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Official Publication of the Chicago Section • Institute of Electrical & Electronics Engineers • October 1986

TIME SENSITIVE MATERIAL

CALENDAR OF EVENTS

For reservations call the IEEE office 236-4609
(unless otherwise indicated)

Copy Deadline for November Scanfax is Sept. 29, 1986

Oct. 14	"Microwave Antennas, Transmission Lines, and Earth Stations"	EMC Society	Andrew Corp. 10500 W 153rd St Orland Park	Meeting 7:30 PM
14	Monthly Meeting ALL WELCOME	IEEE Executive Committee	Allen Bradley Company 910 Pasquinelli Dr. Westmont, IL	Meeting 7:30 PM
18	Air Traffic Tour	Fox Valley Subsection	Air Traffic Control Center 619 West Indian Trail Drive Aurora, IL	10:30 AM Noon
20	"Faraday & Maxwell"	Antennas & Prop./ Microwave Theory & Techniques Society	Louis Restaurant 351 E. Lake Street Addison, IL	Social 5:30 PM Dinner 6:30 PM Meeting 7:30 PM
29	"Impact of High Technology"	Industry Appl. Soc./ Industry Elec. Soc. Chicago Chapter	S&C Electric Company 6601 N. Ridge Boulevard Chicago, Illinois 60626	Social 5:30 PM Dinner 6:30 PM Meeting 7:30 PM
29	"Lasers"	Fox Valley Subsection	Wilton Manor 2200 Main Street Wheaton, IL	Cash Bar 6:00 PM Dinner 7:00 PM Meeting 8:00 PM
Call (312) 236-4609 for reservations. Cost: \$10.00				
Nov. 11	MONTHLY MEETING	IEEE Executive Cte.	Allen Bradley Company 910 Pasquinelli Dr. Westmont, IL	Meeting 7:30 PM

Chapter Officers and Heads of Organizations

Make sure you have received your 1987 budget forms by Oct 15, 1986, and return them to the treasurer, Joe Feitler, by Nov. 1, 1986. Any questions will be answered by Joe who can be reached at 979-7762 (office) or 383-8773 (home).

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979-3627

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979-5824

Eleanore Burda, Copy Manager
IEEE Office
(312) 236-4609

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Send change of address to Roseann Schulz, Member Services, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854-4150. Include your SPECTRUM mailing label is possible. We cannot forward this information for you, so please do not send it to the local office.

JOINT CHICAGO CHAPTER OF IEEE ANTENNAS & PROPAGATION SOCIETY AND MICROWAVE THEORY AND TECHNIQUES SOCIETY

OCTOBER 1986 MEETING NOTICE

FARADAY AND MAXWELL

BY: PROFESSOR ROBERT S. ELLIOTT

Date: Monday October 20, 1986

Time:

Place: Louis Restaurant
351 E. Lake Street
Addison, IL

(First traffic light west of Route 83)

Social	5:30 PM
Dinner	6:30 PM
Meeting	7:30 PM

ABSTRACT

A brief description of the private and public lives of Michael Faraday and John C. Maxwell will be discussed. The principle contributions each made to our knowledge of electromagnetic theory will be discussed. The talk will be illustrated by vintage photographs and sketches.

SPEAKER

Robert S. Elliott has been a professor of Electrical Engineering at UCLA since 1957. He is currently serving a second stint as a Distinguished Lecturer for the Antennas and Propagation Society. He holds an AB degree in English Literature and a BS in Electrical Engineering from Columbia University, an MS and PhD in Electrical Engineering from the University of Illinois, and an MA in Economics from the University of California at Santa Barbara. Dr. Elliott has worked at the Applied Physics Laboratory of John Hopkins University, as the head of the antenna research facilities of Hughes Research Laboratories. He has been on the faculty of the University of Illinois, and was a founder of Rantec Corporation. Dr. Elliott is a Fellow of the IEEE and a member of Sigma Xi, Tau Beta Pi, and the New York Academy of Sciences. He has received numerous teaching prizes and has received two Best Paper awards from the IEEE.

The dinner is optional. A reservation is helpful even if you plan to attend the talk only. Reservation may be made by calling 677-4700 before noon on Friday, October 17, 1986. Non-IEEE members are welcome.

YOUNG ENGINEERS FORUM

The YOUNG ENGINEERS FORUM, sponsored by the Western Society of Engineers, will be held on Sept. 24, Oct. 1, 8, 15, 22, 28, at the Midland Hotel. The series of 6 dinner meetings will feature speakers on Career Planning, Effective Communication, Leadership Skills, Stress Management, and Transactional Analysis. Mr. Roger L. Plummer, Vice President, Illinois Bell, will speak on career advancement at the final session. Fee for the 6 meetings, including dinner, is \$195. Call (312) 372-3760 for further information.

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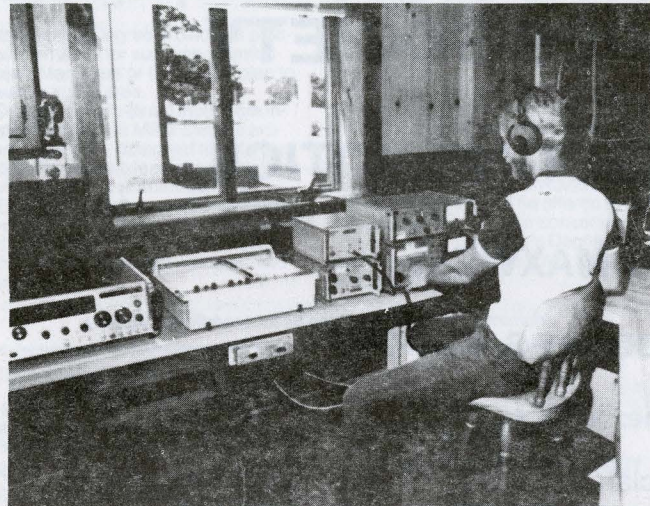
The Chicago Section is now offering a Placement Service for its members free of charge. The program is intended for those who are Member Grade and above and is a positive step to help our members who are unemployed. If interested in any of the applicants listed below, call the IEEE office (236-4609) for their name and phone number. If marked "confidential," the applicant will be contacted by the IEEE office so that he/she may contact the prospective employer.

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- B31 — Software engineer - research, teaching, databases, microprogramming, OS, AI.
- B32 — BSEET entry level pos. exp. in field service/telecom equipment.
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- B36 — Engineering executive - hi tech inst. mfr. proven productivity imprvmt.
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- B38 — Sr. electl. proj. engr. - nuclear & fossil power all aspects inc. I&C.
- B39 — BSEET - Purdue Penn State GPA 5.0/6.0 entry level position in engineering.
- B40 — BSEET - looking for entry level field service or test engr. position
- B41 — Manager - exp.: billing, purch., sales-bldg.; sec. & maint.-vehicle: dispatch & maint.

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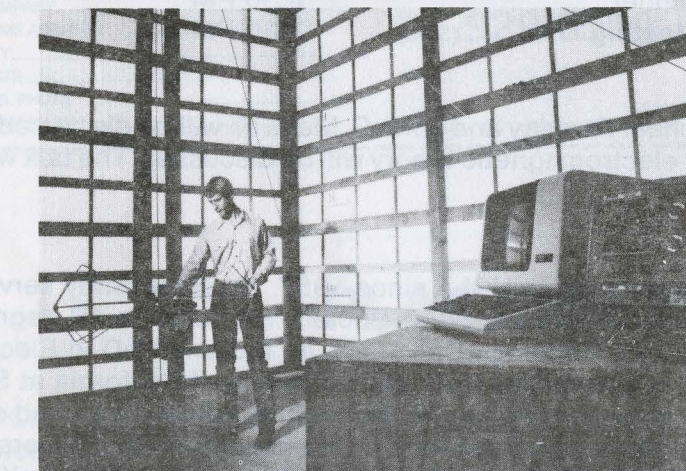
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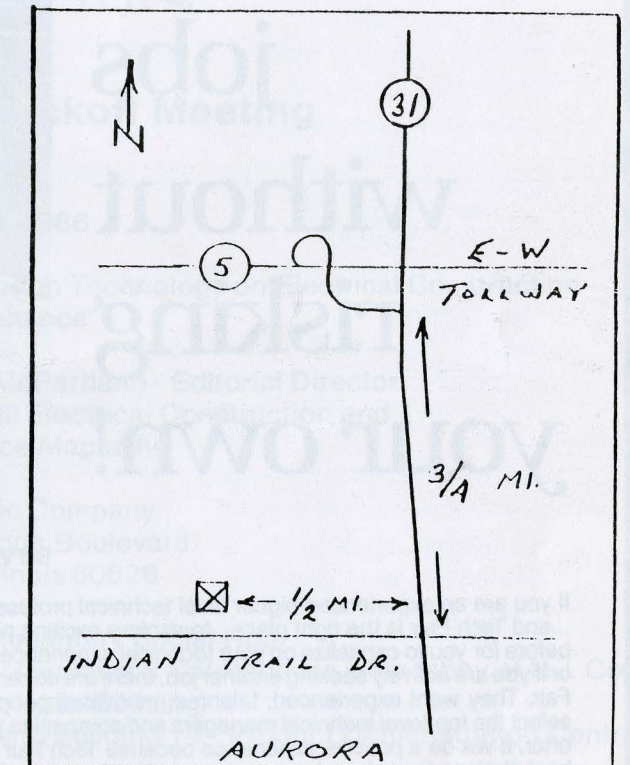
SATURDAY, OCTOBER 18, 1986

FACILITY TOUR:
CHICAGO AIR TRAFFIC CONTROL CENTER

The Chicago Air Traffic Control Center handles all air traffic in an area which includes the Northern half of Illinois, Northwest Indiana, Western Michigan, Southern half of Wisconsin, Eastern Iowa and Northeastern Missouri. It is responsible for all air traffic (commercial, private and military) in this corridor from the ground up to infinity.

Place: Air Traffic Control Center
Location: 619 West Indian Trail Drive
Aurora, IL
Time: 10:30 AM - Noon
Reservations: (312) 236-4609
Limits: 25 People

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EMC SOCIETY MEETING

TUESDAY OCTOBER 14, 1986

7:30 PM

Location

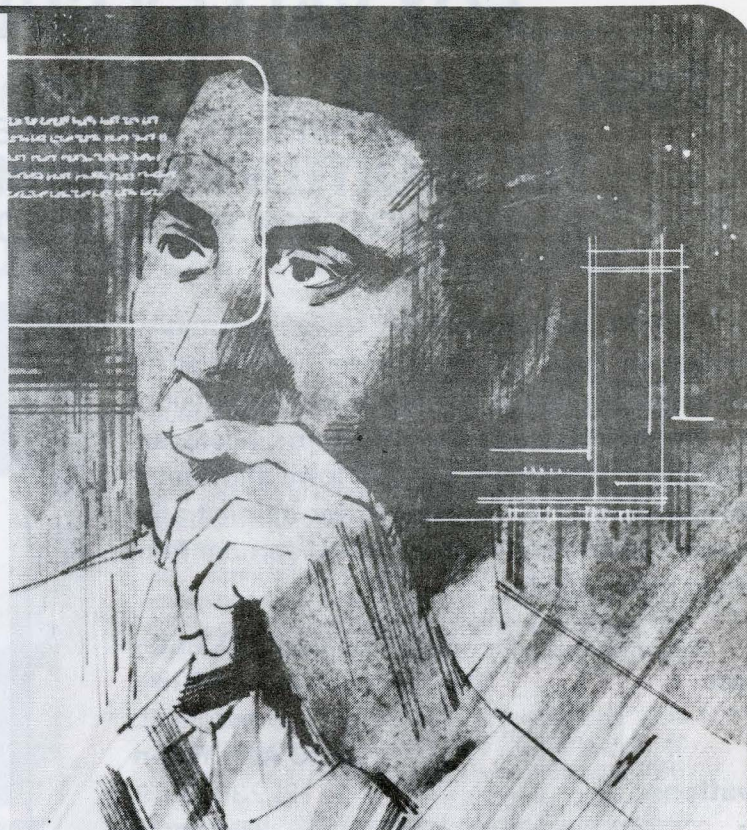
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Topic

Microwave Antennas, Transmission Lines, and Earth Stations

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Bill Wade, Senior Systems Engineer

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CHICAGO CHAPTER

1986-1987 Program Kickoff Meeting

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WOODRIDGE, IL 60517
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DATE:

October 29, 1986

TOPIC:

"Impact of High Technology on Electrical Construction and Maintenance"

SPEAKER:

Joseph F. McPartland - Editorial Director
McGraw-Hill Electrical Construction and
Maintenance Magazine

LOCATION:

S&C Electric Company
6601 N. Ridge Boulevard
Chicago, Illinois 60626

TIME:

5:30 Complimentary Social Hour
6:30 Dinner (Building 3 Cafeteria via main lobby of N.J. Conrad
Lab. Building)
7:30 Program (Building 14 - Product Demonstration Center)

Please call IEEE Office (Eleanore Burda) at 312-236-4609, to make dinner reservations by October 20, 1986. Remit dinner reservation checks to our Treasurer payable to IEEE IAS/IES Society on or before October 15, 1986. The cost for dinner is \$12 for IEEE members, \$13 for non-members. Reservations are appreciated even if you attend only the program.

PROGRAM COMMITTEE

CHAIRMAN

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IAS/IES TREASURER:

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ISSUE	COPY DUE	MAILED ON
NOV.	SEPT. 29	OCT. 15
DEC.	OCT. 27	NOV. 15
JAN. 87	NOV. 24	DEC. 15
FEB.	DEC. 29	JAN. 15
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FOX VALLEY SUBSECTION

WEDNESDAY, OCTOBER 29, 1986

LASERS

Mike Melody will be our guest speaker at our season opener at the Wilton Manor. Mike holds an Associate Degree from Texas State Technological Institute of Technology (Waco), and has been teaching at Triton College for the last 3 years.

Mike will discuss Laser Basics, and their latest application to medical electronics and to materials processing.

Just a reminder: Dinner, although usually pretty good at the Manor, is not a pre-requisite for meeting attendance. Even if you are tied up at the dinner hour, you are most welcome to join us at the meeting - and the price is right!

PLACE: Wilton Manor

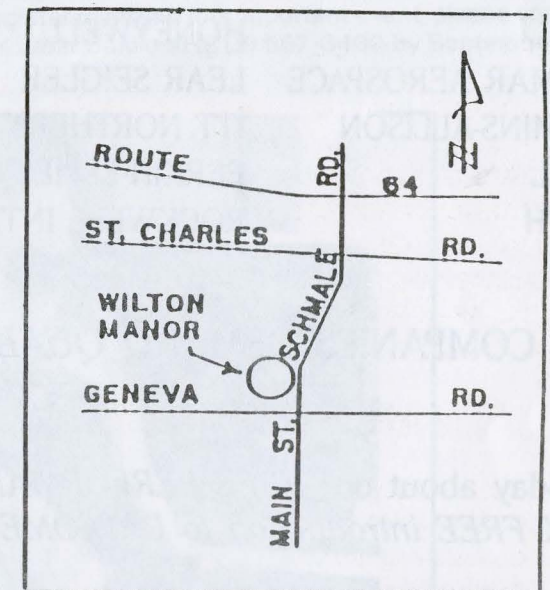
LOCATION: 2200 Main Street
Wheaton, IL

TIME: Attitude Adjustment - 6:00 PM (Cash Bar)

DINNER: 7:00 PM
Cost: \$10.00

MEETING: 8:00 PM

DINNER RESERVATIONS:
Call (312) 236-4609
Prior to Monday, October 27



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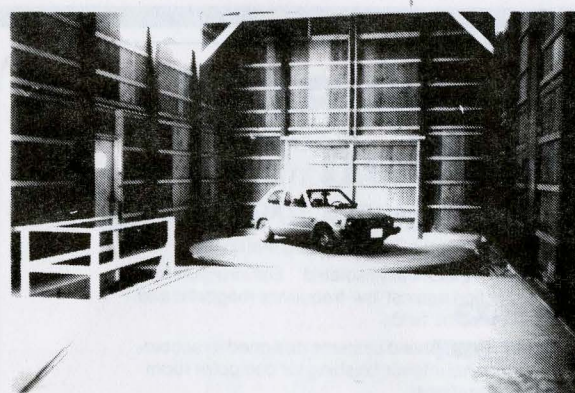
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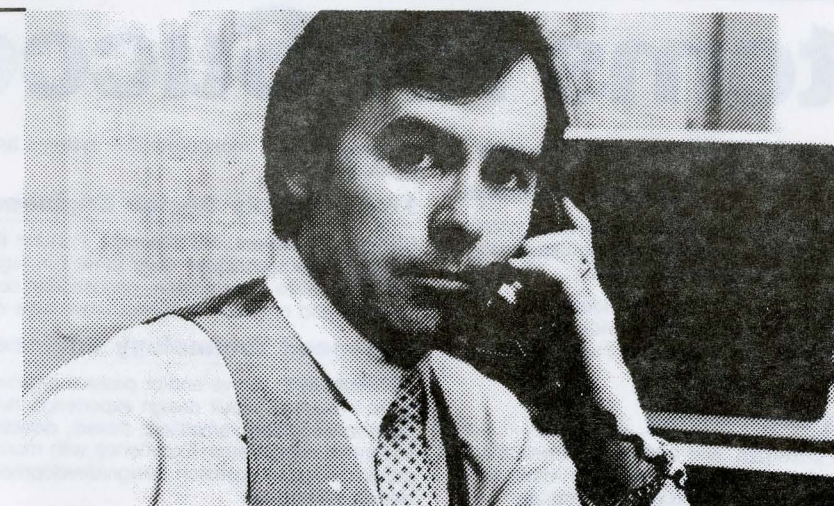
"S-PAC Comes to IIT"

On Thursday, October 2, the IEEE Student Branch of the Illinois Institute of Technology will be hosting its first Student Professional Awareness Conference. An S-PAC is a half-day conference for engineering students that centers on professional awareness. Four prominent speakers will address topics such as self-assessment, skill development, leadership, entrepreneurship, and personal and professional factors affecting today's engineer. Included in the conference will also be a special dinner followed by a panel discussion on the topics presented.

S-PACS were introduced in 1979 by the IEEE Professional Activities Committees for Engineers (PACE) and have proven to be very popular among engineering students. Schools such as Boston University, Rensselaer Polytechnic, RIT, and the University of Illinois at Urbana have hosted S-PACS, and six more have been scheduled this year in Region IV alone.

The speakers for the IIT conference will be James Watson, Sales Director for Ohio Edison; Robert Janowiak, President of Professional Educational International Inc. of Chicago; Dr. Leonard Reiffel, President and Chief Executive Officer of Interand Corporation of Chicago; and Joseph Wiencko of Fiber Com, Inc.

The IIT S-PAC will be open to all IIT, Northwestern, U. of I. Chicago, Northern Illinois, and DeVry students and faculty. Professional members of the Chicago Section are also encouraged to attend. The conference is sponsored by the Chicago Section IEEE RAB, IIT, and donations from industry. The S-PAC will be held in IIT's Hermann Hall, and 300 guests are expected to attend. The conference begins at 1:00 PM and admission is \$12.00 for the entire program. If you would like further information on the S-PAC or if you would like to register to attend this important event, please contact Dr. Jafar Saniie at (312) 567-3400 by September 29.



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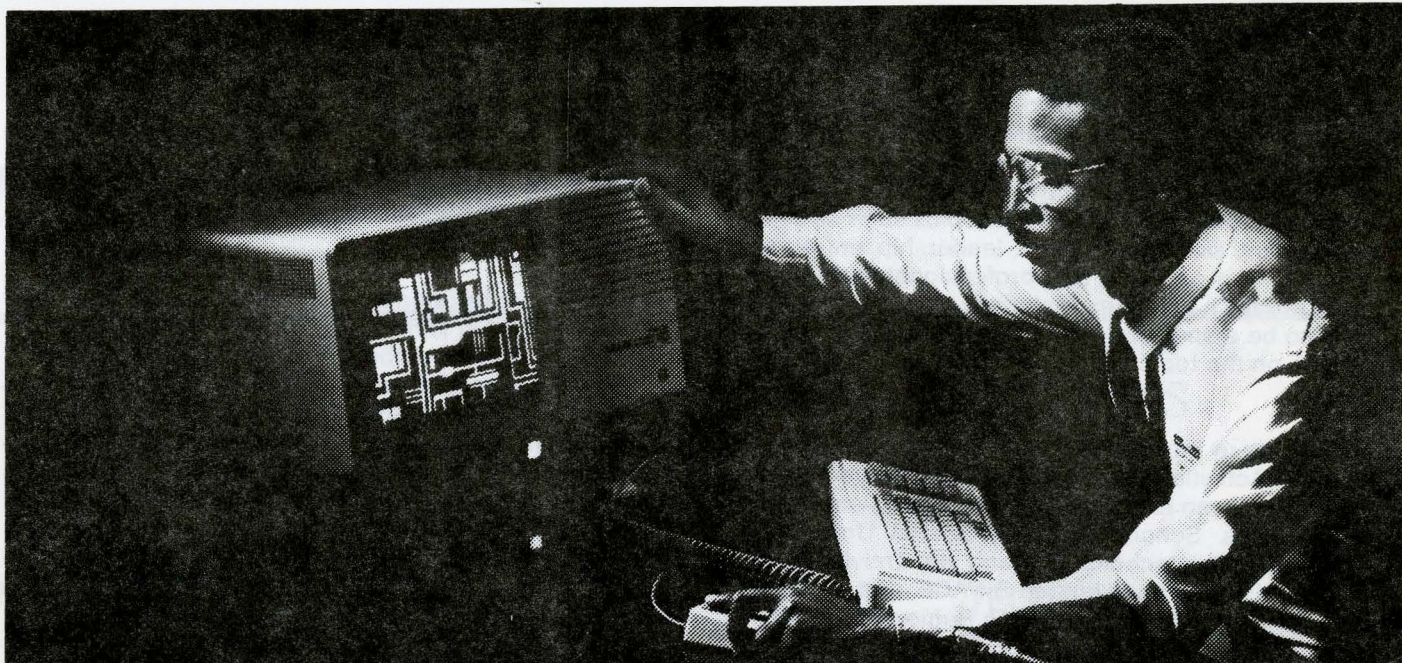
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BSEE or equivalent. Advanced Degree preferred. Experience (12+ years) with receivers including project management and staff supervision. Knowledge of broadband receivers, video processing, digital signal processing, high speed log amps, filters, signal characterization, microwave integrated circuits, hybrids, and surface mount technology required.

Sr. Manufacturing Engineer

BSEE, BSME or equivalent, and 5-10 years experience within a military electronics environment. Will support manufacturing in the specification of technologies and fabricating processes utilized in the assembly of surface mounted devices, leadless chips, and power supplies used in military airborne electronic countermeasures systems. Must provide necessary expertise associated with the resolution of problems inherent to new product introduction into assembly. Familiarity with automated material handling and processing assembly technologies required.

Antenna Design Engineers

BSEE or Physics or equivalent, MS desirable. Requires knowledge

of phased arrays, monopulse D.F. systems and millimeter wave techniques.

Power Supply Design Engineers

BSEE or equivalent, MS desirable. Perform IR & D activities involving new techniques development in high voltage microwave/millimeter wave transmission, nanosecond control of high DC voltages and modulation of microwave tube devices.

Advanced Technology Engineers

MICROWAVE: Active and/or passive microwave and millimeter wave integrated circuit design experience involving components such as oscillators, amplifiers, mixers, detectors and filters and integrated subsystems. Experience with monolithic microwave integrated circuit research design/development and computer-aided design is required.

RECEIVERS: Conceptual design, fabrication, and test of state-of-the-art receiver systems for ECM/Elint applications. Familiarity with systems architecture, signal processing, and channelized, set-on, and micro-scan techniques is desirable.

ANALOG: Specialists in videoamplifiers, filters, A/D and D/A conversion; background should include feedback theory analysis and computer-aided circuit analysis.

DIGITAL: Design/develop high speed signal processing and control systems; microprocessor controlled hardware, D/A and A/D conversion, digital signal processing utilizing very high speed logic, TTI, ECL, CMOS, GaAs, Gate Arrays and Pal's.

Qualified candidates are invited to submit resume with salary requirements to: **Supervisor Staffing, NORTHROP CORPORATION, DEFENSE SYSTEMS DIVISION, 600 Hicks Road, Rolling Meadows, IL 60008.** We are an equal opportunity employer M/F/V/H. All positions require U.S. Citizenship.

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