



IEEE

The Orlando Section Monthly

The Newsletter of the Orlando Section of the IEEE

Volume XXIII

August, 1989

Number 1

1989 Installation of New Section Officers

By Frank Fluet, Awards Chairman

The Annual installation of new Orlando Section officers was held on June 17 at the Sheraton Hotel in Maitland. After a pleasant four course dinner, a very informative presentation of the confusing state of federal and industry pension activities was made by our local expert, George McClure. This was an occasion for presenting some special awards and also for turning over the Section reins to the incoming officers.

Pensions

"Orchestrating Your Retirement" was the title of the talk given by George McClure, the featured speaker. George has resided in Orlando and worked for Martin Marietta since 1961, where he is now Program Engineer and Functional Manager. In the past, he has taken an active role in many issues concerning engineers as Region 3 PACE Coordinator. Now, as vice chairman of the IEEE Pension Committee, he has become expert in a complex and changing area of retirement planning and pension legislation.

For many of us, retirement seems so far off that we don't give it much thought. However, planning now can make a big difference in the quality of our retirement years. George handed out a packet of information at the Installation Banquet that clarified some of the changes that have taken place in pension and IRA legislation. He also gave plain English descriptions of proposed pension reform legislation and listed who we could contact to support or oppose these bills. These are important issues for the engineering profession. We very much appreciate the time and energy George has invested in becoming expert in this area. Contact him to discuss pension issues or for a copy of the information packet. His daytime phone number is (407) 356-3782.

Region 3 Award

Mr. Robert C. Smythe, an Orlando Section engineer has been singularly recognized in the entire southeast region by being selected as the Region 3 Outstanding Engineer in 1989. Tom Nelson had the pleasure of presenting a plaque to Mr. Smythe during the award



Speaker, George McClure (left), Outgoing Chairman, Tom Nelson (center), and New Chairman, Dr. Keith Huddleston (right) at the 1989 Installation of Officers Banquet.

ceremonies. Bob is that rare breed--a native Floridian. He is an internationally recognized expert in the area of quartz resonator theory and design. To quote a letter from Professor Tiersten of RPI: "His expertise covers just about all aspects of the design and fabrication of quartz resonators and filters...to my knowledge, he is considered to be the leading authority." Bob is a graduate of Rice University and the University of Florida. We are proud to have him as a member of the Orlando Section.

Section Awards

The 1989 Outstanding Service plaque was presented to IEEE Fellow, Mr. George F. McClure for his many years of service to the Orlando Section, the IEEE organization, and the engineering profession. George has been Chairman of the Orlando Section, The Florida Council, PACE Coordinator for Region 3, Section Conference Chairman, Chairman of AUTOTESTCON Conference, and many others. He is presently Chairman of the Vehicular Technology Society, and as noted above, Vice-Chairman of the IEEE Pension Committee.

Mr. Robert F. Gray, Chairman of the Power Engineering and Industry Application joint Chapter was selected as the "1989 Outstanding Chapter Chairman." Jim Pipkin, Vice Chairman of the Chapter accepted the plaque for Bob. Under Bob's leadership, the PE&IA Chapter has had a very successful year. Technical meetings, Plant Tours, and educational Tutorials were organized for the Orlando Section members.

Certificate of Appreciation

Outgoing Chairman, Tom Nelson, presented Certificates of Appreciation to the following Section officers:

- Dr. G. Keith Huddleston - Section Vice Chairman
- Dr. Madjid A. Belkerdid - Section Treasurer
- Jorge Medina - Section Secretary & Publications Manager
- Frank Fluet - Section Awards Chairman
- Dr. M Ali Atashroo - Chapters Chairman
- Geoffrey E. Dick - PACE & Conference Chairman

New Chairman and Section Executive Board

At the end of the meeting, Tom Nelson turned over the gavel to the new Chairman for 1989-1990 -- Dr. Keith Huddleston.

One of the first official acts the new chairman performed was to present a framed Certificate of Appreciation to the past chairman, Tom Nelson, for guiding the Orlando Section through a very successful year.

Before adjourning the meeting, the new chairman introduced the other Executive Board officers for the new term:

- Dr. Madjid A. Belkerdid - Vice Chairman
- Jorge Medina - Treasurer
- Dr. M. Ali Atashroo - Secretary.

Special Notice

The Voice Information Center (VIC) is now on-line 24 hours a day. The telephone number is (407) 366-7594. More details on page 3.

IEEE ORLANDO SECTION
Region 03 Section 05 Council 51

Executive Board

Chairman: Dr. Gene Keith Huddleston
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Secretary: Dr. M. Ali Atashroo
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Editorial: T. Ed Ellis
(Home) 834-3319
Historian: Russell E. Theisen
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Membership: Sandra M. Walker
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Programs: Dr. Madjid Belkerdid
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Publications Manager: Jorge Medina
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COMPUTER: Dr. Ratan Guha
(Bus.) 275-2956, (Home) 628-4910
COM/VT: Dr. Michael G. Georgiopoulos
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ED/CHMT: Robert Canright
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LEO: Dr. M. G. (Jim) Moharam
(Bus.) 658-6833, (Home) 679-0073
PE/IA: Robert F. Gray
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UFFC: Dr. Sam M. Richie
(Bus.) 281-5765, (Home) 671-2568
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(Home) 679-8265

**Orlando Section Voice
Information Center**
366-7594

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G. K. Huddleston, Section Chairman

Chairman's Corner
August 1989

This issue of the *Orlando Section Monthly* emphasizes our commitment to publish relevant information for the Orlando Section members while keeping a close eye on our budget. Jorge Medina has been instrumental in maintaining an affordable publication by cutting production costs and by obtaining support through advertising. We hope you find this issue informative and that you will patronize the advertisers where possible.

Another cost-cutting effort was initiated last year by our outgoing Section Chairman, Tom Nelson -- the *Voice Mail Center* as described in a separate column of this newsletter. In this era of electronic mail, we feel that some of the function of the monthly newsletter can be served in a more timely fashion by the telephone system that Tom has installed and now operates for the Section. Eventually we hope to discontinue the monthly newsletters and realize considerable savings in publication costs -- but you, the members, will have to actively participate and use the *Voice Mail Center* for this innovative approach to be successful. Give it a try today by calling 366-7594. Because of his active participation in IEEE activities, Tom was able to secure funds from FCIEEE and Region 3 for this special project. Tom has served the section well, and we look forward to his continued involvement in the coming year.

As you may have guessed, the theme for my term as Section Chairman will be to deliver the maximum service to the Orlando membership within the limits of our budget. For last year, our expenses were over \$9800 and our

income from the national societies and headquarters rebate was under \$8400. The deficit was made up from our cash reserves of approximately \$6000 -- which were built up originally by hosting meetings and social events (\$3656) while publication costs, postage, and mailing labels for newsletters amounted to \$5610.

Our budget priorities for the coming year will be to continue to fund the chapter activities at the pace that the Chapter Chairman set, to keep publication and mailing costs within budget, and to provide seed money for meetings and symposia that will in turn replenish our treasury. In that regard, we are particularly thankful to George McClure for leading the charge as Chairman for the Vehicular Technology Conference to be held in Orlando in May 1990. Other conferences are also being planned, and while professional conference services will be employed, local IEEE volunteers will be needed to make things happen.

We now have nine chapters in the Section which "assemble, read, and discuss papers and matters relating to our trades or professions and at the same time enjoy pleasant personal and social intercourse, all of which is conducive to improvement and advancement in ideas, theories, practice, business, and good fellowship" as indicated in the original prospectus of the AIEE. To help ensure a viable chapter program, I challenge each Chapter Chairmen of Orlando to plan a program of nine monthly meetings next year, to solicit funds from your national society to supplement the basic allocation from the Section, to invite at least one national lecturer as provided by your national society, to fill all opening in your chapter officers, and to communicate with your chapter members. If this challenge is met, I am confident that the greatest possible service to the membership will have been delivered. And congratulations to Bob Gray (PE/IA) for cornering the Outstanding Chapter Chairman award for 1989.

The feature article for this issue was written by Frank Fluett and presents highlights of the installation banquet that was held in June. Frank has served as our Awards Chairman for the past three years and has done a simply outstanding job. He understandably wants to take on new responsibilities in the Section; hence, we are actively seeking his replacement. If interested, please call Madjid Belkerdid. His telephone number is listed with those of the other Section officers elsewhere in this issue. We are also looking for Section members to serve as Education

Chairman and as Chapters Activities Chairman.

The IEEE is a professional society that is managed largely by volunteers. We are paid no salary for the service we perform. We reap our benefits from the professional exposure and self-expression outside our normal work place, and from having a voice in how the organization is run. I highly recommend that you also get involved now so that you will be ready for bigger things later in your professional lives. We have many opportunities to serve. Call me.

The **Executive Committee** meets on the first Tuesday of each month at 5:30 pm. The location is Automation Intelligence, 1200 W. Colonial Dr., Orlando. All IEEE members are invited to attend.

Voice Information Center

By Tom Nelson, Jr. Past Chairman

The Florida Council and Region 3 jointly sponsored a special project of the Orlando Section called the Voice Information System with Telemarketing capabilities to provide current information on Section activities to members.

The initial version of the system is now on-line 24 hours a day. **The telephone number is (407) 366-7594.** At present there are four main menus: 1-Section, 2-Chapters, 3-Florida Council, 4-Help. Each chapter Chairman can access the system via telephone and remotely change the information messages for that chapter.

The system has a number of interesting capabilities that can be used. It has a voice mail system. The telemarketing features enable it to initiate calls and deliver messages and be remotely programmed. At the present time we are only using a few of the system capabilities. We plan to explore the use of some of the other features in the near future.

If you would like additional information about the system, or would like to make some comments about it, you can call the system and leave a message. **The telephone number is (407) 366-7594.**

Chapters News

COMPUTER

New officers for 1989-1990:

Chairman: Dr. Ratan Guha
Vice Chairman: Deborah Koscielski
Treasurer: Dalbashi Roy
Secretary: Elsa Delgado

LEOS

The first meeting of the Orlando LEOS Chapter will be held at the Center for Research in Electro-Optics and Laser (CREOL), University of Central Florida. All LEOS and other interested IEEE members are strongly encouraged to attend. Society chapter officers will be elected for 1989-1990 and future activities of the chapter will be discussed. Participants are invited to tour CREOL research facilities. Refreshments will be served.

Date: 6:00 P.M. on Monday August 14, 1989

Place: CREOL-UCF, Suite 400, 12424 Research Parkway (Research Pavilion building, Central Florida Research Park off Alafaya Trail between University and East Colonial)

Contact: Jim Moharam, 658-6833

PE/IA

New officers for 1989-1990:

Chairman: Bob Gray
Vice Chairman: Jim Pipkin
Program Coordinator: Rich Chruszcz
Secretary: Mike Dodane
Education Chairman: Bob Nelson
Membership Chairman: Mike Haddad

40th IEEE Vehicular Technology Conference

Orlando, Florida 7-9 May 1990
"Vehicular Technology -- On the Move in the '90s"

CALL FOR PAPERS*

You are invited to submit a paper for presentation at the 1990 VT Conference. Topics include, but are not limited to the following:

- 1) Research and development
- 2) System design
- 3) Hardware/Software design
- 4) Engineering test results
- 5) Applications engineering

for

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*Authors of accepted papers agree to present their papers at the 1990 conference. Send your summary to IEEE VTC '90, Papers Committee, P.O. Box 1317, Winter Park, Florida 32790.

AUTHOR'S SCHEDULE:

*Submit four copies of typed summary of Paper (260 words maximum) and a résumé by August 1, 1989.

*Authors notified of acceptance of Paper by November 30, 1989.

*Send final manuscripts to VT Conference Record by January 31, 1990.

IEEE ORLANDO SECTION EVENTS CALENDAR

CHAPTER/ CONTACT	AUGUST	SEPTEMBER	OCTOBER
COMPUTER Bob Rawa 826-1148 Russ Theisen 356-4320		18th - 22th: "COMPSAC 89 Computer Software and Applications Week" Hyatt Orlando Hotel	
LEOS Jim Moharam 658-6833	14th: "Election of new officers, discussion of future activities and tour to CREOL research facilities." CREOL-UCF - 4:00 P.M.		15th - 20th: "1989 LEOS Annual Meeting" Orange County Convention Center
SECTION Keith Huddleston 356-7201	1st: "Executive Committee Meeting" Automation Intelligence 5:30 P.M.	5th: "Executive Committee Meeting" Place: TBA 5:30 P.M.	3rd: "Executive Committee Meeting" Place: TBA 5:30 P.M.

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Volume XXIII

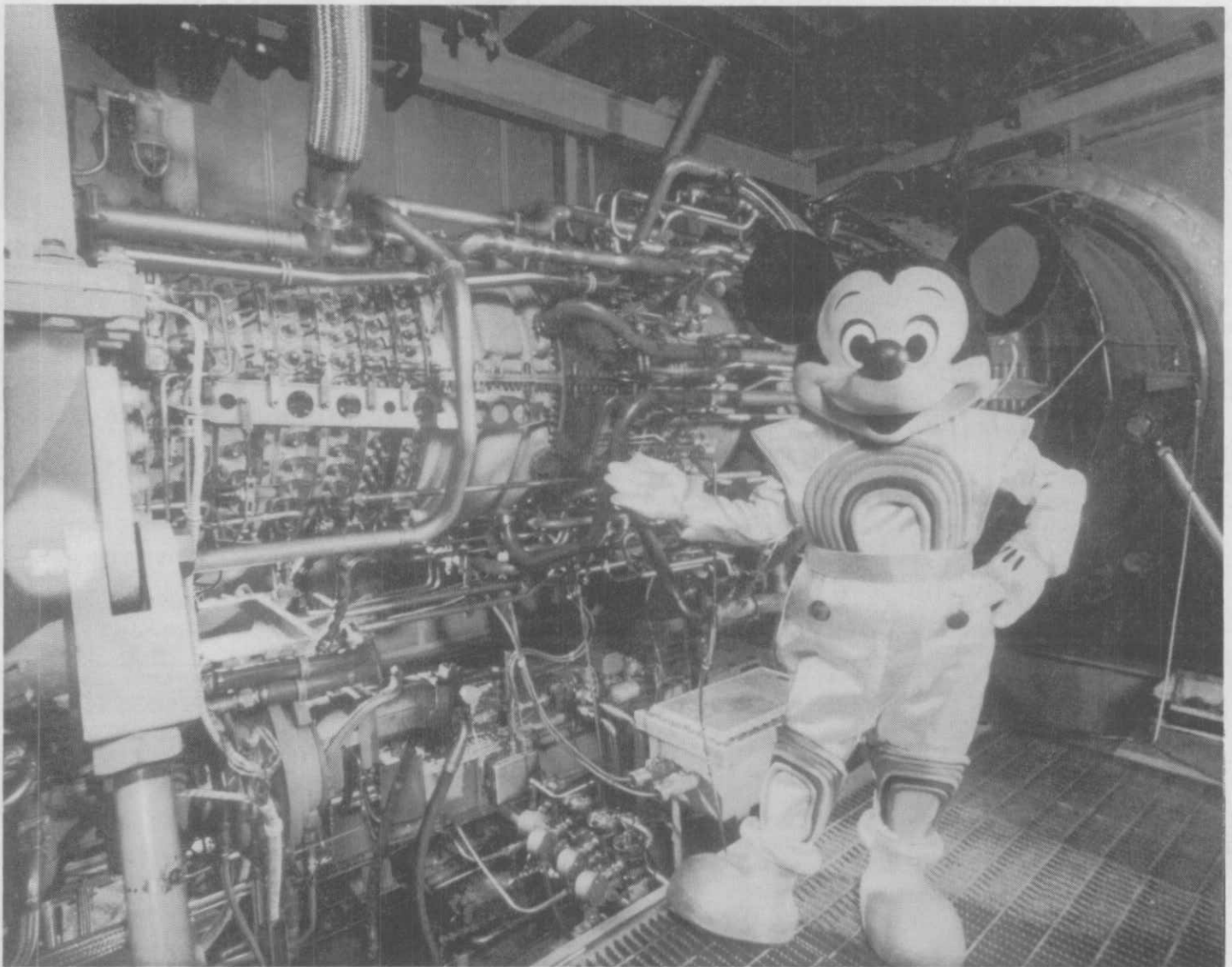
September, 1989

Number 2

POWER ENGINEERING SOCIETY/ INDUSTRIAL APPLICATIONS SOCIETY

Wednesday, September 20, 1989

"TOUR OF WALT DISNEY WORLD'S COGENERATION FACILITY"



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DON'T MISS THIS OPPORTUNITY FOR A "BACK-STAGE" LOOK!

(SEE PAGE 3 FOR MORE DETAILS)

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UFFC: Jackie Hines (Bus.) 886-8860
Student Branch: Jeff Zuelch
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Orlando Section
Voice Information Center
366-7594

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G. K. Huddleston, Section Chairman

Chairman's Corner
September 1989

The Chapter Chairmen should be in full swing organizing their chapter programs for the coming year, with meetings beginning in September. A minimum of two meetings should be held each year to ensure that the chapter is not declared inactive and to ensure a rebate from IEEE. We have set a goal of nine meetings for each chapter and have provided budgets to fund this level of activity. Three chapters are planning September meetings. Dr. Christos Christodoulou has agreed to serve as Chapters Chairman and will be aiding and abetting the nine chapters to provide active programs.

A necessary ingredient for a successful meeting year is participation by the members. We contend that if the chapter officers provide a reasonable program of speakers (and refreshments!), the members will respond and attend the meetings. Please help make this contention true!

The Voice Information Center is operational and needs calls to it to know that the membership is alive and interested in up-to-date information on meetings. Please help make this systems a success by using it. The telephone number is (407) 366-7594

The Executive Committee met on August 1 and completed the meeting in 69 minutes! Tom Nelson agreed to serve as our Awards Chairman, and Madjid Belkerdid will serve as Program Chairman. Charles Hughes agreed to fill our long-empty position of Education Chairman. Our next meeting will be at 5:30 PM on September 5 at Automation Intelligence, with the business starting at 6:00 PM sharp. We still need a few

more participants to round out the organization. If interested, please plan to attend the September 5th meeting. We do not waste time. Bob S., where are you?

The IEEE is a professional society that is managed largely by volunteers. We are paid no salary for the service we perform. We reap our benefits from the professional exposure and self-expression outside our normal work place, and from having a voice in how the organization is run. I highly recommend that you also get involved now so that you will be ready for bigger things later in your professional lives. We have many opportunities to serve. Call me.

Meeting
Announcements

**ANTENNAS &
PROPAGATION/MICROWAVE
THEORY & TECHNIQUE**
(AP/MTT)

Topic: "Superconductivity for Microwave Applications"

Speaker: Hugh Hickman

Date: Thursday, September 21, 1989

Time: 5:30 PM Refreshments, 6:00 PM Technical Presentation

Place: Hewlett Packard, 6177 Lake Ellenor Drive, Orlando, FL 32809

Contact: For further information contact Bob Cock, 356-2924 or Jeff Rollman, 356-3926

New officers for 1989-1990:

Chairman: Bob Cock

Vice Chairman: Parveen Wahid

Secretary: Jeff Rollman

**ULTRASONICS, FERROELECTRICS
& FREQUENCY CONTROL**
(UFFC)

Topic: "SAW Applications and Subsystems"

Speaker: Jorgen Andersen

Date: Tuesday, September 12, 1989

Time: Refreshments 6:00 PM, Technical Presentation 6:30 PM

Place: Sawtek Inc., 1818 South Highway 441, Apopka, FL 32703

Contact: For more information, call Jackie Hines or Sunder Gopani 886-8860

Meeting Announcements

Continued

POWER ENGINEERING/ INDUSTRY APPLICATIONS

(PE/IA)

Tour: "Walt Disney World's Cogeneration Facility"

Background: Reedy Creek Energy Services recently commissioned it's new state-of-the-art Cogeneration Plant. This is a combined cycle operation utilizing a 35 megawatt gas turbine and an 8.5 megawatt steam turbine. The gas turbine is an aircraft derivative CF6-50 General Electric LM 5000 engine which is used in such aircraft as the DC-10, Boeing 747, and Airbuss A-300. The plant has been designed and built with maximum emphasis placed on dependability, efficiency, and productivity. The latest innovations in electrical and control equipment have been installed such as SF₆ gas and vacuum circuit breakers, SCADA and DCS controls, variable frequency drives, high efficiency generators, motors, and transformers, digital fault recorders, UPS systems, etc.

Program: Our program will consist of a slide presentation, plant tour, and demonstration of the DCS control system in the main RCES Control Room. Richard Chruszcz, P.E., RCES Senior Electrical Engineer, is coordinator of the program. Virgil Farling, RCES Control Room Coordinators Supv. will provide a demonstration of the DCS Controls.

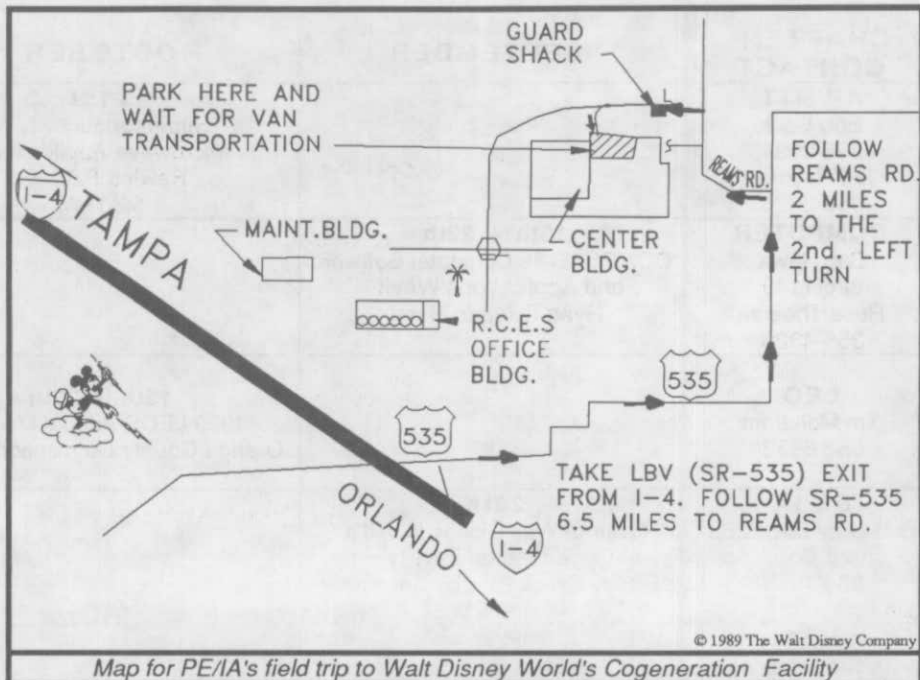
Date: Wednesday, September 20, 1989

Time: 7:00 PM

Place: RCES Maintenance Building, Second Floor Conference Room. Refer to the map for directions to the North Service Area gate. Parking is available in the Center Building parking lot. A van will be provided for transportation to RCES at 6:45 PM.

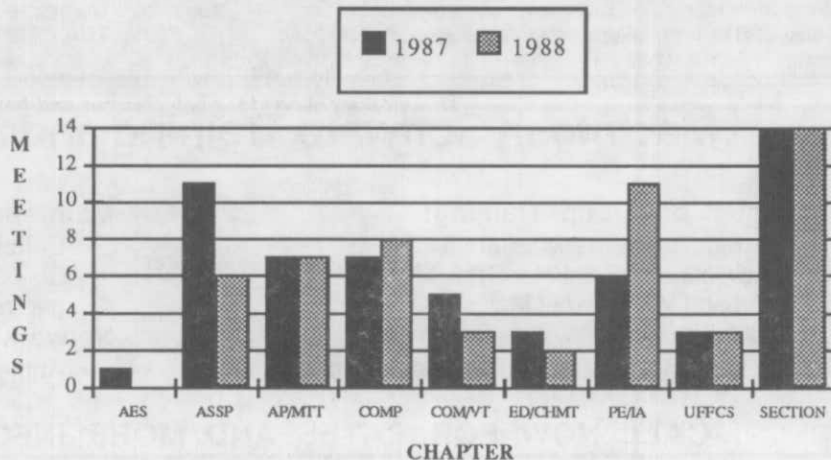
Reservations are Required: DEADLINE IS SEPTEMBER 18, 1989 to obtain necessary gate clearances.

Contact: Please call Bob Gray 281-3269, Richard Chruszcz 824-4953, or Jim Pipkin 281-2916

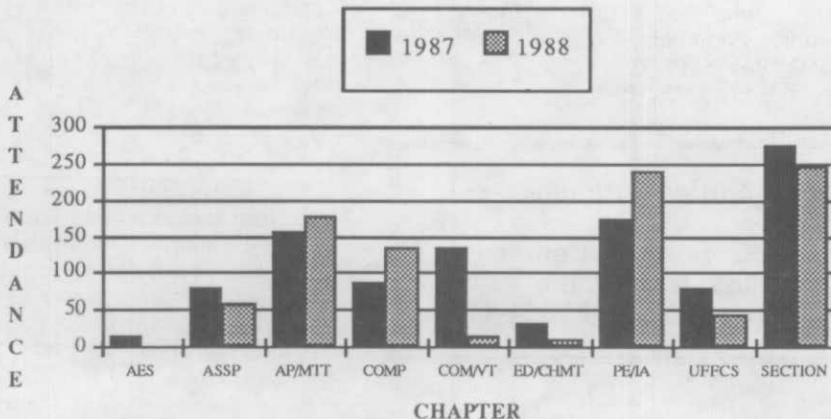


IEEE ORLANDO SECTION - CHAPTER ACTIVITY STATISTICS

1987 vs 1988 CHAPTER MEETINGS



1987 VS 1988 CHAPTER ATTENDANCE



IEEE ORLANDO SECTION - EVENTS CALENDAR

CHAPTER/ CONTACT	SEPTEMBER	OCTOBER	NOVEMBER
AP/MTT Bob Cock 356-2924 Jeff Rollman 356-3926		21st "Superconductivity for Microwave Applications" Hewlett Packard 5:30 PM	
COMPUTER Bob Rawa 826-1148 Russ Theisen 356-4320	18th - 22th "COMPSAC 89 Computer Software and Applications Week" Hyatt Orlando Hotel		
LEO Jim Moharam 658-6833		15th - 20th "1989 LEOS Annual Meeting" Orange County Convention Center	
PE/IA Bob Gray 281-3269 Richard Chruszcz 824-4953 Jim Pipkin 281-2916	20th "Tour of Walt Disney World's Cogeneration Facility" Reedy Creek Energy Services 7:00 PM		
UFCF Jackie Hines or Sunder Gopani 886-8860	12th "SAW Applications & Subsystems" Sawtek Inc. 6:00 PM		
SECTION Keith Huddleston 356-7201	5th "Executive Committee Meeting" Automation Intelligence 5:30 P.M.	3rd "Executive Committee Meeting" Place: TBA - 5:30 P.M.	7th "Executive Committee Meeting" Place: TBA - 5:30 P.M.

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The Institute of
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The Orlando Section Monthly

The Newsletter of the Orlando Section of the IEEE

Volume XXIII

October, 1989

Number 3

Meeting Announcements

POWER ENGINEERING SOCIETY/ INDUSTRY APPLICATIONS SOCIETY (PE/IA)

POWER ENGINEERING SOCIETY DISTINGUISHED LECTURER PROGRAM

PROGRAM: The PES Distinguished Lecturer Program provides speakers for local society meetings on various topics of interest to our membership. The Orlando chapter has requested and received confirmation of a presentation on Fusion Power and its potential role in meeting the energy needs of society. The history of the international research effort will be reviewed, its current status, and remarks on magnetic and inertial confinement, "cold fusion," and future direction of fusion research efforts. Possible characteristics of future power plants will be forecast.

SPEAKER: Dr. Robert G. Mills, formerly of Princeton University (44 years), recently retired as Director of the Interdepartmental Program in Plasma Science and Fusion Technology at Princeton University. Dr. Mills has been associated with Princeton's controlled thermonuclear research program for over 30 years. He has served on various advisory and review committees for the AEC, ERDA, DOE, and EPRI. Dr. Mills is a Fellow of the IEEE, a centennial medal recipient, and serves on the IEEE Energy Committee. He was recently elected a Fellow of the American Nuclear Society (1988).

DATE: Tuesday, October 17, 1989.

TIME: Dinner 6:00 P.M. - Lecture 7:15 P.M.

PLACE: University Holiday Inn at University Blvd. and Alafaya Trail. Ballroom A main floor.

RESERVATIONS REQUIRED: Deadline is October 13, 1989.

CONTACT: Please call Jim Pipkin (281-2916), Mike Dodane (896-6765) or Bob Gray (281-3269).

ANTENNAS & PROPAGATION/ MICROWAVE THEORY & TECHNIQUE (AP/MTT)

TOPIC: "Techniques for Stimulating Synthetic Radar Targets, ECM Waveforms, and Advanced Modern Threats"

SPEAKER: Greg Lowitz; Hewlett Packard

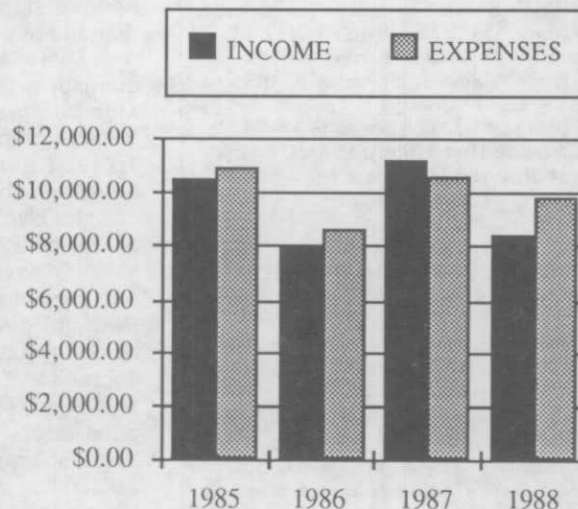
DATE: Wednesday, October 18, 1989

TIME: 5:30 P.M. Refreshments - 6:00 P.M. Technical Presentation

PLACE: Hewlett Packard, 6177 Lake Ellenor Drive, Orlando, FL 32809

CONTACT: For further information contact Bob Cock (356-2924) or Jeff Rollman (356-3926).

IEEE ORLANDO SECTION FINANCIAL STATISTICS



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G. K. Huddleston, Section Chairman

Chairman's Corner
October 1989

The Orlando Section has many Members who are invited to upgrade their membership grade to Senior Member. The grade of Senior Member is the highest for which application may be made. A candidate must be an engineer, scientist, educator, technical executive, or originator in IEEE designated fields. The candidate must have been in active professional practice for at least ten years and shown significant performance over at least five of those years. An application for Senior Membership is available from Sandy Walker (826-9239). Three letters of recommendation from current Senior Members are also required, and Sandy can direct you to such members if needed. I heartily encourage you to upgrade at your earliest eligibility.

There are 129 Senior Members currently in the Orlando Section and 907 Member grade members. The total membership, including students, is 1,249. I suspect that the number of Members who are eligible to upgrade is such that we could have equal members of Members and Senior Members.

We have changed the location of our Executive Committee meeting to Hewlett-Packard on Lake Ellenor Drive in southeast Orlando. We greatly appreciate the hospitality of Rick Lane and Hewlett-Packard for providing such good facilities for our future meetings. We also appreciate the hospitality of Automation Intelligence and Tom Nelson for letting us use their facilities over the past number of years.

By the time you read this newsletter, we will have already met at Hewlett-Packard for the first time. I checked with the **Voice Information**

Center (407-366-7594) and found that it had been updated to reflect the change in meeting location. I encourage you to use the Voice Information Center to receive timely meeting information for all Orlando IEEE activities. The Chapter Chairmen have access codes that permit them to update chapter messages remotely. Thanks to the efforts of Tom Nelson, we now have a convenient way to disseminate timely information. Let us all please use it!

The IEEE is a professional society that is managed largely by volunteers. We are paid no salary for the service we perform. We reap our benefits from the professional exposure and self-expression outside our normal work place, and from having a voice in how the organization is run. I highly recommend that you also get involved now so that you will be ready for bigger things later in your professional lives. We have many opportunities to serve. Call me.

Orlando Section Monthly
Advertisement Rates

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3/4 Page	\$255	\$225
2/3 Page	\$225	\$195
Half Page	\$195	\$165
1/3 Page	\$165	\$135
1/4 Page	\$135	\$105
1/6 Page	\$80	\$72

Also, One Eighth (Business Card) size ads will be placed at a promotional rate of \$50 per issue for a minimum of four consecutive issues, or \$37.50 per issue for eight consecutive issues. Please call Jorge Medina at (407) 330-5346 or Carmen Medina at (407) 260-1676, to place your ads or if you have any questions.

Hewlett-Packard RF & Microwave Symposium

Hewlett Packard has scheduled the following papers to be presented at the **Microwave Symposium, October 17, 1989** at the *St. Petersburg Hilton & Towers* or, *October 19, 1989* at the *Palm Bay Holiday Inn*, Palm Bay, FL.

Below is a list of technical papers that will be presented. An exhibition of HP's latest RF & MW products will also be on display.

RF & MICROWAVE PAPERS

- * Advanced TDR Techniques
- * Time Domain Analysis of Broadband Transmission Systems
- * Dynamic Testing of Frequency Agile Radios
- * Advances in Microwave Error Correction Techniques
- * Practical Applications of Time Domain Microwave Design
- * Using CAE to Model a 2-20 GHz Amplifier
- * New Measurement Techniques for Testing Linear and Nonlinear Devices
- * Spread Spectrum Signal Analysis Using a Time and Frequency Analyzer
- * Characterization of Frequency Agile Source
- * Advanced Simulation of EW, Radar and Communication Signals
- * Accuracy of Noise Figure Measurement Systems
- * Pulse Responses Measurements Using Spectrum Analyzers

LIGHTWAVE PAPERS

- * Optical Power Measurements
- * Measurements of Lasers of High-Capacity Communication Systems
- * A New 20 GHz Lightwave Component Analyzer
- * High-Speed Optical Modulator for Lightwave Instrument Applications

**To Pre-Register for this *Free* Symposium
please call:**

**Trinda Clodfelter - Hewlett-Packard Company/Orlando
(407) 826-9240**

IEEE ORLANDO SECTION EVENTS CALENDAR

CHAPTER/ CONTACT	OCTOBER	NOVEMBER	DECEMBER
AP/MTT Bob Cock 356-2924 Jeff Rollman 356-3926	18th "Techniques for Stimulating Synthetic Radar Targets, ECM Waveforms, and Advanced Modern Threats" Hewlett-Packard - 5:30 P.M.	16th "State of the Art Circuit and System Simulation & Beyond" MTT - Distinguished Lecturers Hewlett-Packard - 5:30 P.M.	
LEO Wendy Rochelle (201) 562-3895	15th - 20th "1989 LEOS Annual Meeting" Orange County Convention Center Orlando, Florida		
PE/IA Jim Pipkin 281-2916 Mike Dodane 896-6765 Bob Gray 281-3269	17th "Fusion Power" University Holiday Inn at University Blvd. and Alafaya Trail Dinner 6:00 PM - Lecture 7:15 PM		
SECTION Keith Huddleston 356-7201	3rd "Executive Committee Meeting" Hewlett-Packard 6177 Lake Ellenor Drive, Orlando 5:30 P.M.	7th "Executive Committee Meeting" Hewlett-Packard 6177 Lake Ellenor Drive, Orlando 5:30 P.M.	5th "Executive Committee Meeting" Hewlett-Packard 6177 Lake Ellenor Drive, Orlando 5:30 P.M.

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Meeting Announcements

ACOUSTICS, SPEECH AND SIGNAL PROCESSING (ASSP)

TOPIC: "Signal Processing for Advanced Television"
SPEAKER: Dr. Jae Lim, Distinguished Lecturer
DATE: Friday, November 17, 1989
TIME: Lecturer 5:00 P.M. - Dinner after the meeting.
PLACE: Executive Conference Room at Martin Marietta Electronic Systems Company on Lake Underhill Drive.
CONTACT: For further information or dinner reservation contact Dave King (356-1881) prior to November 15.

COMPUTER SOCIETY (COMP)

TOPIC: "Computer Graphics Applications for Civil Engineering"
SPEAKER: Brian R. Garvey, P.E.
DATE: Thursday, November 16, 1989
TIME: Cash Bar 6:30 P.M. - Dinner/Lecture 7:00 P.M.
PLACE: Red Lobster at 3400 East Colonial Dr., Orlando
CONTACT: For further information or dinner reservation contact Ratan Guha (275-2956), Debbie Koscielski (330-5309) or Elsa Delgado (330-5328) prior to November 14.

ANTENNAS & PROPAGATION/ MICROWAVE THEORY & TECHNIQUE (AP/MTT)

TOPIC: "Nonlinear Device Modeling and Use in the Simulation and Design of Microwave Circuits and Systems"
SPEAKER: Octavius Pitzalis, Jr. - MTT Distinguished Lecturer
DATE: Thursday, November 16, 1989
TIME: Refreshments 5:30 P.M. - Lecture 6:00 P.M.
PLACE: Hewlett Packard, 6177 Lake Ellenor Drive, Orlando, FL 32809
CONTACT: For further information contact Bob Cock (356-2924) or Jeff Rollman (356-3926).

ULTRASONICS, FERROELECTRICS AND FREQUENCY CONTROL (UFFC)

TOPIC: "Acoustic Charge Transport (ACT) Technology in 1990"
SPEAKER: Armando Juan "A.J." Vigil
DATE: Tuesday, November 14, 1989
TIME: Refreshments 6:00 P.M. - Lecture 6:30 P.M.
PLACE: UCF PC2-105 (next to CEBA-I)
CONTACT: For further information contact Jackie Hines (886-8860) or Sam Richie (281-5765).

POWER ENGINEERING SOCIETY/ INDUSTRY APPLICATIONS SOCIETY (PE/IA)

TOPIC: "Harmonics in Power Systems." Their causes, their effects, and mitigation of harmonics will be covered as they apply to industry.
SPEAKER: Ray Stratford - IAS Distinguished Lecturer
DATE: Thursday, November 16, 1989.
TIME: Dinner 6:00 P.M. - Lecture 7:15 P.M.
PLACE: Villa Nova Restaurant at Rt. 17-92 and Lee Rd in Winter Park, FL.
RESERVATIONS REQUIRED: Deadline is November 14, 1989.
CONTACT: Please call Jim Pipkin (281-2916), Mike Dodane (896-6765) or Bob Gray (281-3269).

☆☆☆ STAR SEARCH ☆☆☆

Help us identify the "Outstanding Electrical Engineers" in the Orlando Section!

We are looking for potential candidates for major Section Awards. The "Outstanding Engineer Award" and the "Outstanding Engineering Educator Award" will be presented in February, 1990 and the "Outstanding Service Award" will be given in June, 1990.

The Orlando Section consists of over 1,200 Engineers spread over five counties. We can only get to know who the top performers are with your help. If you are aware of someone who has made significant contributions to the profession in the technical or academic arena or by service to the Institute, and who also meets the "Eligibility" requirements, please take a few minutes to fill out the short "Search Form" on page 3. You may also make nominations by calling the Orlando Section Voice Information Center at 366-7594

ELIGIBILITY:

- Only IEEE members with 3 years residency in the Orlando Section are eligible.
- A nominee cannot be considered for more than one award simultaneously.
- Current members of the Section Executive Board are not eligible.
- Previous award recipients, even from other Sections, are not eligible for the same award.
- The candidate need not be a member of a Group or Society.

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G. K. Huddleston, Section Chairman

Chairman's Corner

November 1989

The Awards Banquet is scheduled for February, and the key ingredient for its success is that there be recipients for the awards that we offer! The chapter and section officers are now involved in the Star Search process of identifying candidates for those awards and need the help of the membership in this regard. If YOU have a candidate for the awards described by Tom Nelson elsewhere in this issue, please contact the appropriate chapter chairman or Tom.

The other important ingredient for success of the Awards Banquet is attendance by members of the Orlando Section. The date for the event has not been set yet, but please keep your social calendar flexible for February. More publicity will follow in the next issue of the newsletter.

Bob Cock, Chairman of the AP/MTT chapter, is the winner of our internal contest to see which chapter chairman would be first to successfully use the remote feature of the **Voice Information Center (407-366-7594)**. Bob called from his home and installed a meeting notice message on the machine in Tom Nelson's home, which is accessible by the membership. Now this does not sound like a technological marvel in this age of computers, but it is a significant step forward in our quest to utilize the **Voice Information Center**. One small step for man...

Thank you for your response to our call to upgrade to Senior Member. Sandy Walker now has a list of Senior Members who can serve as references in the application. Please plan to provide your reference with a completed

reference form and a copy of your resume. It is not necessary that your reference know you a long time prior to this application.

Our next Section meeting will be on November 7 at Hewlett Packard in Orlando Central Park. Bob Smallwood had very nice refreshments for us at our last meeting and we thank him for his hospitality.

The IEEE is a professional society that is managed largely by volunteers. We are paid no salary for the service we perform. We reap our benefits from the professional exposure and self-expression outside our normal work place, and from having a voice in how the organization is run. I highly recommend that you also get involved now so that you will be ready for bigger things later in your professional lives. We have many opportunities to serve. Call me.

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TOLL-FREE 800 NUMBER FOR IEEE

The IEEE Service Center in Piscataway has established a new toll-free telephone number for member inquiries. Members may dial 1-800-678-IEEE for assistance on IEEE publication orders, membership applications, information about seminars on standards, changes of address, and student services. The service is available during the Center's business hours: 8:00 A.M. to 4:00 P.M. Eastern time.

THE INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS, INC.

ORLANDO SECTION AWARD CANDIDATE SEARCH FORM

Thomas J. Nelson
1156 Duncan Dr.
Winter Springs, FL 32708

1. AWARD: _____ Outstanding Engineer Award
 _____ Outstanding Engineering Educator Award
 _____ Outstanding Service Award

2. NOMINEE CANDIDATE:

Name: _____

Occupation/Position/Affiliation: _____

Current Address: _____

3. PROPOSED CITATION (30 words or less): For _____

4. IEEE SOCIETY/BOARD RELEVANT TO ACHIEVEMENT CITED: _____

5. SUBMITTED BY: _____

Name: _____

Occupation/Position/Affiliation: _____

Current Address: _____

Phone: () _____

6. ARE YOU WILLING TO PREPARE THE NOMINATION FORMS YOURSELF? YES _____ NO _____
 IF YES, STOP HERE AND MAIL THIS FORM TO ABOVE ADDRESS. THE AWARD COMMITTEE WILL SEND YOU A
 COPY OF THE NOMINATION FORM. IF NO, PLEASE COMPLETE THE REST OF THIS FORM AND MAIL TO ABOVE
 ADDRESS

7. POTENTIAL ENDORSERS:

(Persons familiar with nominee, who can probably attest to his/her contributions and to the importance thereof)

A. Name	B. Name	C. Name
Position/Title	Position/Title	Position/Title
Address	Address	Address
City/zip	City/zip	City/zip

BRIEF EVIDENCE TO SUPPORT NOMINATION:

9. SUGGESTED NOMINATOR(S) IF DIFFERENT FROM #5: _____

IEEE ORLANDO SECTION - EVENTS CALENDAR

CHAPTER/ CONTACT	NOVEMBER	DECEMBER	JANUARY
AP/MTT Bob Cock 356-2924 Jeff Rollman 356-3926	16th "State of the Art Circuit and System Simulation & Beyond" MTT - Distinguished Lecturer Hewlett-Packard - 5:30 P.M.		18th "Compact Ranges and RCS Measurements" AP - Distinguished Lecturer Hewlett-Packard - 5:30 P.M.
ASSP Dave King 356-1881	17th "Signal Processing for Advanced Television" ASSP - Distinguished Lecturer Martin Marietta ESC - 5:00 P.M.		
COMPUTER Ratan Guha 275-2956 Debbie Koscielski/ Elsa Delgado 330-5309/330-5328	16th "Computer Graphics Applications for Civil Engineering" Red Lobster - 3400 East Colonial Cash Bar: 6:30 P.M. Dinner/Lecture: 7:00 P.M.	TBA "A tour of Walt Disney World/Epcot facilities"	18th "Functional Languages and Parallelism" & "Compiling Parallel Logic Languages"
PE/IA Jim Pipkin 281-2916 Mike Dodane 896-6765 Bob Gray 281-3269	16th "Harmonics in Power Systems" IAS - Distinguished Lecturer Villa Nova Restaurant Dinner 5:30 P.M - Lecture 7:15 PM		
UFCF Jackie Hines 886-8860 Sam Richie 281-5765	14th "ACT Technology in 1990" UCF PC2-105 Refreshments 6:00 PM Lecture 6:30 PM		
SECTION Keith Huddleston 356-7201 Voice Info. Center 366-7594	7th "Executive Committee Meeting" Hewlett-Packard 6177 Lake Ellenor Drive, Orlando 5:30 P.M.	5th "Executive Committee Meeting" Hewlett-Packard 6177 Lake Ellenor Drive, Orlando 5:30 P.M.	2nd "Executive Committee Meeting" Hewlett-Packard 6177 Lake Ellenor Drive, Orlando 5:30 P.M.

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The Orlando Section Monthly

The Newsletter of the Orlando Section of the IEEE

Volume XXIII

January, 1990

Number 6

IEEE Orlando Section Awards Banquet



Michael Bass outside the only store in a village on Lake Baikal in Central Siberia.

Topic:

"Moscow, the City, the Sights, the People"

Dr. Michael Bass was a member of a US delegation from IEEE to visit the AS Popov Society for technical relations renewal in the Opto-Electronics field. His 17 day stay allowed him to visit the General Physics Institute in Moscow, the Lebedev Institute, Moscow State University, the Institute for High Temperature Physics, the Radio Technical Institute of the Soviet Union, and the Institute of Spectroscopy at Troitsk.

Dr. Michael Bass

Vice President for Research
University of Central Florida

a brief biography...

Michael Bass was born in the Bronx, NY in 1939. He received his B.S. in physics from Carnegie-Mellon University in 1960 and his M.S. in 1962 and his Ph.D. in 1964 in Physics from the University of Michigan. Dr. Bass joined U.C.F. in 1987 as Vice President for Research. From 1984 to 1987 he was professor and Chairman of Electrical Engineering-Electrophysics at the University of Southern California. From 1977 to 1984 he served as the Director of the Center for Laser Studies at U.S.C. Prior to coming to U.S.C. in 1973 he was a Senior Research Scientist at the Research Division of the Raytheon Company.

Professor Bass was amongst the first to demonstrate homogeneous broadening in dye lasers showing why they could oscillate over so broad a spectral range. His application of the statistical approach to the analysis of laser-induced damage led to the recognition of avalanche breakdown as the principal cause of this phenomenon in transparent media. Professor Bass also developed the technique of pulsed laser calorimetry to measure small intensity dependent absorptions. He is one of the co-inventors of the YAlO₃ laser host, the flexible, hollow, metal walled infrared transmissive waveguide and the use of fiber optics to deliver laser light for the treatment of internal bleeding and tumors.

Professor Bass is listed in Who's Who in Engineering, and Who's Who in America. He has authored over 100 refereed publications and has presented many invited lectures in several countries and at international conferences. He is the editor of a book entitled *Laser Material Processing* and is the co-editor of volumes IV and V of the *Laser handbook*.

Professor Bass is a fellow of both the Optical Society of America and the Institute of Electrical and Electronics Engineers. In 1979 he was honored as the first recipient of the U.S.C. School of Engineering Distinguished Researcher Award.

Awards Banquet

Saturday, February 24, 1990

PARK AVENUE GRILL

358 North Park Avenue
Winter Park

6:00 P.M. Cash Bar, Hors d'oeuvres

7:00 P.M. Dinner

Prime Rib or Red Snapper

Featured Speaker: Dr. Michael Bass

Vice President for Research
University of Central Florida

Cost \$22.00 per person

Last day for reservations is February 16th 1990

For Reservations Call:

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Home: 699-4890

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The *Orlando Section Monthly* is a communication of the Orlando Section of the IEEE, P.O. Box 521917, Longwood, Florida 32750. Eleven issues per year excluding July. Mailed about the 20th of each month. Announcements and advertisements for the *Orlando Section Monthly* should reach the Publications Manager by the 1st Tuesday of each month. For changes to the above list, contact the Section Secretary. The views and opinions by authors or advertisers are not necessary those of the Orlando Section of the IEEE.



Chairman's Corner
January 1990

The Awards Banquet is scheduled for February 24 at the Park Avenue Grill in Winter Park. Madjid Belkerdid has invited Steve Bass, the Vice President for Research at UCF, to speak on his recent trip to Russia. Dr. Bass's talk should be interesting to members and their spouses and dates.

A good New Year's resolution might include greater participation in your professional society, and attendance at the Awards Banquet is a good way to get started. The Chapter and Section officers will be delighted to see you there as some evidence of their efforts to serve the membership. Please give serious consideration to attending - and to making a timely reservation.

You can call the **Voice Information Center (407-366-7594)** to get more information about the banquet and to make your reservation. Tom Nelson will collect the reservations left on the VIC and forward them to Madjid. You can pay Madjid in advance or at the door on the night of the banquet.

Sandy Walker has initiated a project this year to increase membership. She is sending letters and application forms to key individuals at high tech companies in our Section territory, which includes Orange, Seminole, Lake, Osceola, and Sumter counties. You can help by making known your membership in IEEE and in getting forms to prospective members in your workplace.

Our next Section meeting will be on January 2 at Hewlett Packard in Orlando Central Park. We will be voting on changes to the bylaws to permit a calendar year budget cycle so that we will be in sync with IEEE HQ reporting.

Some other minor changes will also be made.

Nominations for Section and Chapter officers will be coming up in the March-May time frame. You may be interested in becoming more involved in either Section or Chapter operations. If interested in Section service, please let me know; for Chapter service, contact the Chapter Chairman.

On behalf of the members of the Executive Committee, I wish you a Happy New Year! Don't forget to eat rice for riches, peas for peace, turnip greens for greenbacks, and hog jowl for joy for dinner on New Year's Day!

The IEEE is a professional society that is managed largely by volunteers. We are paid no salary for the service we perform. We reap our benefits from the professional exposure and self-expression outside our normal work place, and from having a voice in how the organization is run. I highly recommend that you also get involved now so that you will be ready for bigger things later in your professional lives. We have many opportunities to serve. Call me.

Orlando Section Monthly
Advertisement Rates

The Orlando Section of the IEEE encourages placement of technical, professional, promotional, and commercial advertisement in the *Monthly*. The *Monthly*, read by more than 1,300 members, is published 11 times a year, August through June. The due date for the receipt of the ad is the 1st Tuesday of the month preceding the month of publication.

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1/6 Page	\$80	\$72

Also, One Eighth (Business Card) size ads will be placed at a promotional rate of \$50 per issue for a minimum of four consecutive issues, or \$37.50 per issue for eight consecutive issues. Please call Jorge Medina at (407) 330-5346 or Carmen Medina at (407) 260-1676, to place your ads or if you have any questions.

Meeting Announcements

ANTENNAS & PROPAGATION/ MICROWAVE THEORY & TECHNIQUE (AP/MTT)

TOPIC: "Compact Ranges and RCS Measurements"

SPEAKER: Professor Walter D. Burnside, Ohio State University - AP Distinguished Lecturer

DATE: Thursday, January 18, 1990

TIME: Refreshments 5:30 P.M. - Lecture 6:00 P.M.

PLACE: Hewlett Packard, 6177 Lake Ellenor Drive, Orlando, FL 32809

CONTACT: For further information contact Bob Cock (356-2924) or Jeff Rollman (356-3926).

COMPUTER SOCIETY (COMP)

1st. LECTURE: "Functional Languages and Parallelism"

SPEAKER: Dr. Peter M. Kogge

ABSTRACT: One of the major problems with extracting parallelism from conventional programs is the "Von Neumann Bottleneck" - namely a view of the computation as the result of changing locations in a memory in some time-ordered sequence. Dr. Kogge discusses a class of languages, called functional languages, that avoid this problem and consequently offer opportunities for parallelism not possible with, for example, Fortran. Discussion will start with the mathematical base of lambda calculus, and describe how that has spawned many interesting variations which are showing up with increasing frequency in new languages and novel processor designs.

DATE: Thursday, January 18, 1990

TIME: 2:00 P.M.

PLACE: UCF - CCA Rooms 102-103

2nd. LECTURE: "Compiling Parallel Logic Languages"

SPEAKER: Dr. Peter M. Kogge

ABSTRACT: Two of the most exciting fields in computer science today are parallelism and logic languages like Prolog. Dr. Kogge will give an overview of the progress being made in efficiently supporting such languages on real parallel processors. He will start with an overview of logic languages and the opportunities for parallelism present in them. Following this will be a review of the "Warren Abstract Machine (WAM)"--the major intermediate architecture used in practically all high performance Prolog compilers today. Modifications to the WAM to support parallelism will be discussed, with emphasis on the major problems and most promising solutions.

DATE: Thursday, January 18, 1990

TIME: 6:30 P.M.

PLACE: UCF - CCA Rooms 102-103

CONTACT: For further information and reservations contact Ratan Guha (275-2956), Debbie Koscielski (330-5309) or Elsa Delgado (330-5328).

POWER ENGINEERING SOCIETY/ INDUSTRY APPLICATIONS SOCIETY (PE/IA)

PROGRAM: Florida Power Corp. in cooperation with Sandia National Labs, the Florida Solar Energy Center, and the University of Central Florida is studying photovoltaics - harnessing sunlight to produce electricity - to discover how viable this alternate energy source can be for homes and business. We will be touring the "Solar Progress" substation of Florida Power at University Blvd and Econlockhatchee Trail in Orlando. This is the largest photovoltaic power station in the state of Florida, generating 15 KW of electricity.

SPEAKER: Nat Lewis is an Energy Services Engineer with Florida Power Corp. in Winter Park, Florida. Nat graduated from UCF with a B.S.E. and has been with Florida Power for 8 years. He is a member of AEE (Association of Energy Engineers).

DATE: Thursday, January 18, 1990

TIME: Tour - 5:45 P.M., Dinner - 6:30 P.M. at Tien Garden Restaurant

PLACE: University Blvd and Econ Trail near UCF at Florida Power Substation. Dinner at Tien Garden (after the tour) at Colonial Drive and Alafaya Trail.

RESERVATIONS REQUIRED: Deadline is January 16, 1990. Please call Jim Pipkin (281-2916) or Mike Dodane (896-6765) or Bob Gray (281-3269)

SIGNAL PROCESSING SOCIETY (SP)

Executive Board Meeting

TOPIC: "Plans for the activities in 1990"

DATE: Wednesday, January 17, 1990

TIME: 5:00 P.M.

PLACE: Dave King's house

CONTACT: For further information contact David King at 356-1881 (Bus.) or 628-4462 (Home)

ULTRASONICS, FERROELECTRICS AND FREQUENCY CONTROL (UFFC)

TOPIC: "Current Topics in Crystal Filters and Oscillators"

SPEAKER: R.C. Smythe, Piezo Technology, Inc.

ABSTRACT: This talk will describe, for the nonspecialist in the field, some recent developments in monolithic and conventional crystal filters and in crystal oscillators. Topics to be discussed include a multiresonator monolithic filter in an LCC package, VHF monolithic and discrete-resonator filters using chemically-milled ring-supported resonators, and a microprocessor-compensated crystal oscillator and its associated resonator.

DATE: Tuesday, January 9, 1990

TIME: Refreshments 6:00 P.M. - Lecture 6:30 P.M.

PLACE: University of Central Florida, CEBA-I Room 456

CONTACT: For further information contact Sam Richie at 281-5765 (UCF Office CEBA-I 116) or Jackie Hines at 886-8860 (SAWTEK, Inc).

IEEE ORLANDO SECTION - EVENTS CALENDAR

CHAPTER/ CONTACT	JANUARY	FEBRUARY	MARCH
AP/MTT Bob Cock 356-2924 Jeff Rollman 356-3926	18th "Compact Ranges and RCS Measurements" AP - Distinguished Lecturer Hewlett-Packard - 5:30 P.M.	15th "Gallium Indium Arsenide Heterostructures for LNA's High Speed Logic and Lightwave Detection"	15th "Self-Calibration of Large Antenna Arrays or High Resolution Microwave Imaging" Hewlett-Packard - 5:30 P.M.
COMPUTER Ratan Guha 275-2956 Debbie Koscielski/ Elsa Delgado 330-5309/330-5328	18th "Functional Languages and Parallelism" - UCF CCA - 2:00 P.M. "Compiling Parallel Logic Languages" UCF CCA - 6:30 P.M.	14th "Parallel Processing and the RP3" UCF A.M. "Hot Spot Contention in Multistage Networks" TBD P.M.	TBD "Performance Evaluation of Fault-Tolerant Software" & "Software Reliability Modeling and Related Topics"
LEOS Jim Moharam 658-6833 Alan Miller 658-6812		15th "Quantum Well Optical Switching Devices" UCF Adm. building - Board Room 5:30 P.M.	
SP David King 356-1881	17th "Plans for the activities in 1990" Dave King's house - 5:00 P.M.		
UFFC Jackie Hines 886-8860 Sam Richie 281-5765	9th "Current Topics in Crystal Filters and Oscillators" UCF, CEBA-I Room 456 6:00 P.M.	20th "Micro-Scale Mechanics for Sensors and Actuators" Distinguished Lecturer TBD	
SECTION Keith Huddleston 356-7201 Voice Info. Center 366-7594	2nd "Executive Committee Meeting" Hewlett-Packard 6177 Lake Ellenor Drive, Orlando 5:30 P.M.	2nd "Executive Committee Meeting" Hewlett-Packard 6177 Lake Ellenor Drive, Orlando 5:30 P.M.	6th "Executive Committee Meeting" Hewlett-Packard 6177 Lake Ellenor Drive, Orlando 5:30 P.M.

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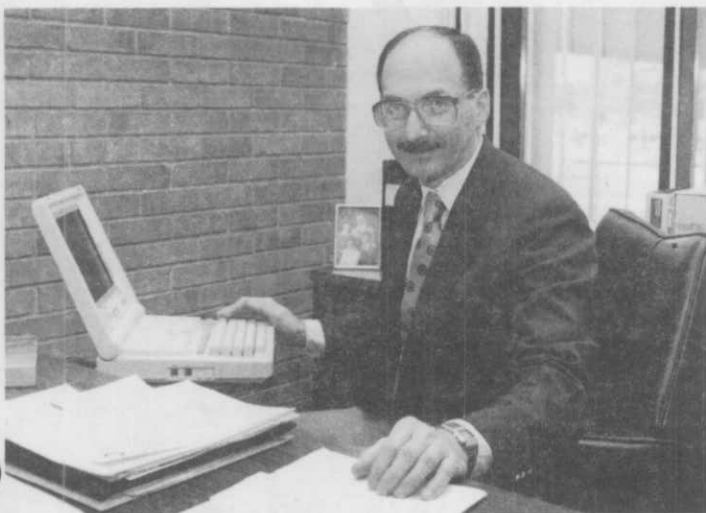
The Newsletter of the Orlando Section of the IEEE

Volume XXIII

February, 1990

Number 7

IEEE Orlando Section *Awards Banquet*



Dr. Michael Bass in office in Fall 1988

Topic:

"Moscow, the City, the Sights, the People"

Dr. Michael Bass was a member of a US delegation from IEEE to visit the AS Popov Society for technical relations renewal in the Opto-Electronics field. His 17 day stay allowed him to visit the General Physics Institute in Moscow, the Lebedev Institute, Moscow State University, the Institute for High Temperature Physics, the Radio Technical Institute of the Soviet Union, and the Institute of Spectroscopy at Troitsk.

Dr. Michael Bass

Vice President for Research
University of Central Florida

a brief biography...

Michael Bass was born in the Bronx, NY in 1939. He received his B.S. in physics from Carnegie-Mellon University in 1960 and his M.S. in 1962 and his Ph.D. in 1964 in Physics from the University of Michigan. Dr. Bass joined U.C.F. in 1987 as Vice President for Research. From 1984 to 1987 he was professor and Chairman of Electrical Engineering - Electrophysics at the University of Southern California. From 1977 to 1984 he served as the Director of the Center for Laser Studies at U.S.C. Prior to coming to U.S.C. in 1973 he was a Senior Research Scientist at the Research Division of the Raytheon Company.

Professor Bass was amongst the first to demonstrate homogeneous broadening in dye lasers showing why they could oscillate over so broad a spectral range. His application of the statistical approach to the analysis of laser-induced damage led to the recognition of avalanche breakdown as the principal cause of this phenomenon in transparent media. Professor Bass also developed the technique of pulsed laser calorimetry to measure small intensity dependent absorptions. He is one of the co-inventors of the YAlO₃ laser host, the flexible, hollow, metal walled infrared transmissive waveguide and the use of fiber optics to deliver laser light for the treatment of internal bleeding and tumors.

Professor Bass is listed in Who's Who in Engineering, and Who's Who in America. He has authored over 100 refereed publications and has presented many invited lectures in several countries and at international conferences. He is the editor of a book entitled *Laser Material Processing* and is the co-editor of volumes IV and V of the *Laser handbook*.

Professor Bass is a fellow of both the Optical Society of America and the Institute of Electrical and Electronics Engineers. In 1979 he was honored as the first recipient of the U.S.C. School of Engineering Distinguished Researcher Award.

Awards Banquet *Saturday, February 24, 1990*

PARK AVENUE GRILL

358 North Park Avenue

Winter Park

647-4556

6:00 P.M. Cash Bar, Hors d'oeuvres

7:00 P.M. Dinner

Prime Rib or Red Snapper

Featured Speaker: Dr. Michael Bass

Vice President for Research
University of Central Florida

Cost \$22.00 per person

Last day for reservations is February 16th 1990

For Reservations Call:

Madjid Belkerdid

Work: 281-5793

Home: 699-4890

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(Bus.) 843-7030 ext. 360, (Home) 365-6837
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Committee Chairmen

Awards: Tom J. Nelson, (Home) 365-6837
(Bus.) 843-7030 ext. 360, (Fax) 839-5870

Chapters Chairman:

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(Bus.) 281-5831, (Home) 657-5120
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(Bus.) 275-2318, (Home) 699-4890
Publications Manager: Jorge Medina
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Society Chapter Chairmen

AES: Dr. Robert C. Hamey
(Bus.) 356-2373, (Home) 352-6991
AP/MTT: Bob Cock (Bus.) 356-2924
COMPUTER: Dr. Ratan Guha
(Bus.) 275-2956, (Home) 628-4910
COM/VT: Dr. Michael G. Georgiopoulos
(Bus.) 281-5338, (Home) 657-5085
ED/CHMT: Robert Canright
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(Bus.) 658-6833, (Home) 679-0073
PE/IA: Robert F. Gray
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UFFC: Jackie Hines (Bus.) 886-8860
Student Branch: Jeff Zuelch
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**Chairman's Corner
February 1990**

The Awards Banquet is scheduled for February 24 at the Park Avenue Grill in Winter Park. All Section members and their dates/spouses are invited to attend. All Chapter and Section officers and committee members are especially invited. This year's banquet should be a gala event, and I encourage you to attend.

You may call Madjid Belkerdid or the **Voice Information Center (407-366-7594)** to get more complete information about the banquet and to make your reservation. You can pay Madjid in advance or at the door on the night of the banquet.

Sandy Walker has mailed out over 100 letters to various companies in the area to help boost membership in IEEE. Please help in this drive by letting your co-workers know that you are a IEEE member and will help in signing up new members.

National Engineers Week is scheduled for February 18-24 and is sponsored by IEEE along with nine other similar organizations. Bob Gray and the PE/IA chapter are sponsoring a breakfast at UCF during this period to encourage careers in Power Engineering. Our hat is off to him for his initiative. (Bob's chapter won the Best Chapter Award last June).

Our next Section meeting will be on February 6 at Hewlett Packard in Orlando Central Park. We will be voting to amend the budget to run from January 1 to December 31 according to the revised by-laws as unanimously approved at our meeting on January 2.

Nominations for Section and Chapter officers will be coming up in the March-May time frame. Tom Nelson, Frank Fluet, and Geof Dick have been appointed as the nominating committee for the Section Officers. You may be interested in becoming more involved in either Section or Chapter operations. If interested in Section service, please contact Tom, Frank, or Geof; for Chapter service, contact the respective chapter Chairman.

The IEEE is a professional society that is managed largely by volunteers. We are paid no salary for the service we perform. We reap our benefits from the professional exposure and self-expression outside our normal work place, and from having a voice in how the organization is run. I highly recommend that you also get involved now so that you will be ready for bigger things later in your professional lives. We have many opportunities to serve. Call me.

G. K. Huddleston

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Meeting Announcements

ANTENNAS & PROPAGATION/ MICROWAVE THEORY & TECHNIQUE (AP/MTT)

TOPIC: "Gallium Indium Arsenide Heterostructures for LNA's High Speed Logic and Lightwave Detection"

SPEAKERS: Dr. April Brown, Dr. Umesh Mishra. N.C. State University and the Army Research Office. MTT distinguished lecturers.

DATE: Thursday, February 15, 1990

TIME: Refreshments 5:30 P.M. - Lecture 6:00 P.M.

PLACE: Hewlett Packard, 6177 Lake Ellenor Drive, Orlando, FL 32809

CONTACT: Bob Cock (356-2924) or Jeff Rollman (356-3926).

COMPUTER SOCIETY (COMP)

SPEAKER: Dr. Greg F. Pfister

1st. LECTURE: "Parallel Processing and the RP3"

DATE: Wednesday, February 14, 1990

TIME: 2:00 P.M.

PLACE: UCF - CCA Rooms 102-103

2nd. LECTURE: "Hot Spot Contention In Multistage Networks"

DATE: Wednesday, February 14, 1990

TIME: 6:30 P.M.

PLACE: UCF - CCA Rooms 102-103

CONTACT: For further information and reservations contact Ratan Guha (275-2956), Debbie Koscielski (330-5309) or Elsa Delgado (330-5328).

ELECTRON DEVICES/ COMPONENTS, HYBRIDS, MANUFACTURING TECHNOLOGY (ED/CHMT)

TOPIC: "Infrared Detectors and Thermal Imaging"

SPEAKER: Dr. Rama S. Singh. Member, senior professional staff, Martin Marietta.

DATE: Thursday, February 15, 1990

TIME: 6:30 P.M.

PLACE: Orlando Public Library, Rosalind Ave. (third floor).

CONTACT: Robert Canright at 263-8198

LASER AND ELECTRO-OPTIC SOCIETY (LEOS)

PROGRAM The speaker will discuss recent advances in quantum well optical switching devices science and technology and their applications in optoelectronics, fiber optic communication, optical computing, and optical interconnects.

SPEAKER: Dr. David A. B. Miller is the head of the Photonics Switching Device Research Department of AT&T Bell Laboratories, Holmdel, NJ. He has pioneered a new class of optoelectronic switching devices namely the SEED. He received several international awards for his work on semiconductor nonlinear optics and quantum wells. Dr. Miller is a former IEEE-LEOS Traveling Lecturer.

DATE: Thursday, February 15, 1990

TIME: Social Hour (refreshments, etc.) 5:30 PM; Presentation 6:30 PM

PLACE: Board Room - UCF (3rd. floor UCF Administration building)

RESERVATIONS: Required for both social hour and presentation. Please call Jim Moharam, 658-6833 or Alan Miller, 658-6812

POWER ENGINEERING SOCIETY/ INDUSTRY APPLICATIONS SOCIETY (PE/IA)

PROGRAM: The program will cover the design features, performance, and applications of energy efficient motors. High efficiency motors are desirable due to cost effectiveness for the user and help to keep energy demand down by conserving electricity.

SPEAKER: Mike Bolton, Motor Sales Representative of General Electric Co. in Tampa. Mike is a graduate of Clemson University. Previous GE assignments involved applications for pulp & paper, material handling, and food processing industries. His present assignment in motor sales began in 1984.

DATE: Tuesday, February 13, 1990

TIME: Diner - 6:00 PM, Presentation - 7:30 PM

PLACE: Gary's Duck Inn on South Orange Blossom Trail (Rt. 441)

RESERVATIONS REQUIRED: Deadline is February 12, 1990. Please call Jim Pipkin (281-2916) or Mike Dodane (896-6765) or Bob Gray (281-3269)

POWER ENGINEERING SOCIETY/ INDUSTRY APPLICATIONS SOCIETY (PE/IA)

Turning Ideas Into Reality...
It Takes Time!

Engineer's Week 1990

Continental Breakfast at
University of Central Florida (UCF)

Co-sponsored by the
UCF IEEE Student Branch

Wednesday February 21
7:00 - 8:30 AM
University Dining Room

PROGRAM: This will be an opportunity for the students to mingle and chat with power engineers from industry in the Central Florida area. The students may discuss career paths, new developments in power, IEEE/PES involvement, and "life in the real world" with the PES representatives.

SPEAKER (7:30 AM) Lon Montgomery, Senior Engineer - Generator Devel. Westinghouse Electric Corporation.

RESERVATIONS: Contact Bob Gray - Westinghouse 281-3269, Professor Mike Harris - UCF 275-2548 or Abel Fernandez - Dir. of Industrial Relations - UCF 275-2156

ULTRASONICS, FERROELECTRICS AND FREQUENCY CONTROL (UFFC)

TOPIC: "Micro-Scale Mechanics for Sensors and actuators"

SPEAKER: Dr. Richard M. White, Achievement Award Winner, Fellow, IEEE UFFC 1989 Distinguished Lecturer

DATE: Tuesday, February 20, 1990

TIME: Social Hour - 5:30 PM (Refreshments, etc. - donation of \$2.00 per person required) - Lecture 6:30 P.M.

PLACE: Reception - UCF President's Dining Room at student center. Presentation - UCF President's Board Room (3rd. floor Administration building)

CONTACT: For further information contact Sam Richie at 281-5765 (UCF Office CEBA-I 116) or Jackie Hines at 886-8860 (SAWTEK, Inc.).

IEEE ORLANDO SECTION - EVENTS CALENDAR

CHAPTER/ CONTACT	FEBRUARY	MARCH	APRIL
AP/MTT Bob Cock 356-2924 Jeff Rollman 356-3926	15th "Gallium Indium Arsenide Heterostructures for LNA's High Speed Logic and Lightwave Detection"	15th "Self-Calibration of Large Antenna Arrays or High Resolution Microwave Imaging" Hewlett-Packard - 5:30 P.M.	19th "Antennas Ranges and Pattern Recording Equipment" Hewlett-Packard - 5:30 P.M.
COMPUTER Ratan Guha 275-2956 Debbie Koscielski/ Elsa Delgado 330-5309/330-5328	14th "Parallel Processing and the RP3" UCF CCA 2:00 P.M. "Hot Spot Contention in Multistage Networks" UCF CCA - 6:30 P.M.	TBD "Performance Evaluation of Fault-Tolerant Software" & "Software Reliability Modeling and Related Topics"	
ED/CHMT Robert Canright 263-8198	15th "Infrared Detectors and Thermal Imaging" Orlando Public Library - 6:30 P.M.		
LEOS Jim Moharam 658-6833 Alan Miller 658-6812	15th "Quantum Well Optical Switching Devices" UCF Adm. building - Board Room 5:30 P.M.		
PE/IA Bob Gray 281-3269 Jim Pipkin 281-2916 Mike Dodane 896-6765	13th "Energy Efficient Motors" Gary's Duck Inn - 6:00 PM 21st "Turning Ideas into Reality... It Takes Time!" UCF Dining Room - 7:00 AM		
UFFC Jackie Hines 886-8860 Sam Richie 281-5765	20th "Micro-Scale Mechanics for Sensors and Actuators" Distinguished Lecturer UCF - 5:30 PM		
SECTION Keith Huddleston 356-7201 Voice Info. Center 366-7594	6th "Executive Committee Meeting" Hewlett-Packard 6177 Lake Ellenor Drive, Orlando 5:30 P.M.	6th "Executive Committee Meeting" Hewlett-Packard 6177 Lake Ellenor Drive, Orlando 5:30 P.M.	3rd "Executive Committee Meeting" Hewlett-Packard 6177 Lake Ellenor Drive, Orlando 5:30 P.M.

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The Orlando Section Monthly

The Newsletter of the Orlando Section of the IEEE

Volume XXIII

March, 1990

Number 8

MEETING ANNOUNCEMENTS

ANTENNAS & PROPAGATION/ MICROWAVE THEORY & TECHNIQUE (AP/MTT)

TOPIC: "Self-Calibration of Large Antenna Arrays or High Resolution Microwave Imaging"

SPEAKERS: Professor Bernard D. Steinburg, University of Pennsylvania. AP Distinguished Lecturer.

DATE: Thursday, March 15, 1990

TIME: Refreshments 5:30 P.M. - Lecture 6:00 P.M.

PLACE: Hewlett Packard, 6177 Lake Ellenor Drive, Orlando, FL 32809

CONTACT: Bob Cock (356-2924) or Jeff Rollman (356-3926).

COMPUTER SOCIETY (COMP)

SPEAKER: Dr. Anil K. Jain, Distinguished Lecturer. Dr. Jain is a professor in the Computer Science Dept. at Michigan State University. He received his BTech degree from the Indian Institute of Technology, Kampur, and MS and Ph.D degrees in Electrical Engineering from the Ohio State University. His research interests are in the area of pattern recognition and computer vision.

LECTURE: "Three-Dimensional Computer Vision"

DATE: Wednesday, March 21, 1990

TIME: 6:30 P.M.

PLACE: UCF - Administration Building, President's Room on the 3rd. floor with refreshments served 15 minutes prior to the lecture.

CONTACT: For further information and reservations contact Ratan Guha (275-2956), Debbie Koscielski (330-5309) or Elsa Delgado (330-5328).

SIGNAL PROCESSING SOCIETY (SP)

TOPIC: "A Survey of Computer Tomography"

SPEAKER: Dr. Ikram Abdou

DATE: Wednesday, March 14, 1990

TIME: 5:00 P.M.

PLACE: UCF Room 383 CEBA1

CONTACT: For further information contact David King at 356-1881 (Bus.) or 628-4462 (Home).

POWER ENGINEERING SOCIETY/ INDUSTRY APPLICATIONS SOCIETY (PE/IA)

PROGRAM: Our topic is UPS - "Uninterruptible Power Systems." A brief history of power electronics will be presented from the vacuum tube to the bipolar transistor. The various types of UPS will be discussed (Standby, Ferro, Bi-Directional, and On-Line) and their applications. Key items to request when specifying UPS will also be covered as they relate to UPS standards (IEEE, NEMA, etc). Finally, our speaker will address present and future market trends for UPS.

SPEAKER: Greg Mack, Product Marketing Manager - UPS Department UPS Division of Toshiba International. Greg is a graduate of Lamar University (BSEE) and has been with Toshiba since 1984. He created the UPS Division of Toshiba in 1987 and has pioneered its growth over the past 3 years. His work involves extensive travel to customers and distributors in North America to determine market requirements and trends.

DATE: Thursday, March 15, 1990

TIME: Dinner - 6:00 PM, Presentation - 7:15 PM

PLACE: Ronnie's Restaurant, 2702 E. Colonial Dr. at the Colonial Mall.

RESERVATIONS REQUIRED: Deadline is March 13, 1990. Please call Mike Dodane (896-6765), Jim Pipkin (281-2916) or Bob Gray (281-3269)

POWER ENGINEERING SOCIETY/ INDUSTRY APPLICATIONS SOCIETY (PE/IA)

Second Annual Power Engineering Seminar

After the excellent response to last year's power engineering seminar, which had over 40 attendees, the PES/IAS has decided to offer a seminar series on Tuesday evenings from May 1 - June 5, 1990. The theme this year will be the Analysis and Modeling of Major Power System Components - overhead and underground lines, transformers, generators, and switchgear. Instructors will be practicing engineers, primarily from major manufacturers. The PES/IAS has received commitments for speakers from Westinghouse, General Electric, Cablec, and McGraw-Edison.

More information will appear in the April issue of the *Orlando Section Monthly*.

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366-7594

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Chairman's Corner

March 1990

This is the time of the year when our awards chairman and our program chairman are the busiest. The Awards banquet is by far the most important event of the IEEE Orlando Section, and I hope to see you on the 24th. The Awards banquet will be held at The Park Avenue Grill (Phone: 647-4556) located at 358 North Park Avenue in downtown Winter Park. Come early for a stroll down Park Ave. if you can. You can park off any sidestreet, along Park Ave., or in the back. The banquet will be held in the second story part of the restaurant with wide open windows and a cash bar in the center of the dining area.

There are a lot of activities going on in our section. Please try our VOICE INFORMATION CENTER (407-366-7594) for more details. One item of importance is the upcoming international conference on Vehicular Technology to be held in Orlando in May 1990. The Orlando Section is co-sponsoring that conference. George McClure, the conference general chairman and the chairman of the Vehicular Technology

national society, was instrumental in bringing this conference to Orlando, we are grateful and honored. The details for GlobeCom '92 in Orlando are being finalized, a general conference chairman, as well as a technical Conference chairman have been found, thanks to the effort of Ed Ellis.

The section will make a profit off the VT conference, and if the section is to be financially healthy we need to plan for more conferences in the future. This section cannot rely on the headquarters rebate as the only means income we have to capitalize on our location to attract conferences and symposia.

For your information IEEE is the largest professional organization in the world, well over 300,000 members. The IEEE Orlando Section is well over 1,500 members.

Our next Section meeting will be on Tuesday March 6th, 1990 at Hewlett Packard in Orlando Central Park, at 5:30 P.M. This is your professional organization, get involved!

G. K. Huddleston, Section Chairman

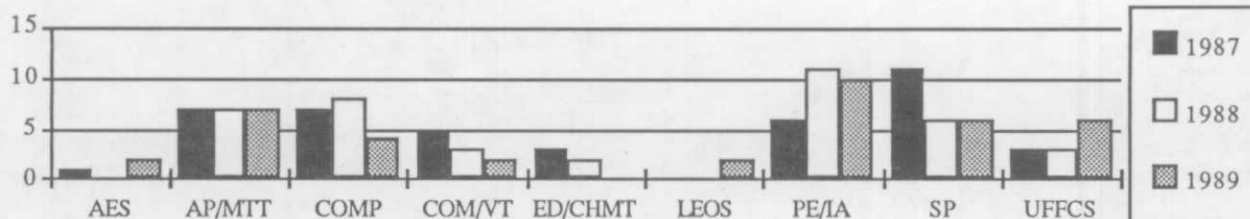
IEEE ORLANDO SECTION ANNUAL FINANCIAL REPORT TO IEEE HEADQUARTERS FOR YEAR ENDING DECEMBER 31, 1989

INCOME AND EXPENSES	INCOME	EXPENSES
A. Programs and Activities		
A.1 Meetings and Social Events	\$2,248.00	\$3,992.28
A.2 Publications	\$500.00	\$4,930.00
A.3 Advertising	\$500.00	
A.4 Continuing Education Activities	\$4,275.00	\$40.00
A.5 Student Activities		\$173.35
A.6 Grants and Awards		\$180.36
A.7 Section Support Via Region 3	\$1,200.00	\$1,347.63
Total Part A	\$8,723.00	\$10,663.62
B. Other Income		
B.1 Rebate from Headquarters (Gross amount)	\$5,080.70	
B.2 Interest	\$35.12	
B.3 Support from National Societies	\$1,100.00	
Total Part B	\$6,215.82	
C. Other Expenses		
C.1 Office Expenses		\$928.32
Total Part C		\$928.32
D. Total (Sum of Part A, B, & C)	\$14,938.82	\$11,591.94
OTHER RECEIPTS AND DISBURSEMENTS		
E. Loans and advances made to VT Conference		\$2,000.00
F. Grand Total Receipts & Disbursements (D + E)	\$14,938.82	\$13,591.94
G. Cash on hand January 1, 1989	\$5,069.53	
H. Add Grand Total Receipts (Line F)	\$20,008.35	
I. (Deduct) Grand Total Disbursements (Line F)	(\$13,591.94)	
J. Cash on hand December 31, 1989	\$6,416.41	

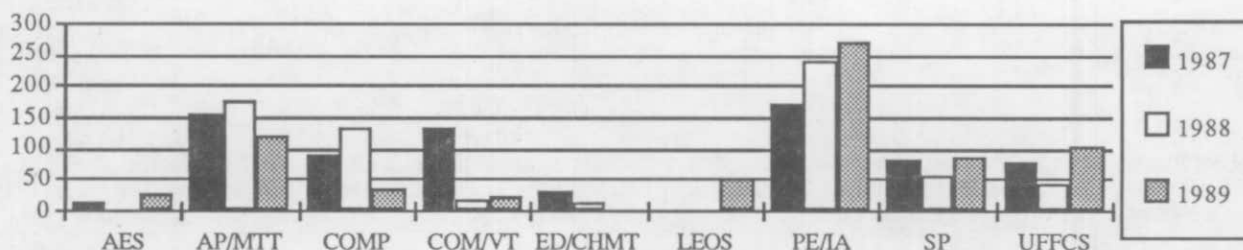
HOW ACTIVE YOUR IEEE ORLANDO SECTION WAS IN 1989?

The IEEE Orlando Section and her nine society chapters had a banner year in 1989 measured by the level of activities and member participations. There were 13 section meetings with 212 attendants and 39 technical or social meetings among the nine chapters with 796 attendants. The following bar charts display the number of chapter meetings and the number of attendants in calendar years 1987, 1988, and 1989 for each of the chapters AES, AP/MTT, COMPUTER, VT/COM, ED/CHMT, LEOS, PE/IA, SP, and UFFC. The PE/IA has been the consistent most active chapter, besides holding a seminar in 1989, followed by chapters AP/MTT, UFFC, SP, and COMPUTER.

NUMBER OF CHAPTER MEETINGS



NUMBER OF CHAPTER ATTENDANTS



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IEEE ORLANDO SECTION - EVENTS CALENDAR

CHAPTER/ CONTACT	MARCH	APRIL	MAY
AP/MTT Bob Cock 356-2924 Jeff Rollman 356-3926	15th "Self-Calibration of Large Antenna Arrays or High Resolution Microwave Imaging" Prof. Bernard D. Steinburg Hewlett-Packard - 5:30 P.M.	19th "Antenna Ranges and Pattern Recording Equipment" Scientific - Atlanta, Inc. Hewlett-Packard - 5:30 P.M.	17th "Radar Principles; Low, Medium, and High PRF Radar" Dr. S. A. Hovanessian The Aerospace Corporation Hewlett-Packard - 5:30 P.M.
COMPUTER Ratan Guha 275-2956 Debbie Koscielski/ Elsa Delgado 330-5309/330-5328	21st "Three-Dimensional Computer Vision" Dr. Anil K. Jain UCF, Adm. Bldg. 6:30 P.M.	18th "Performance Evaluation of Fault-Tolerant Software" & "Software Reliability Modeling and Related Topics"	TBA
PE/IA Bob Gray 281-3269 Jim Pipkin 281-2916 Mike Dodane 896-6765	15th "UPS - Uninterruptible Power Systems" Greg Mack - UPS Div. of Toshiba Dinner - 6:00 P.M. Presentation - 7:15 P.M. Ronnie's Restaurant	TBA	1st - June 5th "Second Annual Power Engineering Seminar Series"
SP David King 356-1881	14th "A Survey of Computer Tomography" Dr. Ikram Abdou UCF Room 383 CEBA1 - 5:00 P.M.	18th "Image Compression Using the NITF Standard Algorithm" Tim Young UCF Room 107 CEBA1 - 5:00 P.M.	16th "Automatic Target Recognition" Dr. Ali Atashroo Place: TBA Dinner - 5:00 P.M.
SECTION Keith Huddleston 356-7201 VIC - 366-7594	6th "Executive Committee Meeting" Hewlett-Packard - 5:30 P.M. 6177 Lake Ellenor Drive, Orlando	3rd "Executive Committee Meeting" Hewlett-Packard - 5:30 P.M. 6177 Lake Ellenor Drive, Orlando	1st "Executive Committee Meeting" Hewlett-Packard - 5:30 P.M. 6177 Lake Ellenor Drive, Orlando
IEEE Sponsored and Cosponsored Conferences	20th - 22nd "SOUTHCON '90" Region 3, Atlanta Sec, FL Council Orange County Convention Center Orlando Janis Bendle 1-800-877-2668	29th - May 1st "1990 IEEE Rural Electric Power Conference" IA Sheraton Plaza, Orlando C. Alan Blackmon - (803) 878-6326	6th - 9th 1990 IEEE VT Conference Sheraton Plaza, FL Mall, Orlando George McClure 629-5712 21st - 25th "1990 21st IEEE Photovoltaic Specialist Conference" Hyatt Orlando, Kissimmee Dr. J. Meakin (302) 451- 1672

Orlando Section Monthly - Advertisement Rates

The Orlando Section of the IEEE encourages placement of technical, professional, promotional, and commercial advertisement in the *Monthly*. The *Monthly*, read by more than 1,500 members, is published 11 times a year, August through June. The due date for the receipt of the ad is the 1st Tuesday of the month preceding the month of publication. The monthly rates and sizes of the ads are as follows:

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Two Page	\$450	\$390	Half Page	\$195	\$165
Full Page	\$300	\$255	1/3 Page	\$165	\$135
3/4 Page	\$255	\$225	1/4 Page	\$135	\$105
2/3 Page	\$225	\$195	1/6 Page	\$80	\$72

Also, One Eighth (Business Card) size ads will be placed at a promotional rate of \$50 per issue for a minimum of four consecutive issues, or \$37.50 per issue for eight consecutive issues. Please call Jorge Medina at (407) 330-5346 or Carmen Medina at (407) 260-1676, to place your ads.

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Engineers, Inc.

The Orlando Section Monthly

The Newsletter of the Orlando Section of the IEEE

Volume XXIII

April, 1990

Number 9

IEEE Orlando Section Awards Banquet

Tom Nelson, Awards Chairman

The 1990 Awards Banquet was held at the Park Avenue Grill in Winter Park on Saturday February 24th. There were eighty-five people in attendance for the awards. Dr. Michael Bass, Vice President for Research at the University of Central Florida gave a presentation entitled "Moscow, the city, the Sites, the People."

Chapter Engineer of the Year Awards

AP/MTT	Jonathan Ladd
COM/VT	Dr. Madjid A. Belkerdid
PE/IA	Edward A. Lobnitz
SP	Dr. M. Ali Atashroo
UFCF	Benjamin P. Abbott
COM	Fred G. Curtis
CHMT	Richard C. Landis

Student Awards

Each year the Orlando Section presents an award and a \$50 U.S. Savings Bond to the *Outstanding Senior Student in Electrical Engineering* and the *Outstanding Graduate Student in Electrical Engineering*. The 1990 winners were Mr. Steve T. Yun and Mr. Waisum Wong respectively.

Section Awards

Again this year there were many excellent well-qualified nominations for the Section Outstanding Engineer and Engineering Educator Awards.

The Orlando Section Outstanding Engineering Educator Award is designed to recognize members who, through their academic contributions, have enhanced the engineering profession.

The 1990 Outstanding Engineering Educator Award was presented to Dr. Nicolaos S. Tzannes for his efforts to promote excellence in research and teaching at the Electrical Engineering Department of the University of Central Florida.

Dr. Tzannes has published more than fifty papers in technical journals and conferences and written four books in the field of communications and co-authored one others. He has received many honors, is a reviewer for books in Electrical Engineering and Applied Math for three publishers and for the IEEE transactions on Information Theory and



Outstanding Engineering Educator, Dr. Nicolaos S. Tzannes (left) and Outstanding Engineer, Dr. Robert C. Harney.

Acoustics, Speech and Signal Processing. He has over twenty-five years of teaching experience in Electrical Engineering and is currently Professor and Chair of the Department of Electrical Engineering at the University of Central Florida.

The Orlando Section Outstanding Engineer Award is designed to recognize Orlando Section members who through their technical and professional abilities have made outstanding contributions to their profession.

The 1990 Outstanding Engineer Award was presented to Dr. Robert C. Harney for significant contributions to the theoretical and practical development of



1990 Chapter Engineers of the Year: Dr. Madjid A. Belkerdid (COM/VT), Jonathan Ladd (AP/MTT), Benjamin P. Abbott (UFCF), Fred G. Curtis (COM), Dr. M. Ali Atashroo (SP), Edward A. Lobnitz (PE/IA) (absent) and Richard C. Landis (CHMT) (absent).

coherent laser radar technology and its application to multisensor systems.

Dr. Harney has been active in laser applications research since 1969 and an active contributor to the field of laser radar continuously since 1977. He has authored over sixty technical publications including Journal articles, conference proceedings, and formal technical reports, more than thirty of which deal with laser radar technology. He has been awarded five patents. He is currently a Senior Member-Professional Staff at Martin Marietta Electronic and Missile Systems, Orlando, Florida.

See Awards Banquet, p.2



FCIEEE Outstanding Engineer, Carl Flick and FCIEEE Outstanding Engineering Educator, Dr. Charles E. Hughes.



Karl Lohman, FCIEEE Awards Chairman, presents the FCIEEE Outstanding Service Award to George F. McClure.

IEEE ORLANDO SECTION Region 03 Section 05 Council 51

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Chairman's Corner

April 1990

G. K. Huddleston

Orlando Section Chairman

The Awards Banquet was held on February 24 at the Park Avenue Grill in Winter Park, and it was quite an event with over 80 attendees. Seven of our nine chapters presented their awards for Engineer of the Year as detailed elsewhere in this issue. Our congratulations specially go to Bob Harney of Martin Marietta for the Section Outstanding Engineer and to Nick Tzannes of UCF as Outstanding Educator. Specially congratulations are in order for Carl Flick of Westinghouse, Charles Hughes of UCF, and George McClure of Martin Marietta for awards from the Florida Council of IEEE. We have also learned that Carl Flick has been selected as the Region 3 Outstanding Engineer for 1990! He will be receiving his award on April 3 in New Orleans during the Region 3 Southeastcon '90.

Special appreciation also goes to Dr. Mike Bass, Vice President for Research at UCF. Mike gave an interesting and entertaining slide show of his visits to the Soviet Union since the early '80's. Of particular note were his observations concerning the changes in attitudes toward a more open society in the late '80's.

My appreciation is extended to the Section officers who made the Awards Banquet happen: Madjid Belkerdid (and his wife) for selecting the site, organizing the program, inviting the speaker, and collecting the money; Tom Nelson, Frank Fluet, Geof Dick, and Madjid Belkerdid for conducting the awards selection; Tom Nelson for organizing the awards portion of the program and for preparing all the

certificates in a timely manner.

Tom Nelson, Frank Fluet, and Geof Dick have been appointed as the nominating committee for the Section officers and will present the list of candidates in this issue. An Elections Committee will be appointed at the April meeting of the Executive Committee if there is more than one nominee for any office. Ballots, if needed, will be published in the May issue of the Section Monthly. All nominations from the membership for elected offices should be submitted to the Section Chairman before April 1, as required in our Bylaws.

Chapter officers are specially encouraged to meet the same deadlines for election of new chapter officers. The new Chapter Chairmen will be required to elect the Society Chapters Representative (Chapter's Chairman) at the August meeting.

Our next Section meeting will be on April 3 at Hewlett Packard in Orlando Central Park. Nominations and planning for the Installation Banquet in June will occupy a large part of the agenda.

The IEEE is a professional society that is managed largely by volunteers. We are paid no salary for the service we perform. We reap our benefits from the professional exposure and self-expression outside our normal work place, and from having a voice in how the organization is run. I highly recommend that you also get involved now so that you will be ready for bigger things later in your professional lives. We have many opportunities to serve. Call me.

Awards Banquet, from p.1

FCIEEE Awards

Each year the Florida Council of the IEEE makes awards for Outstanding Engineer, Outstanding Engineering Educator, and Outstanding Service. The Orlando Section nominates the Section awards winners from the previous year for the FCIEEE awards and also the Region 3 awards. This year, the nominees from the Orlando Section won all three awards. Karl Lohman, FCIEEE awards chairman made the presentations as follows:

FCIEEE Outstanding Engineer: *Carl Flick*

FCIEEE Outstanding Engineering Educator: *Dr. Charles E. Hughes*

FCIEEE Outstanding Service: *George F. McClure.*

Volunteers Needed

The IEEE Vehicular Technology Conference '90 needs volunteers on May 6 through May 9, 1990 to:

1. Man the membership booth (materials from HQ will be available)
2. Coordinate placement of signs for sessions and sponsors
3. Hand out conference records at registration
4. Staff the hospitality room (spouses' lounge) each morning
5. Staff the authors' preparation room
6. Serve as room monitors

Sunday volunteers will be invited to attend the Sunday evening reception. If you are interested in helping out the IEEE VTC '90 please contact George McClure at (407) 629-5712

IEEE POWER SYSTEMS ANALYSIS SEMINAR SERIES

TIME: 6:00 - 8:00 on Tuesday evenings from May 1, 1990 - June 5, 1990

PLACE: R.W. Beck and Associates Orlando Office, 3rd Floor Conference Room, Florida National Bank Building, 800 N. Magnolia, Orlando.

REGISTRATION FEE: \$150 for IEEE members, \$175 for non-members. Registration fee includes free copy of the Westinghouse "Transmission and Distribution Reference Book"

OBJECTIVE: To impart an understanding of the characteristics, analysis, and modeling of essential power system components: generators, transformers, lines, and switchgear. The course is recommended for engineers and technicians who have a need to become familiar with power system equipment. The course text will be the Westinghouse "T & D Book," supplemented by instructor handouts. A background in power systems analysis is desirable, but not necessary. Instructors will be practicing engineers from local engineering firms, utilities, or major manufacturers. A certificate of completion will be awarded at the end of the course.

SCHEDULE

CLASS	TITLE	PRINCIPAL INSTRUCTOR (TENTATIVE)
1	Course Overview and Introduction to Modeling of Power System Components	M.S. Baldwin, Westinghouse (Retired)
2	Generators	Jim Pipkin, Westinghouse
3	Power Transformers	Dave Tupper, McGraw-Edison
4	Overhead Lines	Robert Miller, R.W. Beck
5	Underground Cables	Tom Howard, CABLEC
6	Switchgear	Paul Lawrence, GE

For further information, contact program coordinators:

Bob Nelson (Westinghouse) 281-6308

Luis Ramos (Black and Veatch) 240-9015

**REGISTER EARLY BY MAIL. CLASS SIZE IS LIMITED.
DEADLINE IS APRIL 27.**

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Orlando, Florida 32803

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1/6 Page	\$80	\$72

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MEETING ANNOUNCEMENTS

ANTENNAS & PROPAGATION/ MICROWAVE THEORY & TECHNIQUE (AP/MTT)

TOPIC: "Antenna Ranges and Pattern Recording Equipment"

SPEAKER: Scientific-Atlantic, Inc..

DATE: Thursday, April 19, 1990

TIME: Refreshments 5:30 P.M. - Lecture 6:00 P.M.

PLACE: Hewlett Packard, 6177 Lake Ellenor Drive, Orlando, FL 32809

CONTACT: Bob Cock (356-2924) or Jeff Rollman (356-3926).

COMPUTER SOCIETY (COMP)

SPEAKER: Dr. Amrit L. Goel received his BS and BEng degrees from Agra University and University of Roorkee, India, respectively, and MS and Ph.D degrees from the University of Wisconsin. He is currently Professor of Electrical and Computer Engineering and a member of the Computer and Information Science Faculty at Syracuse University. His current interests are in software reliability and testing, fault-tolerant software and performance modeling of parallel systems.

1st. LECTURE: "Performance Evaluation of Fault-Tolerant Software"

DATE: Wednesday, April 18, 1990

TIME: 2:00 P.M.

PLACE: UCF - Administration Building, President's Room on the 3rd. floor with refreshments served 15 minutes prior to the lecture.

—◆—
2nd. LECTURE: "Software Reliability Modeling and Related Topics"

DATE: Wednesday, April 18, 1990

TIME: 6:30 P.M.

PLACE: UCF - Administration Building, President's Room on the 3rd. floor with refreshments served 15 minutes prior to the lecture.

CONTACT: For further information and reservations contact Ratan Guha (275-2956), Debbie Koscielski (330-5309) or Elsa Delgado (330-5328).

SIGNAL PROCESSING SOCIETY (SP)

TOPIC: "Image Compression Using the NITF Standard Algorithm"

SPEAKER: Tim Young

DATE: Wednesday, April 18, 1990

TIME: 5:00 P.M.

PLACE: UCF Room 107 CEBA 1

CONTACT: For further information contact David King at 356-1881 (Bus.) or 628-4462 (Home).

LASER AND ELECTRO-OPTIC SOCIETY (LEOS)

TOPIC: "The Photonics Revolution in Telecommunications"

ABSTRACT: The new photonics technology is based on breakthroughs in semiconductor lasers and low-loss optical fibers. It has caused a global revolution in the transmission of voice, data and video information. Research is progressing rapidly on several fronts. Recent progress includes transmission of 16 gigabit per second signals over 70 Km of fiber, the use of optical amplifiers, and the demonstration of photonic integrated circuits for optical heterodyne receivers and wavelength division multiplexing.

SPEAKER: Dr. Herwig Kogelnik is the Director of the Photonics Research Laboratory of AT&T Bell Laboratories, Holmdel, N.J. He is a Fellow of IEEE and of the Optical Society of America and an elected member of the National Academy of Science. Dr. Kogelnik is past President of the Optical Society of America and is the society Distinguished Lecturer for 1990.

DATE: Saturday, April 14, 1990

TIME: Technical Presentation 9:30 A.M.

PLACE: UCF - CEBA II Room 116

CONTACT: Jim Moharam, 658-6833

RESERVATIONS: Not required but appreciated. Please call Jim Moharam, 658-6833 or Alan Miller, 658-6812

POWER ENGINEERING SOCIETY/ INDUSTRY APPLICATIONS SOCIETY (PE/IA)

PROGRAM: The development of a commercial diagnostic graphics package integrated with an AI diagnostic expert system for turbine-generator application will be discussed. This project was completed under contract to a utility in Michigan for an 812 MW nuclear power generating station.

SPEAKER: Ian King, Senior Engineer - Diagnostics Power Generation Technology and Strategic Operations Division, Westinghouse Electric Corp. - Orlando, Florida.

Ian is a graduate of the National University of Ireland (B.Sc.) and earned his Ph.D. from Fordham University in New York in 1973. He has worked for Texas Instruments in the UK and has been employed by Westinghouse Electric since 1979. His work experience includes design of Digital/Analog I/O systems and data acquisition technology for the Process Control Division of Westinghouse in Pennsylvania.

DATE: Tuesday, April 17, 1990

TIME: Dinner - 6:00 PM, Presentation - 7:30 PM

PLACE: Peppino's Restaurant - Alafaya Trail (2 miles north of UCF). Presentation will be made at Westinghouse Electric Corp. - Power Generation Headquarters - across from UCF on Alafaya Trail. Enter at visitors entrance at southern entrance at tower #6 (left turn at main access stop sign facing building).

RESERVATIONS REQUIRED: Deadline is April 16, 1990. Please call Bob Gray (281-3269), Mike Dodane (896-6765), or Jim Pipkin (281-2916)

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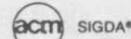
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HOTEL	SINGLE	DOUBLE
— Econo Lodge	\$51.00	\$57.00
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— Marriott World Center	105.00	120.00
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— The Peabody	100.00	108.00
— Quality Inn Plaza	43.00	43.00
— Sheraton World	85.00	85.00
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2. Advance registrations must be postmarked no later than **May 25, 1990**.
3. Register one person per form (copy this form as needed).
4. **Refund Policy:** Written requests for refunds must be received in the DAC office no later than **May 25, 1990**. Refunds are subject to a \$15.00 processing fee.
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Non-Member	\$190.00	\$340.00

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IEEE ORLANDO SECTION - EVENTS CALENDAR

CHAPTER/ CONTACT	APRIL	MAY	JUNE
AP/MTT Bob Cock 356-2924 Jeff Rollman 356-3926	19th "Antenna Ranges and Pattern Recording Equipment" Scientific - Atlanta, Inc. Hewlett-Packard - 5:30 P.M.	17th "Radar Principles; Low, Medium, and High PRF Radar" Dr. S. A. Hovanessian The Aerospace Corporation Hewlett-Packard - 5:30 P.M.	TBA
COMPUTER Ratan Guha 275-2956 Debbie Koscielski/ Elsa Delgado 330-5309/330-5328	18th "Performance Evaluation of Fault-Tolerant Software" and "Software Reliability Modeling and Related Topics" UCF - 2:00 PM & 6:30 PM	TBA	TBA
LEOS Jim Moharam 658-6833 Alan Miller 658-6812	14th "The Photonic Revolution in Telecommunications" Dr. Herwig Kogelnik UCF - CEBA II - Room 116 9:30 A.M.	TBA	TBA
PE/IA Bob Gray 281-3269 Jim Pipkin 281-2916 Mike Dodane 896-6765	17th "Diagnostic Graphics Package Integrated with an AI Diagnostic Expert System for Turbine- Generator Application" Westinghouse Electric Corp. Dinner 6:00 PM -Program 7:30 PM	May 1st - June 5th "Second Annual Power Engineering Seminar Series" R.W. Beck and Associates Office FL Nat. Bank Bldg. - Orlando 6:00 - 8:00 on Tuesday evenings	TBA
SP David King 356-1881	18th "Image Compression Using the NITF Standard Algorithm" Tim Young UCF Room 107 CEBA 1 - 5:00 P.M.	16th "Automatic Target Recognition" Dr. Ali Atashroo Place: TBA Dinner - 5:00 P.M.	TBA
SECTION Keith Huddleston 356-7201 VIC - 366-7594	3rd "Executive Committee Meeting" Hewlett-Packard - 5:30 P.M. 6177 Lake Ellenor Drive, Orlando	1st "Executive Committee Meeting" Hewlett-Packard - 5:30 P.M. 6177 Lake Ellenor Drive, Orlando	5th "Executive Committee Meeting" Hewlett-Packard - 5:30 P.M. 6177 Lake Ellenor Drive, Orlando
IEEE Sponsored and Cosponsored Conferences	29th - May 1st "1990 IEEE Rural Electric Power Conference" IA Sheraton Plaza, Orlando C. Alan Blackmon - (803) 878-6326	6th - 9th 1990 IEEE VT Conference Sheraton Plaza, FL Mall, Orlando George McClure 629-5712 21st - 25th "1990 21st IEEE Photovoltaic Specialist Conference" Hyatt Orlando, Kissimmee Dr. J. Meakin (302) 451- 1672	25th - 29th 1990 ACM/IEEE Design Automation Conference - Orlando M.P. Associates (303) 530-4562 Boulder, CO

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The Orlando Section Monthly

The Newsletter of the Orlando Section of the IEEE

Volume XXIII

May 1990

Number 10

MEETING ANNOUNCEMENTS

ANTENNAS & PROPAGATION/ MICROWAVE THEORY & TECHNIQUE (AP/MTT)

Topic: "Radar Principles: Low, Medium, and High PRF Radar"

Speaker: Dr. S. A. Hovanessian; The Aerospace Corporation; AP - Distinguished Lecturer.

Date: Thursday, May 17, 1990

Time: Refreshments 5:30 P.M. - Lecture 6:00 P.M.

Place: Hewlett Packard, 6177 Lake Ellenor Drive, Orlando, FL 32809

Contact: Bob Cock (356-2924) or Jeff Rollman (356-3926).

COMPUTER SOCIETY (COMP)

Speaker: A. E. Bonds, Dept. of Electrical Eng., Vanderbilt Univ.

Lecture: "Neural Networks, Connections and the Brain"

Date: Thursday, May 17, 1990

Time: 2:00 P.M. and 6:30 P.M.

Place: UCF - Administration Building, President's Room on the 3rd. floor with refreshments served 15 minutes prior to the lecture.

Contact: Ratan Guha (275-2956), Debbie Koscielski (330-5309) or Elsa Delgado (330-5328)

SIGNAL PROCESSING SOCIETY (SP)

Topic: "A Survey of Computer Tomography"

Speaker: Dr. Ikram Abdou

Date: Wednesday, May 16, 1990

Time: 5:00 P.M.

Place: UCF CEBA 1, Room 383

Contact: David King at 356-1881 (Bus.) or 628-4462 (Home).

VEHICULAR TECHNOLOGY CONFERENCE '90

Advances in the development of mobile communications, vehicle electronics, and communication systems will highlight the 40th IEEE Vehicular Technology Society conference. Authors will present 140 papers about mobile communication technology with emphasis on the new high-capacity, mobile telephone systems.

Date: May 6-9, 1990

Place: Sheraton Plaza at Florida Mall, Orlando

Contact: Glenda McClure, (407) 629-5712

IEEE POWER SYSTEMS ANALYSIS SEMINAR SERIES

Time: 6:00 - 8:00 on Tuesday evenings from May 1, 1990 - June 5, 1990

Place: R.W. Beck and Associates Orlando Office, 3rd Floor Conference Room, First Union (formerly Florida National Bank Building), 800 N. Magnolia, Orlando.

Registration Fee: \$150 for IEEE members, \$175 for non-members. Registration fee includes free copy of the Westinghouse "Transmission and Distribution Reference Book."

Objective: To impart an understanding of the characteristics, analysis, and modeling of essential power system components: generators, transformers, lines, and switchgear. The course is recommended for engineers and technicians who have a need to become familiar with power system equipment. The course text will be the Westinghouse "T & D Book," supplemented by instructor handouts. A background in power systems analysis is desirable, but not necessary.

Instructors will be practicing engineers from local engineering firms, utilities, or major manufacturers.

A certificate of completion will be awarded at the end of the course.

SCHEDULE

CLASS	TITLE	PRINCIPAL INSTRUCTOR
1	Course Overview and Introduction to Modeling of Power System Components	M.S. Baldwin, Westinghouse (Retired)
2	Generators	Jim Pipkin, Westinghouse
3	Power Transformers	Orrean Chew, McGraw-Edison
4	Overhead Lines	Robert Miller, R.W. Beck
5	Underground Cables	Walter Zenger, CABLEC
6	Switchgear	Paul Lawrence, GE

For further information, contact program coordinators:

Bob Nelson (Westinghouse) 281-6308

Luis Ramos (Black and Veatch) 240-9015

**REGISTER EARLY BY MAIL. CLASS SIZE IS LIMITED.
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Chairman's Corner

May 1999

*G. K. Huddleston
Orlando Section Chairman*

Carl Flick called me on Friday and told me what a wonderful experience he and his wife had on April 3 in New Orleans at Southeastcon. He received the Region 3 award for Outstanding Engineer for 1990! Carl was clearly excited about this impressive award and wanted to thank the Section for nominating him for it. Our thanks also go to Frank Fluett and Tom Nelson as Awards Chairmen who have so faithfully discharged the duties of their office and brought Carl and others to receive the recognition that they deserve.

True to my pledge, I applied for and have received my Senior Member status in IEEE. I heartily encourage all members with over 5 years experience to apply for such status. Sandy Walker has Senior Member kits. IEEE just sent ten more such kits to me. The members of the Executive Committee also have lists of Senior Members in the Orlando Section for you to choose from for the three references needed.

The Installation Banquet will be held on June 23. Please plan to join us at our next-most important social occasion where we install the new Section officers. We will also present the Outstanding Service Award at that time. George McClure was the recipient last year. Place and time will be forthcoming.

Speaking of George McClure, the Vehicular Technology Conference '90 will be held on May 6-9 at the Sheraton Plaza at Florida Mall. George is the chairman for VTC '90 and needs volunteer help. You can call him at (407) 629-5712 in Orlando.

Chapter officers are reminded that each chapter should elect new officers before the June banquet. The new Chapter Chairmen will be required to elect the Society Chapters Representative (Chapter's Chairman) at the August meeting of the Executive Committee.

Our next Section meeting will be on May 1 at Hewlett Packard in Orlando Central Park. After a few dismal showings of attendance since January (including my own absence), I encourage all members of the Executive Committee to try to attend. Let's finish out our terms in good order and tie up the loose ends.

The IEEE is a professional society that is managed largely by volunteers. We are paid no salary for the service we perform. We reap our benefits from the professional exposure and self-expression outside our normal work

place, and from having a voice in how the organization is run. I highly recommend that you also get involved now so that you will be ready for bigger things later in your professional lives. We have many opportunities to serve. Call me.

Nominations

Tom Nelson, Awards Chairman

The Orlando Section elects officers for a term of one year beginning July 1. This year the Nominating Committee has selected Dr. Madjid Belkerdid for Chairman, Jorge Medina for Vice Chairman, Dr. Ali Atashroo for Treasurer and Jackie Hines for Secretary. These candidates are all well qualified active members of the Section. They have previously served on the Executive Board and/or as Chapter Chairmen.

The Section membership may make additional nominations for these offices by submitting qualified petitions to the Section Chairman by June 1, 1990. The new officers will be installed at the Annual Installation Meeting of the Section to be held on June 23, 1990.

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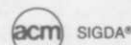
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CHAPTER/ CONTACT	MAY	JUNE	JULY
AP/MTT Bob Cock 356-2924 Jeff Rollman 356-3926	17th "Radar Principles; Low, Medium, and High PRF Radar" Dr. S. A. Hovanessian The Aerospace Corporation Hewlett-Packard - 5:30 P.M.	TBA	TBA
COMPUTER Ratan Guha 275-2956 Debbie Koscielski/ Elsa Delgado 330-5309/330-5328	17th "Neural Networks, Connections and the Brain" A.E. Bonds, Vanderbilt Univ. UCF - 2:00 PM & 6:30 PM	TBA "Tour of the facility at Walt Disney World/EPCOT"	NO ACTIVITIES
PE/IA Bob Gray 281-3269 Jim Pipkin 281-2916 Mike Dodane 896-6765	May 1st - June 5th "Second Annual Power Engineering Seminar Series" R.W. Beck and Associates Office First Union (Formerly Florida National Bank Bldg.) - Orlando 6:00 - 8:00 on Tuesday evenings	TBA	TBA
SP David King 356-1881	16th "IA Survey of Computer Tomography" Dr. Ikram Abdou UCF Room 383 CEBA 1 - 5:00 P.M.	13th "A Tour of the Orlando Regional Medical Magnetic Resonance Imaging Center" 5:00 P.M. at ORMC MRI Center Reservations Required	TBA
SECTION Keith Huddleston 356-7201 VIC - 366-7594	1st "Executive Committee Meeting" Hewlett-Packard - 5:30 P.M. 6177 Lake Ellenor Drive, Orlando	5th "Executive Committee Meeting" Hewlett-Packard - 5:30 P.M. 6177 Lake Ellenor Drive, Orlando 23rd "Annual Installation Meeting" Time & Place: TBA	NO EXECUTIVE COMMITTEE MEETING
IEEE Sponsored and Cosponsored Conferences	6th - 9th 1990 IEEE VT Conference Sheraton Plaza, FL Mall, Orlando George McClure 629-5712 21st - 25th "1990 21st IEEE Photovoltaic Specialist Conference" Hyatt Orlando, Kissimmee Dr. J. Meakin (302) 451- 1672	24th - 28th 1990 ACM/IEEE Design Automation Conference - Orlando M.P. Associates (303) 530-4562 Boulder, CO	TBA

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3/4 Page	\$255	\$225	1/4 Page	\$135	\$105
2/3 Page	\$225	\$195	1/6 Page	\$80	\$72

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