IEEE North Jersey Section Seminar
ADVANCED C LANGUAGE PROGRAMMING
Tuesday or Thursday Evenings, Starting September 25, 1990
Jersey Central Power & Light Co.,
Madison Avenue & Punch Bowl Road, Morristown, N.J.

The North Jersey Section is offering two evening classes (Tuesday or Thursdays) for a course titled "Advanced C Language Programming." The course will focus specifically on the Microsoft QuickC compiler, on the IBM PCs and compatible computers with DOS.

The lecture will cover intermediate to advanced C programming techniques that will help experienced C programmers apply real world applications.

Students will be assigned assignments to do on their own IBM PC or compatible, if one is available; either at home or on the job.

A Microsoft QuickC compiler and two text books will be supplied.

Prerequisites: The student should be familiar with the C Language.

The instructor is Mr. Tuan O. Nguyen, a Systems Engineer at Jersey Central Power and Light Company.

The following list of topics to be covered will take place over 14 sessions:

1. Advanced C Warmup - Basic Pointers; Function Basics; Array-Processing Functions; Functions and Strings; Functions and Two-Dimensional Arrays; Storage Classes; Function Scope; Pointers to Functions; Summary.
2. Binary and Text File I/O - Text Files and Binary Files; Command Line Arguments; Low-Level I/O; Low-Level File Creation; Buffered I/O and the Standard I/O Package; Standard Files and Redirection: More Functions from the Standard Package.
3. Integer Forms and Bit Operations - Integer Types; Integer Conversions and Sign Extension; Bit Operations; Using bitwise Operators: Flag Work; Bit Fields; Summary.
4. Common I/O Problems and Solutions - Buffers and Echoes; Interactive Programming; Interactive String Input; Cursor Control; Cursor Control and Interrupts. Summary.
5. Using Your PC's Memory - Memory Models and Segments; Dynamic Memory Allocation; Video Memory. Summary.
6. Library Standard Functions - File Permissions; Checking Files and Reporting Problems; Time with Time( ); Interrupt Handling; Signal( ); Environment; Conversions; Deleting Files; Unlink( ); Process Control System( ); Exec, ( ); and Sprawlin( ); File-Related Functions: Setmod( ), Flavo, and Fdopend( ); Test Processing with the Oem Key; Test Processing with String Functions; Performing Math Operations. Summary.
7. I/O Buffers and Facilities - B10S Cdev; DOS Interrupts; Ports ; Inp( ) and Outp( ) ; Summary.
12. Dynamic Allocation - The Dynamic Allocation System; Sparse-Array Processing; Choosing an Approach; Reusable Buffers; The "Uncommon Memory" Fragmentation. Summary.

Class Size will be limited to a maximum of 25 with a minimum registration of 16. Early registration is recommended. Phone Reservations will be accepted. Reservations accepted after September 11, 1990 will require an additional fee of $35.


When: Two classes. Tuesday Evenings 6:30-9:00 PM and Thursday Evenings 6:30-9:00 PM. Fourteen sessions starting September 25, 1990.

Cost: With Text Books and QuickC compiler, IEEE Members $270; non-IEEE Members $345.
With Text Books only, IEEE Members $220; Non-IEEE Members $275.

Contact: Mr. John A. Baka at (201) 485-8534 (Business).

Regulation "Advanced C Language Programming"
To: Mr. John Baka, Distribution Engineering, JCP&L Company, Madison Avenue at Punch Bowl Road, Morristown, NJ 07960
Name__________________________________________________________
Affiliation_____________________________________________________
Address_________________________Phone No.______________________
Course Date Preference: Tuesday ______ Thursday ______
Check if QuickC Compiler is needed or not Yes [ ] No [ ]
Enclose required fee made payable to "North Jersey Section IEEE"

Signature______________________________________________________

SEPTEMBER, 1990

IEEE North Jersey MTT/AP & New York I&M Society:
Nonlinear Noise Model For MesFETs And MM-Wave
The New MTT/AP and NY/NI North Joint Instrumentation and Measurement meeting will meet on September 6, 1990. The topic will be "New Nonlinear Noise Model For MesFETs Including MM-Wave Application." The speaker will be Dr. Ulrich H. Rohde.
About The Talk:
This talk will cover a linearized time-domain approach for calculating the dynamic elements of the hybrid Pi-HsFET model. These elements in the traditional linear model have been used to calculate the noise correlation matrix. The model then supplies the required four-noise parameters. For Gm and Rn, a novel enhancement to the basic equivalent circuit parameter circuit uses its into the MM-wave area. This enhancement consists of an additional time delay in the drain source conductance Gds. This approach has been incorporated into a simulator for the purpose of verification. The models or other models interested in the subject are invited to attend.

About The Speaker:
Ulrich L. Rohde is President of Compact Software and a partner of Rohde & Schwarz, Munich, West Germany, a multinational company specializing in test equipment and advanced communications systems. Previously, he was the business area director for Radio Systems and RCA, Government Systems division, Camden, N.J., responsible for implementing communications approaches for military secure and adaptive communications. Having studied electrical engineering and radio communications at the universities of Munich and Darmstadt, West Germany, he holds a PhD in electrical engineering and a DoD (hon.) in radio communications.

Pre-Meeting Buffet Dinner
There will be a free buffet dinner for attendees in the lobby commencing at 6:00 PM. Reservations for the complimentary dinner are required.
Time: 7:30 PM, Thursday, September 6, 1990. (Buffet starting 6:00PM.)
Place: ITT Auditorium, 500 Washington Ave., Nutley, N.J.
For Reservations and Questions: Dick Snyder (201) 492-1297; Wills Schmitt (201) 284-2255.

Power System Reliability Evaluation
The North Jersey Chapter of the Reliability Society will meet on September 19, 1990, to bear a talk on "Reliability in Public Service Power Systems." The speaker will be Dr. Murry P. Bhavaraju, Public Service Electric and Gas Company of New Jersey.
About The Talk:
The talk will describe the concepts and methods used to evaluate electric power system reliability. Probabilistic methods for reliability assessment of bulk power transmission systems will be discussed.
About The Speaker:
Dr. Bhavaraju received his B.E. (Hons) (1981) from Andhra University, India, his ME (1983), from the Indian Institute of Science and an MSc and PhD (1969), from the University of Saskatchewan, Canada. He is a registered professional engineer in New Jersey and has been with Public Service and Gas Company of New Jersey since 1969. He is currently Least Cost and Reliability Manager in the Transmission Systems Department. During 1978-79 he was an intern at the Electric Power Research Institute where he initiated several important research projects on power system reliability. From 1968 to 1987 he was a member of the North American Electric Reliability Council. Reliability Criteria Subcommittee, representing the mid-Atlantic region. He is a member of the System Reliability Task Force in the Pennsylvania-New Jersey-Maryland Interconnection of the Council. Dr. Bhavaraju has authored more than 30 technical papers in power system reliability and planning. He is a member of CIGRE, a Fellow of IEEE and a member of the IEEE Probabilities Sub-committee. He was the Chairman of the IEEE Power System Engineering Committee during 1988-89.
Free Buffet
A free buffet will be provided starting at 6:00 PM, on a first-come-first-served basis.
Time: 7:00 PM, Wednesday, September 19, 1990. (Buffet starting at 6:00PM.)
Place: ITT Auditorium, 500 Washington Avenue, Nutley, N.J.
For Further Information: Henry Moss (201) 785-6458.
North Jersey Section Activities

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September 6, 1990—“New Nonlinear Noise Model For MesFETs Including Mobility Degradation” Application—IT/TT North Jersey MITTAP and NY IM Society Joint Chapter Meeting, 7:30 PM, ITT, Tower Auditorium, 500 Washington Ave, Nutley, N.J.; David Snyder (201) 492-1207.

September 11—“Marketing and Your Consulting Career”—IEEE New York Section Consultants’ Network, 7:00 PM, Con Edison, 4 Irving Pl., 14th Floor, NYC. For details call Jim Wetterson (212) 222-1999.

September 12—“Member And Evolutions Of Lithography”—IEEE Metroplex Section Engineering in Medicine and Biology Society, 7:30 PM, Rockefeller University, Tower Bldg., Room 305, 1200 York Ave, NYC. Robert Hayman (914) 363-2601.

September 13—“Professional Needs—Can IEEE Deliver?”—North Jersey Section PACE, 7:00 PM, ITT Auditorium, 500 Washington Ave, Nutley, N.J. Robert Johnson (201) 229-3241.


September 22—“Symposium: Reliability and Risk Assessment (RA) of Industrial Utility Systems”—IEEE North Jersey Section Industry Application Society, 9:00 AM-2:00 PM, Saturday, ITT Clubhouse, 417 River Road, Nutley, N.J. Vital Rehavaganda (201) 804-3011.


Upcoming Meetings

October 11—“Leading Edge Career Management”—North Jersey Section PACE, 7:00 PM, ITT Auditorium, 500 Washington Ave, Nutley, N.J. Robert Sinusas (201) 229-3241.


October 23—“Software Reliability Engineering For The Developing Manager”—NY/North Jersey Engineering Management Society, 7:00 PM, ITT Auditorium, 500 Washington Ave, Nutley, N.J. Al Botani (201) 285-7797.

November 14—“HighTech P/CWorkstation Applications Conference”—North Jersey Section and United Societies of Engineering & Science of New Jersey, Inc., (UBS), 9:00 AM-8:00 PM, Governor Morris Inn, Morristown, N.J. Dave Perry (201) 325-8415.

December 6—“Non-Linear GaAsFET Mixing, A Mixture Of Art And Science”—North Jersey MITTAP/Chapter, 7:15 PM, ITT Auditorium, 500 Washington Ave, Nutley, N.J. Dick Snyder (201) 492-1207.

IEEE North Jersey Section Seminar

ADVANCED MICROWAVE COMPONENT DESIGN

Tuesday 6:30-9:00 PM - September 25-December 4, 1990
ITT-Avionics Auditorium or Clubhouse, Nutley, N.J.

This evening course offered by the North Jersey Section IEEE is designed for those graduate Electrical Engineers who have taken the IEEE Introductory Microwave Component Design course (or the equivalent), and who are working in the microwave design field.

The course will go into depth in the particular combination of electromagnetic and network theory that is required for efficient passive and active microwave component design.

Problem designs will be assigned each week. Familiarity with PC usage is helpful but not required; however, the student will use matrix combination in the design process. Equivalent circuits will be developed that will be both network and E-M based.

These will form the basis for the various designs of filters, couplers, ferrite and other non-reciprocal and active devices. Design philosophy will consider the frequency range from 1 MHz up to the millimeter region.

The instructor is Dr. Richard V. Snyder, RS Microwave (201) 492-1207.

1. September 25 - Review of electromagnetic wave theory, including temporal and spatial characteristics applicable to the "innards" of components.

2. October 2 - Scattering and other linear matrices, including mathematical theory and application to characterization of resonators, obstacles and structures.


4. October 16 - Filter design from the lumped equivalent circuit point-of-view. Network transformations.

5. October 23 - Filter design from the distributed circuit point-of-view, including combination of lumped and distributed variables. Principles of optimization applied to active and passive filter design.


7. November 13 - Common mode coupling. Common junction combinatorial techniques, including crossovers at less than 3 dB points, Active multiplexing.

8. November 20 - Steplike junctions, functional couplers, hybrids, power dividers, magic tee, quafature couplers, etc. Lumped and distributed versions of various quifer structures.

9. November 27 - Principles and equivalent networks for various ferrite and other non-reciprocal devices, including the principles of active circulators.

10. December 4 - Review and question week (topics of the day).

Class size will be limited to 35 maximum. Early registration is recommended. Phone reservations are possible, but a telephone call sometimes does not guarantee space. A limited number of reservations are accepted on a first-come, first-served basis. Class notes will be distributed to all students.

Registration Information:

Procedure: All students must register by October 25 or pay the following registration fee. Telephone registration will be accepted, but verification of registration is required.

Names and Affiliation: Please include those paid in a payable to "North Jersey Section IEEE".
IEEE North Jersey Section Seminar
ACCENT AND SPEECH IMPROVEMENT COURSE
Wednesday, 6:30-9:30 PM - September 26-December 12, 1990

The North Jersey Section of the IEEE is sponsoring a seminar titled "Accent and Speech Improvement." The fee for the course is $20 for members and $25 for non-members. The seminar will cover accent reduction, pronunciation, speech clarity, and speech delivery techniques.

Registration: To register, contact Mr. John Bala at (201) 455-8344 (Business) or (201) 926-6523 or Hady Salamy (201) 829-5058.

Time: 7:30 PM, Wednesday, October 17, 1990.
Place: Jersey Central Power & Light Co., 100 S. Madison Ave., Madison, N.J.
Further Information: Aupie Frongenso (201) 926-6523 or Hady Salamy (201) 829-5058.

Please enclose required fee made payable to "North Jersey Section IEEE".
Metro EMBS: Future Trends In And Evolution Of Lithotripsy

On September 12, 1990, the IEEE Microwave Theory and Techniques Society, with the help of the IEEE Ultrasonics, Ferroelectrics, and Frequency Control Society, will present a program on "Future Trends In And Evolution Of Lithotripsy." The speakers will be Steven Mandracco, RT, and Ray Spear, RS. Both speakers are associated with The Stone Center of New York City.

One of the most successful developments in recent biomedical technological advancements was the introduction of lithotripsy in the treatment of kidney stones and gall stones, a non-invasive intervention modality. The speakers have extensive experience in setting up independent diagnostic and treatment centers specializing in advancing and utilizing new therapeutic, diagnostic and therapeutic systems. Their discussion will vary from the general to the detailed in the managerial, technical and financial implications of setting up and operating these treatment centers, including ultrasound equipment and clinical trials.

Ray Spear is Chief Operating Director and is responsible for the day-to-day operation and management of the New York City Branch. He is also a technical consultant with the New York Stone Center. Mary Raye is Project Director of the Project Management Office for the New York Joint Project. Attendees can call 800-838-2615 for more information.

IEEE-EMAS NJ Chapter Symposium Reliability And Risk Assessment Of Industrial Utility Systems

Saturday, 9:30-12:30 AM
ITT Clubhouse, 418 Buhl Blvd., P. O. Box 173, Westfield, N.J.

On Saturday, September 22, 1990 the IEEE New Jersey Section Industry Application Society will host a panel symposium on the fundamental techniques dealing with the upcoming changes in the utilities industry. The symposium will provide an overview of the current process technologies that will be used for risk management of utility systems and the process of developing reliability and risk assessment models for industrial utility systems that can be used to determine if the techniques are relevant to the evolution of these models and/or to analyze the effects of opening system operations. Through their joint efforts, the speakers will be discussing on-going developments in risk assessment technology. The speakers will be discussing the emerging techniques of engineering analysis and risk analysis and will give their unique perspectives on these techniques and the role of these techniques in the new models.

The Joint Panel will be comprised of: Dr. M. H. Ebrahimi, PhD, Fellow IEEE, Rensselaer Polytechnic Institute; Dr. R. W. Speary, AT&T, AT&T Technologies; Dr. A. D. Maltz, general manager, lignite/coal plant, Integrated Technology Systems; Dr. M. L. Lieschtenstein, director, Nuclear Safety Research, Sandia National Laboratories; and Ray Spear, RS, Pierpont Environmental Services Inc., Piscataway, N.J. The session will begin at 9:30 AM and end by 12:30 PM. The registration fee is $25.00 and includes breakfast and refreshments.

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