree site is near Bowling Green, Virginia which is between Richmond and Fredericksburg.

To volunteer, contact John P. Castelvechi at [john\\_castelvechi@dom.com](mailto:john_castelvechi@dom.com). Provide John with your name, address, phone number, email address, requested volunteer position and available dates.

## **An Appeal for Earthquake Victims in India**

The recent devastating earthquake that hit north-western India has had a terrible effect on the population, housing, and infrastructure. Such a drastic event has left countless injured, and myriads dead. The region and people of India have lost much of their progress in recent years due to this earthquake.

We appeal to the general membership to make a contribution to the charity below. Any funds would greatly help bring badly needed food, water, medical supplies, and support services to the affected areas.

Please make your tax-deductible checks payable to: American Red Cross International Response Fund and mail them to:

American Red Cross International Response Fund  
P.O. Box 37243  
Washington, D.C. 20013

Or online at: [www.redcross.org/donate/donate-now.html](http://www.redcross.org/donate/donate-now.html) and [www.embassyofindia.org](http://www.embassyofindia.org).

## **Last Call for Student Presentation Contest Spring 2001**

This article is a final call for participation in the Spring 2001 Student Presentation Contest. The details have been finalized for this year's contest and prizes of \$100/\$75/\$50 for both categories of graduate and undergraduate students.

The contest will be held on Tuesday, March 6, 2001 at FDU in Teaneck, NJ. Room 203 in the Muscarelle Center for Building Construction Studies. (Building number 6 on the Map, 2nd floor). Dinner will be at 6PM and the contest will begin at 7PM. Parking is available and the exact directions and location can be found as hyperlinks on the SAC webpage [http://ewh.ieee.org/r1/north\\_jersey/sac](http://ewh.ieee.org/r1/north_jersey/sac)

The local rules for the presentations are posted on the web along with the judging rules. More importantly, all participants must fill out the registration form and submit an abstract of their presentations. Don't miss the great opportunity to sharpen those all essential presentation and public speaking skills and possibly win some cash. Any questions, just email the organizer at: [a.j.patel@ieee.org](mailto:a.j.patel@ieee.org).

## **Do You Want to Volunteer for Students Activities in the North Jersey Section?**

The student activities committee of North Jersey section is seeking volunteers to help run the committee and be involved with assisting university students in the area. We need folks to help out with giving seminars (technical and professional), coordinating activities among students, and organizing section wide student events.

An introductory social meeting for interested participants will be held on Wednesday, March 28th, 2001 at Houlihan's in Secacus, NJ (off Route 3 West) around 6PM. If you would like to attend, please RSVP to the organizer at: [a.j.patel@ieee.org](mailto:a.j.patel@ieee.org)

This is a great opportunity to get involved with helping students in the local area and giving back essential guidance to students entering the engineering community and beginning long professional careers.

## **The VT Conference Committee Wants You!! Looking for Volunteers, Sponsors, Exhibitors**

The IEEE North Jersey Section is hosting the Fall 2001 Vehicular Technology Conference in Atlantic City, NJ from October 6-11, 2001. And now's your chance to get involved.

Have you ever wondered how a conference comes together? How speakers, tutorials, meals, and many other activities are smoothly integrated? How to produce a powerful technical program of international caliber? How to advertise your company's name on the coffee cups during the lunches and breaks?

Then this is the deal for you. The conference committee is issuing an open call for volunteers to help man its sub-committees. Currently the following have some openings: local arrangements, banquet, publicity, publications, registration, special/social events, transportation, and many others.

But it doesn't stop there. There are special discounts for student volunteers and sponsoring companies. What better way for your organization to get its name out to hundreds of people from worldwide in the mobile communications arena than by becoming Platinum, Gold, or Silver sponsors? You can even tailor your sponsorship to meet your advertising needs. This includes getting tables or floor space to exhibit YOUR products and services to those people with the purchasing power or an all electronic advertisement on the website.

Even students can get involved. There is a significant student admissions discount and does not require any society affiliations. We are also looking for students to man the registration desk and take on other activities. Universities are also welcome to become sponsors.

How can you find out more and get involved? Contact conference chair Art Greenberg at [a.h.greenberg@ieee.org](mailto:a.h.greenberg@ieee.org) or (973) 386-6673, and Industry Liaison/Exhibits chair Stephen Wilkowski at [swilkowski@lucent.com](mailto:swilkowski@lucent.com) or (973) 386-6487. Check out the website at <http://www.fallvtc2001.org>.



## ADVANCES IN WIRED AND WIRELESS COMMUNICATIONS

### SYMPOSIUM PROGRAM

#### Invited Paper Sessions/Chairpersons:

- Advances in Wired Communications / O. Lubecke & V. Lubecke, Lucent Technologies
- Advances in Mobile Communications / J. Harvey, ARO
- Advanced Devices for Communications / J. Lin, Lucent Technologies
- Mobile Cellular Communications / Z. Turski, Sarnoff Corp.
- Communication Filter Technology / R. Snyder, RS Microwave
- Wide Bandgap Semiconductors for Advanced Communication Systems in the New Millennium / W. Gelinovatch, GTS
- Advances in Satellite Communications / P. Palena, Lockheed Martin Corp.
- Advances in Programmable Communications / E. Skurnick, Sarnoff Corp

#### Tutorials/Tutors:

- Bluetooth / R. Schneiderman, consultant

#### Student Paper/Poster Session:

W. Jemison, Lafayette College, organizer.

**DATE:** Wednesday, March 21, 2001

**TIME:** 7:30 AM - 5:30 PM

**PLACE:** The College of New Jersey, Ewing, NJ

#### **REGISTRATION:**

Advance/Same Day: \$125/\$140 (\$10/\$15 student; \$0 life members)

(Registration includes entrance to all sessions and one copy of technical digest; Additional Digest: \$20)

For advance registration contact Barbara J, McGivney, GTS, 3100 Route 138, Wall Township, NJ 07719, phone: (732) 280-2022.

Please make checks payable to: IEEE Princeton Section/Sarnoff Symposium

For program updates, symposium news and other announcements visit our web site at [http://ewh.ieee.org/r1/princeton-centraljersey/Sarnoff\\_Symposium\\_2001.htm](http://ewh.ieee.org/r1/princeton-centraljersey/Sarnoff_Symposium_2001.htm)

Sponsored by: IEEE Princeton Section, IEEE Microwave Theory and Techniques Society, TCNJ Engineering Department and TCNJ IEEE Student Branch

# IEEE AWARDS RECEPTION

*North Jersey Section  
April 22, 2001  
Birchwood Manor, Whippany NJ*

*A time to relax, unwind and enjoy --  
A time to pay tribute to our new Fellows --  
A time to honor our Award Winners --  
YES it's time for the Annual Section Reception*

The Annual Section IEEE Awards Reception will be held at the Birchwood Manor, 111 North Jefferson Road, Whippany again this year. The affair is scheduled for **Sunday, April 22, 2001** from 3 to 6 PM. Tickets are \$35.00 each and include a complete prepaid, two-hour open bar, hors d'oeuvres, buffet, and dessert. Spouses and guests are welcome. We are limited to 90 attendees, so please make your reservations early.

**Reservations are required by April 16, 2001.** Complete the reservation form and return it with your payment. If you would like tickets mailed back to you, please enclose a self-addressed **stamped** envelope. Otherwise, your tickets will be held at the door for you. If any additional information is required concerning the reception, contact Anne Giedlinski at (973) 377-3175.

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Use this form for Reception reservations. **ENCLOSE A SELF-ADDRESSED STAMPED ENVELOPE to receive tickets in advance.** **Reservations are required by April 16, 2001.** Mail reservation request to:

Anne Giedlinski  
299 Brooklake Road  
Florham Park, NJ 07932

Enclosed is \_\_\_\_\_ for \_\_\_\_\_ ticket(s) at \$35.00 each (make check payable to **North Jersey Section IEEE**) for:

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

\_\_\_\_\_

# INDUCTION MOTOR DRIVES & APPLICATION SEMINAR

The IEEE North Jersey Section Chapters of IAS/PES will host a one day Seminar on "Induction Motor Drives & Applications" on May 18, 2001 in Morris County, NJ. The seminar duration will be 9:30 AM to 3:30 PM, with breaks for lunch & coffee. The seminar will cover the following topics:

- Fundamentals of Energy Conversion - Induction Motors
- Standards Governing the Selection & Application of Motors
- Technical Issues Associated with Variable Speed Drive Applications
- Review of basic motor types and winding terminology
- Comments on DC Machines in use in some applications
- Miscellaneous Issues (not already covered above)
- Squirrel Cage Rotors
- Low Voltage Windings
- High Voltage Windings
- Insulation Testing
- Cleaning and Drying
- Winding Repair
- Design Considerations
- Vibration and Balancing
- Digital Relays for Motor Protection

Coverage of the above topics will examine both electrical and mechanical aspects, as relevant, and focus discussions will include information on what to look for in troubleshooting failures, replacement winding designs and practical aspects of testing.

The Seminar will be given by the following:

- **Mr. Beant Nindra, PE (IEEE)** provides engineering oversight for National Electric Coil's Columbus and Brownsville engineering units. He has nearly 40 years experience as a designer of windings for generators and all types of large motors.
- **Mr. William Moore, PE (ASME)** is responsible for the day-to-day management of the Columbus-based engineering unit, which provides technical oversight of repair and refurbishment projects, as well as engineering design for the manufacture of new coils. He brings hands-on operational experiences to his job, gained through power plant technical and business management positions with Florida Power & Light at the Sanford power plant and the award-winning Martin power plant.
- **Mr. Stan Zocholl**, Distinguished Engineer of Schweitzer Engineering Labs, and a Fellow of IEEE will cover digital motor protection of motors.
- **Mr. R. Vittal Rebbapragada (SM), PE**, Senior Consulting Engineer with Washington Group, International will cover motor fundamentals, and standards governing selection and application of motors.

The speakers for this Seminar have over 20 years of experience in the design, selection & application of motors drawn from different organizations. The registration fee for this seminar prior to April 15th will be \$200 (non-IEEE members), \$150 (IEEE Members), and \$25 (Students with valid ID). Registrations after April 15<sup>th</sup> must include an additional late fee of \$25. The Seminar fee includes lunch, refreshments and handouts. Non-members joining IEEE within 30 days of the seminar will be rebated \$100 of the \$200 registration charge. Organizations sponsoring 3 or more attendees will get a 50% discount.

Date: May 18, 2001 (9:30 AM – 3:30 PM)  
Location: TBD but will be in Morris County, NJ (see the April Newsletter for specific details)  
Information: R. Vittal Rebbapragada, PE at (609) 720-3209 or via e-mail at r.rebbapragada@ieee.org  
Registration: US mail to: K. Oexle, 11 Deerfield Rd, Whippany, NJ 07981

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Registration: Induction Motor Drives & Application Seminar, 5/18/2001

Name \_\_\_\_\_

Address \_\_\_\_\_  
\_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_

IEEE # \_\_\_\_\_ Student @ \_\_\_\_\_ Non IEEE \_\_\_\_\_

Payment Enclosed \$ \_\_\_\_\_ (make check payable to **North Jersey Section IEEE**)  
Add \$25 for late registration after April 15<sup>th</sup>