

REGISTRATION: THE BOARD OF DIRECTORS REVAMPS POLICY, CALLS ON THE MEMBERSHIP FOR GUIDANCE

Looking for a position on registration that the members can live with, IEEE's Board of Directors has proposed a broad policy statement noting the engineer's obligation to protect the public safety and recognizing registration as a valid means of such protection. This position is, in effect, a transnational policy aimed at not impinging on non-U.S. members.

In addition, the Board developed, at its August meeting, several variations of a comprehensive policy on registration, one of which may supersede the much-criticized Policy Statement 7.4 that was passed in February 1977. That policy, which deeply divided the membership, called for the removal of the industrial exemption in U.S. state laws on the principle that all those doing engineering work should be licensed and registered.

Recognizing a need for a specific policy relating to the registration of U.S. engineers, the Board is currently seeking member comment on these policy options in hopes of being able to adopt an explicit policy at its December meeting. The first option would, in effect, endorse the industry exemption of engineers by recommending licensing only for engineers dealing directly with the public, such as consultants; and the second would require a sign-off by a P.E. on any product or service that directly affects the public no matter who the employer is.

These two alternatives (see pages 2A-2C for full text) are one portion, part "C," of a three-part proposed policy statement on Registration of U.S. engineers—Policy Statement 7.100. The Board has voted to endorse the first part—part "A," which would involve IEEE in developing "sound" registration procedures—and the second part, part "B," which promotes "reciprocity through uniform requirements for licensure and registration." Members are asked to advise the Board of their views on part "C" before the Board meets in December.

EE readers are requested to read pages 2A-2C very carefully and then communicate their views by mail to the Office of the IEEE General Manager at Headquarters.

BOARD OF DIRECTORS

ENGINEERING SALARIES

Among the many actions taken at its August 27-28 meeting in Vancouver, B.C., IEEE's Board of Directors agreed that industry and Government should normally be paying engineers more than they pay supporting craftsmen, tradesmen, and technicians. In their resolution the Board took a stand in support of principles of engineering compensation originally drafted and brought before it by IEEE's Portland, Oreg., Section. The resolution noted, among other things, that an engineer's compensation should be adjusted to maintain comparability with that of engineers "employed in institutions of similar mission located within the same geographic or economic zone" and that compensation includes salary plus fringe benefits.

The resolution also noted that periodic salary-step increases should be offered "in recognition of increasing performance, knowledge, capability, and changes in local cost of living," and promotion should be offered "on a competitive basis" and be "restricted to engineers for engineering positions." The resolution noted as well that in determining engineer compensation relative to other professions and occupations, recognition and weight should be given to college curriculum demands, local licensing requirements, problem solving versatility, and liability.

AGE DISCRIMINATION

On the topic of age discrimination, IEEE's Board passed a new Policy Statement 7.16, which states, in part, that IEEE is *continued, p. 2*

NEWS SUMMARY

IEEE's Board of Directors acted on the following topics during its Aug. 28-29 sessions in Vancouver, B.C.:

- Age discrimination
- IEEE's 1979 budget
- Patent rights of engineers
- Engineering salaries
- Election infractions
- Engineering umbrella society efforts
- Continuing education credit
- Registration of engineers
- IEEE's Congressional Fellows Program.

For details, see October *The Institute*, and pp. 1-2 of this issue.

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BoD NEWS, continued

committed to encourage not only the "realization and maintenance of an employment environment" in which engineers may be "free of jeopardy from age discrimination practices" but also is committed to the "passage of appropriate legislation" to ensure such an environment.

PATENT RIGHTS

On patent rights of employed engineer inventors, the Board revised Policy Statement 7.11 to go on record as actively supporting patent legislation that would "extend protection of inventions in new fields of technology not currently covered" and "provide equitable distribution of rights between employed inventors and their employers."

Another aim of the revised Policy Statement is to press for "greater incentives to government contractors for the commercial utilization of inventions resulting from government support."

CONTINUING EDUCATION

According to the newly approved Policy Statement on continuing education, achievement units may now be "awarded to the attender of any continuing education program . . . sponsored by the IEEE or by any of its entities, provided that prior evaluation and assignment of appropriate achievement units is obtained . . . from IEEE's Education Activities Board."

Such a unit—to be called a CEAU (Continuing Education Achievement Unit) to distinguish it from the widespread and only sporadically rigorous CEU, which is often awarded without evaluation of the attendee's performance in a course—is the only one to be recorded in IEEE member files. (For further information on this policy, contact John Wilhelm at Headquarters.)

1979 BUDGET

IEEE's Board also discussed 1979 budget estimates for all major programs. At its December meeting, the Board will adopt a budget that is likely to include a deficit, rather than one requiring an increase in member dues. Similar decisions in 1977 and 1978 proved correct when greater than anticipated income, coupled with tight fiscal controls, produced surpluses rather than deficits.

ENGINEERING UMBRELLA SOCIETY

Efforts continue in an intersociety attempt to create an umbrella engineering society, to be called the American Engineering Council. The IEEE Board of Directors has agreed to nine precepts approved by the proposed society's organizing committee (itemized in October *The Institute*). The basic purpose of the new organization is to unify the engineering community in the pursuit of profession-wide goals and in the provision of expert and timely advice on the "technology-related issues of the day."

CONGRESSIONAL FELLOWS

The Board's newly passed Policy Statement on the Congressional Fellow Program essentially formalizes a program that has existed for several years and has committed two Fellows a year to provide technical assistance to the Con-

gress. Those interested in this program are encouraged to write Dick Backe, c/o the IEEE Washington office, 2029 K Street, N.W., Washington, D.C. 20006. (For information on 1979 Congressional Fellows see USAB News, p. 3.)

CONSOLIDATED INVESTMENT OPTIONS

The recent performance of the cash management investment options available to IEEE's organizational units is reported below.

Investment Option 1—Short-Term Bank Deposits*:	
May	7.10%
June	7.25%
July	7.30%
Aug./Nov.	7.50% (estimated)
Investment Option 2—Long-Term Bank Deposits (over 6 months)†:	
May	7.23%
June	7.70%
July	7.80%
Aug./Nov.	8.25% (estimated)
Investment Option 3—Bond Plan†:	
May	8.06%
June	8.25%
July	8.40%
Aug./Nov.	8.40% (estimated)

*Percents refer to amounts actually earned by all depositors in that month.
†Percents are estimated average return over total period of the investment on funds deposited during the respective months.

For additional information, contact Michael J. Sosa at (201) 981-0060, ext. 123, or Thomas W. Bartlett at (212) 644-7748.

NOMINATIONS SOLICITED

The Nominations and Appointments Committee solicits the active participation of individual members and all IEEE organizational units in the submission of nominations of candidates to be considered for appointment to 1980 IEEE Standing Committees and Boards:

Admission and Advancement Committee	Life Member Fund Committee
Awards Board	Long Range Planning Committee
Credentials Committee	Member Conduct Committee
Educational Activities Board	Nominations and Appointments Committee
Fellow Committee	Public Relations Committee
History Committee	Publications Board
IEEE Employee Committee	Tellers Committee
Individual Benefits and Services Committee	United States Activities Board
Investment Committee	

The general qualifications for committee and board service are the same as those in any other position of leadership responsibility and trust: competence, experience, willingness to take on the task, availability of time to participate, enthusiasm, and vigor.

April 1, 1979 is the deadline date for submission of nominations to the Staff Secretary, Nominations and Appointments Committee, IEEE Headquarters, 345 East 47 Street, New York, N.Y. 10017. With this issue of *Electrical Engineering* there is furnished as an insert on pp. 2S-2V one copy of the B-50 Nominating Form to be used for this purpose. Additional Nomination Forms and Guidelines for the preparation of the nominations are available upon request to the Staff Secretary.



Contact: Emily Sirjane

Board of Directors

SPECIAL REPORT: REGISTRATION

Registration—an open letter to IEEE's members requesting your views.

Dear Colleague,
IEEE's Board of Directors needs your informed comment on one of the most important and controversial professional matters ever to face our society: REGISTRATION.

For one and on-half years now, your Board of Directors has been struggling with a variety of proposals regarding an IEEE policy on registration. Most recently, during its August 28-29 meeting, the Board resolved to set before both IEEE's volunteer officers and the membership as a whole a "Summary report on the issue of registration of engineers," based on the combined inputs of IEEE's Ad Hoc Committee on Registration and the Executive Committee of IEEE. In addition, the Board determined to make available to every member, on request, a copy of the more detailed report considered by the Board.

Reprinted here is the "Summary Report," which con-

tains several alternative recommendations for IEEE policy. Further, a coupon has been provided following this "Summary Report," which will allow you to order the unabridged report if you so desire.

In as much as your Board will attempt to resolve 18 months of debate by drafting and adopting an IEEE policy on registration at its December meeting, it is our hope that you will carefully study the alternatives proposed and send us your comments before mid-November. You may communicate with any member of the Board, but please send a copy of all such correspondence to IEEE Headquarters, Attention: General Manager.

Thank you for your attention to this matter of vital concern to all of us.

Sincerely,
Ivan A. Getting
President

Summary of Report to IEEE Board of Directors on the issue of Registration of Engineers

IEEE policy on registration, licensing, and related matters has been under intensive review for almost two years. At its November 1977 meeting, the Board of Directors voted to hold in abeyance any implementation of the IEEE Policy Statement on Engineering Registration adopted in February 1977 pending a report by an *Ad Hoc* Committee appointed by the President at the request of the Board. The *Ad Hoc* Committee made a preliminary report to the Board in May 1978. The Report was subsequently revised by the *Ad Hoc* Committee and by the Executive Committee. At its August meeting, the Board considered the revised Report and other related proposals and took the actions which are described below. At this same time, it was determined by the Board that no new registration policies should be adopted without substantial feedback from the membership. The Board authorized the release of this summary for publication and distribution through all appropriate

media, with the request that comments from the membership be submitted by November 15 in time for consideration by the Board at its meeting in December.

The full text of the Report to the Board on the issue of registration of engineers may be obtained upon request to the General Manager at IEEE Headquarters.

General Policy Statement 7.4— Protection of the Public

The Board proposed to adopt a broad, or general, policy that would be applicable to all Regions. Attachment A is the proposed statement of "7.4"—Protection of the Public. It treats "registration" as a means for promoting the public welfare. As a transnational society, IEEE must in its overall policies formulate them in a manner consistent with universal application. Each country, and often subelements of each country, establishes laws and regulations compatible with its perceived needs. It is therefore suggested that the state-

ment on registration to be included in the overall IEEE (transnational) policy portion be stated in a manner which expresses the fundamental and valid purposes for licensure and registration of engineers—namely, "to protect the public health, safety, and welfare." This Policy 7.4 thus becomes the blanket policy within which any entity of IEEE may develop appropriate further refinement.

**USAB Policy Statement 7.100—
Registration of U.S. Engineers.**

The Board proposed to adopt a more explicit policy applicable to residents of the U.S.A., which assumes the existence of the broader proposed Policy Statement 7.4 and focuses on registration procedures, reciprocity, and exemptions. This proposed policy currently has three paragraphs; the Board voted to endorse paragraphs (A) and (B) but desires input from the membership on paragraph (C). The text for the proposed Policy Statement 7.100 with the endorsed paragraphs (A) and (B) only, appears in Attachment B.

The Board considered a range of possible requirements for registration of engineers, including:

1. All those doing engineering work should be licensed and registered;
2. There should be a licensed and registered engineer in direct control and personally supervising, or with responsibility for approval of engineering offered to individuals or organizations;
3. There should be a licensed and registered engineer in direct control and personally supervising, or with responsibility for approval of any engineering service or product offered to individuals or organizations, that is an end use of the work or product.

The Board agreed that the first alternative was unacceptable to the U.S. membership of IEEE.

The Board concluded that (2) and (3) represented the views of substantial numbers of IEEE members. There are, therefore, in Attachment C two statements of paragraph (C) consistent with the two alternatives.

In effect, version 1 limits the need for registration to engineers who prepare designs and specifications for use by others in the fabrication of a product—particularly where such products have a significant impact on the safety of the public. It thus exempts from registration engineers who are employed by a product-producing company on the basis that the manufacturer is subject to product safety and liability.

In effect, version 2 requires a sign-off by a registered engineer of any end product and service which may affect the safety of the public. This version holds that the requirement for engineering registration should be based on the job performed and how it affects the public and should not depend on who is the engineer's employer.

Resolution—Establishment of Ad Hoc Committee on Certification

Consideration of the above matters led the Board into discussion of certification and other means to identify qualified members, and endorsement of a Resolution calling for the establishment of an Ad Hoc Committee on Certification. This Resolution is Attachment D.

Alternative Versions of Proposed Policies 7.4 and 7.100

The Board received alternative versions of proposed Policies 7.4 and 7.100. These alternative versions add statements which go beyond the basic purposes for registration. While these were not endorsed, the Board

requested that they be disseminated for information purposes. (See Attachments E and F)

The Board of Directors looks forward to receiving comments from the membership on the attached proposals by November 15, in time for consideration by the Board at its December meeting.

ATTACHMENT A

**Proposed IEEE Policy Statement 7.4—
Protection of the Public**

The IEEE recognizes the obligation of the profession to protect the health, welfare, and safety of the public. Where legislation, regulations, codes, or customs impact on electrical and electronics engineering, the Institute shall interface whenever and wherever appropriate with legislative and regulatory bodies. In particular, legislation may include the establishment of qualifications of engineers and the registration and/or licensure of engineers. In furtherance of this policy, the IEEE:

- A. Offers advice and assistance to legislative and regulatory entities;
- B. Encourages the establishment of uniform laws as being in the public interest;
- C. Recommends that there be a minimum of restrictions of a legal nature in the functioning of qualified engineers;
- D. Offers advice and assistance to Boards of Engineering Examiners and similar agencies;
- E. Recommends that, upon request, committees of IEEE members cooperate with appropriate agencies in the development of sound registration examinations which will adequately protect the public interest.

ATTACHMENT B

**Proposed USAB Policy Statement 7.100—
Registration of U.S. Engineers**

The IEEE, in furtherance of IEEE Policy 7.4 (Protection of the Public) and IEEE Policy 7.8 (Code of Ethics for Engineers), as they apply to the U.S., recognizes the need for legislation concerning licensure and registration of engineers in order to protect the health, safety, and welfare of the public. In furtherance of this policy, the IEEE:

- A. Participates actively in the development of sound registration procedures which will adequately protect the public interest while imposing a minimum of restrictions on the practice of qualified engineers;
- B. Promotes complete reciprocity through uniform requirements for licensure and registration;

ATTACHMENT C

**Proposed USAB Policy Statement 7.100—
Registration of U.S. Engineers**

Alternative versions of paragraph C of Policy 7.100 recognized by the Board of Directors as representing the views of a substantial number of U.S. members:

Version 1

C. Recommends that there be a licensed and registered engineer in direct control and personally supervising, or with responsibility for approval of, engineering* offered directly to the public.

Version 2

As a long-term goal contingent upon progress in A and B above, the IEEE recommends:

- C. That there be a licensed and registered engineer in direct control and personally supervising, or with responsibility for approval of, any engineering* service or product offered to individuals or organizations that are end users of the service or product.

* "The science by which the properties of matter and the sources of energy in nature are made useful to man in structures, machines and products," as defined in Merriam-Webster's Third New International Dictionary.

ATTACHMENT D

RESOLUTION

Establishment of Ad Hoc Committee on Certification

WHEREAS, the Board of Directors of the IEEE recognizes the need to enhance the public image of the professional of engineering and of those who practice the profession,

BE IT RESOLVED, that a study be undertaken to determine the feasibility of the addition of a new membership grade or designation to be granted to members who have achieved professional licensure, registration, or certification (the latter by either the IEEE or authorized governmental bodies) to be valid for the period of licensure, registration, or certification for which it was awarded, and

BE IT FURTHER RESOLVED, that this study be performed by an Ad Hoc Committee consisting of representatives of the Long Range Planning Committee, the Admission and Advancement Committee, the Educational Activities Board, the Regional Activities Board, the Technical Activities Board, and the United States Activities Board, and that the results of this study be submitted to this Board of Directors within one year.

ATTACHMENT E

**Alternative Version of IEEE Policy Statement 7.4—
Protection of the Public**

[Not endorsed by the IEEE Board of Directors; provided for information purposes. New wording underscored.]

The IEEE recognizes the obligation of the profession to protect the health, welfare, and safety of the public.

In discharging this obligation, the IEEE urges members of the profession to qualify themselves through appropriate mechanisms such as registration, certification, chartering, or other legal or extra-legal processes, so that the public and the profession may know who has been judged to meet a certain set of minimum standards for the profession.

Furthermore, where legislation, regulations, codes, or customs impact on electrical and electronics engineers, the Institute shall interface whenever and wherever appropriate with legislative and regulatory bodies. In particular, legislation may include the establishment of qualifications of engineers and the registration and/or licensure of engineers. In furtherance of this policy, the IEEE:

- A. Offers advice and assistance to legislative and regulatory entities;
- B. Encourages the establishment of uniform laws as being in the public interest;

C. Recommends that there be a minimum of restrictions of a legal nature in the functioning of qualified engineers;

D. Offers advice and assistance to Boards of Engineering Examiners and similar agencies;

E. Recommends that, upon request, committees of IEEE members cooperate with appropriate agencies in the development of sound registration examinations which will adequately protect the public interest.

ATTACHMENT F

**Alternative Version of USAB Policy Statement 7.100—
Registration of U.S. Engineers**

[Not endorsed by IEEE Board of Directors; provided for information purposes.]

/// = deletion
— = addition

The IEEE, in furtherance of IEEE Policy 7.4 (Protection of the Public) and IEEE Policy 7.8 (Code of Ethics for Engineers), as they apply to the U.S., recognizes the need for legislation concerning licensure and registration of engineers in order to protect the health, safety, and welfare of the public. In furtherance of this policy, the IEEE:

A. Urges its members who use the title engineer to be registered in one or more jurisdictions so as to signify to the public and their colleagues that they have met the minimum standards of the profession;

~~B.~~ Participates actively in the development of sound registration procedures which will adequately protect the public interest while imposing a minimum of restrictions on the practice of qualified engineers;

~~C.~~ Promotes complete reciprocity through uniform requirements for licensure and registration;

~~D.~~ Recommends that there be a licensed and registered engineer in direct control and personally supervising, or with responsibility for approval of, engineering* ~~which affects~~ affecting the public directly;

E. Urges that the title "-----engineer" be assigned by industry, government, and private practitioners only to those who hold a baccalaureate or higher degree in engineering or are registered as an engineer in one or more of the several jurisdictions.

* The ~~discipline~~ discipline by which the properties of ~~matter~~ matter and sources of energy in nature are made useful to ~~society~~ society in structures, machines and products," ~~as defined in Merriam-Webster's Third New International Dictionary.~~ (modified definition from Merriam-Webster's Third New International Dictionary.)

Send me a copy of:
**"IEEE Board Report on the Issue of
Registration of Engineers:**

Name _____ Address _____
City _____ State _____ Zip _____

[Mail this coupon in an envelope marked "Registration Report" and addressed:
Office of the General Manager, IEEE, 345 East 47 Street, New York, N. Y. 10017]



Technical Activities Board

ENGINEERING RESEARCH INITIATION GRANT

The Engineering Foundation has announced the availability of 1979-1980 Engineering Research Initiation Grants of \$11,000 in each field represented by a Founder Society.

The Technical Activities Board has been designated by the IEEE Executive Committee to evaluate and rank order proposals to be submitted by the IEEE to the Engineering Foundation.

The announcement, eligibility rules and instructions for preparing a proposal appear on the following pages.

NOTE: Proposals must be received by December 1, 1978

Mail proposals to:

Dr. Neil D. Pundit
Director, Technical Activities
Institute of Electrical and Electronics Engineers
345 East 47 Street
New York, New York 10017

THE ENGINEERING FOUNDATION
announces the availability

of
ENGINEERING RESEARCH
INITIATION GRANTS

during
1979-1980

sponsored by the ENGINEERING FOUNDATION
with the cooperation of the FOUNDER SOCIETIES

American Society of Civil Engineers
American Institute of Mining, Metallurgical and Petroleum Engineers
The American Society of Mechanical Engineers
Institute of Electrical and Electronics Engineers
American Institute of Chemical Engineers

Applications Must Be Received by
December 1, 1978

ENGINEERING RESEARCH INITIATION GRANTS

Sponsored By

THE ENGINEERING FOUNDATION

With The Cooperation of The Founder Societies

American Society of Civil Engineers
American Institute of Mining, Metallurgical and Petroleum Engineers
The American Society of Mechanical Engineers
Institute of Electrical and Electronics Engineers
American Institute of Chemical Engineers

GENERAL

The ENGINEERING FOUNDATION announces the availability of Engineering Research Initiation Grants during 1979-1980 in fields represented by its FOUNDER SOCIETIES.

The program is directed toward starting full time engineering Faculty members who are without research support. Those with industrial-type experience but who are beginning an academic career are particularly encouraged to apply.

Grants of \$11,000 will be awarded on a competitive basis to two members of each of the FOUNDER SOCIETIES for proposed research projects in fields of mutual interest to the FOUNDER SOCIETY and to the ENGINEERING FOUNDATION.

It is expected that investigators will devote at least one-fourth time during one academic year as part of their normal academic assignment and full time (2-3 months) during the summer following the academic year to the proposed research on the campus of their institution.

ELIGIBILITY

One proposal may be submitted per department on behalf of an individual who:

1. holds a full-time regular academic appointment on the engineering teaching faculty of an institution of higher education.

and either

2. a). was awarded the Doctor's degree not longer than three academic years prior to the submission of the proposal.

or

- b). has gained several years of industrial-type or post-doctoral experience and is within his first three years as a full time member of the faculty.

STATEMENT BY DEPARTMENT HEAD

The proposal must contain a signed statement by the Department Head indicating: investigator's eligibility, and where applicable, the name of the institution that conferred the Doctor's degree, date and title of the dissertation; the normal full time teaching load of the applicant during the current year at the present institution; and that anticipated during the grant duration; endorsement by the Department Head.

STATEMENT OF ENGINEERING RELEVANCE

The proposal must contain a short specific statement of the relevance of the proposed research to engineering.

Projects directed toward innovative engineering approaches to the solution of major national problems or toward the development of new engineering principles, applications and techniques are encouraged.

EVALUATION AND SELECTION OF PROPOSALS

Proposals should be sent directly to the Executive Officer of the appropriate professional society. A panel organized by the professional society will evaluate and select meritorious proposals. These will be submitted (in rank order) to the Projects Committee of the ENGINEERING FOUNDATION which will make the selection of proposals in the technical field of each of the FOUNDER SOCIETIES for submission to the Board of the ENGINEERING FOUNDATION for final approval.

DEADLINE

All proposals being submitted to the FOUNDER SOCIETIES must be received by December 1, 1978.

The rank-ordered proposals selected by the FOUNDER SOCIETIES must be received by the Projects Committee of the ENGINEERING FOUNDATION by March 1, 1979, sixteen copies of each proposal is required.

ANNOUNCEMENT OF GRANTS

Grantees will be notified by a grant letter from the Secretary of the ENGINEERING FOUNDATION on or about June 1, 1979, with copies to their FOUNDER SOCIETIES. Grants will be effective as of September 1, 1979.

REPORTS AND PUBLICATIONS

A semi-annual progress report, due March 1, 1980, and a final report, due September 1, 1980 are required and shall be submitted to the ENGINEERING FOUNDATION by each grantee.

Continuing payment of supporting funds will be contingent upon satisfactory progress as evidenced by the required reports.

It is the policy of the ENGINEERING FOUNDATION that results of all investigations shall be available to the engineering profession and to the

INSTRUCTIONS FOR PREPARING A PROPOSAL

The formal proposal shall include the following information. Sixteen copies are needed.

The Cover Sheet

The first page of the proposal shall include the title of the project; name of principal investigator, title, institution and location; name of person financially responsible for administering project funds.

Statements

The Department Head's statement should be on page 2. The engineering relevance statement should be on page 3.

Abstract of Proposed Research

The fourth page of the proposal should contain an abstract of the proposed research. It should be limited to approximately 250 words and be of a style suitable for direct insertion into a technical journal.

Proposed Budget

The proposed budget should be on page 5. The funds provided may be used to defray such costs as support of the investigator's salary, expendable supplies, some travel, publication costs, and computer time. The ENGINEERING FOUNDATION reserves the right to make adjustments in budget categories.

Budgets will be prepared on the above basis and may not exceed \$11,000. Indirect costs will not be covered by the grant.

Biographical Sketch

Following the proposed budget, a biographical sketch of the principal investigator should be presented including a listing of publications.

Description of Proposed Research

The next section should contain the research proposal in sufficient detail to allow evaluation of its engineering merit, including statement of the problem, its significance, relevance to engineering, approach to execution of the project, and timing of project work. Names of two or three recognized authorities in the field should be provided.

Dissertation Abstract (where applicable)

As the last page, the proposal should contain an abstract of the investigator's doctoral dissertation.

public. If the results of an ENGINEERING FOUNDATION supported project are not otherwise published, the ENGINEERING FOUNDATION reserves the right to publish the material giving due credit to those who conducted the work.

ENGINEERING FOUNDATION policy requires assignments of rights to patents, royalties, inventions, copyrights, etc. to the ENGINEERING FOUNDATION or to the public domain, unless otherwise agreed at the time the project is funded by ENGINEERING FOUNDATION.

Appropriate recognition of the ENGINEERING FOUNDATION and the cooperating FOUNDER SOCIETY must be prominently displayed on the title page of any publications resulting from projects supported by the ENGINEERING FOUNDATION.

GRANT RENEWAL

The ENGINEERING FOUNDATION may at its discretion, in recognition of especially successful and meritorious research programs under its Initiation Grant program provide one additional year of support for the investigator, not necessarily confined to the same research.



Membership Development Newsletter

Contact: Mark M. Lucas

Membership Growth Continues

Total IEEE Membership and Society/Group Membership continues well ahead of last year, indicating increasing interest in IEEE and a strong membership promotion program. As of August 31, IEEE membership stood at 177,928, ahead of last year by 6840, or 3.99 percent. Student membership, at 22,469, is 7.01 percent ahead of last year.

Society/Group memberships are 9,983 ahead of 1977 for an increase of 6.01 percent. Computer Society membership alone has increased by 6672 members, accounting for two-thirds of this growth. Out of 155,459 higher grade members 88,228 (or 54.2 percent) hold an average of 1.7 Group/Society memberships each. Out of 22,469 Student members, 12,024 (or 53.5 percent) hold an average of 2.1 Society/Group memberships each.

Note: Lists of Non Society/Group members are available to organizational units with the members' Technical Interest Profile. Here is an excellent way to expand Society/Group membership among your unit. Contact: M. Lucas.


Advertising Test Launched

A series of 5 ads in Electronics and Electronics Design has recently been run to test the effectiveness of advertising in non-IEEE media. Appearing in August and September issues, the advertising program will help gauge the "pull" of the following two different ads in 5 different issues:

How you can keep up with technology.

There's an oasis of information to help you understand, evaluate and capitalize on the revolutionary advances in electronics technology and applications. Its well is brim-full of state-of-the-art books, short courses, career guides, conferences and conference records, and 39 technical-interest magazines to serve your special needs. And there are successful people at the oasis to guide you on your journey—the members of the Institute of Electrical and Electronics Engineers.

You probably qualify now for one of several IEEE member grades. For information on how IEEE can help you grow to your full capability, contact: Member Services—Dept. C, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. (201) 981-0060 Ext. 132.

 IEEE, Founded 1884.
Serving more than 180,000 members in over 130 countries.

Become an eclectic engineer.

The future belongs to the EE generalist. The "generalist" however, is a specialist in a range of disciplines. He or she is very likely a member of the IEEE and more than one of its technically oriented Societies: Groups serving such areas as Aerospace ... Communications ... Computers ... Electron Devices ... Instrumentation & Measurement ... and 25 other specialized fields.

Through periodicals, conferences and courses, members keep up to date, expand their expertise, protect their educational investment.

You probably qualify now for IEEE membership. For information, contact: Member Services—Dept. D, IEEE Service Center, 445 Hoes Lane, Piscataway, N.J. 08854. (201) 981-0060 Ext. 132.

Eclectic 1: selecting what appears to be best in various doctrines, methods or styles. **2:** composed of elements drawn from various sources or systems.

 IEEE, Founded 1884.
Serving more than 180,000 members in over 130 countries.

RECENTLY PLACED IEEE MEMBERSHIP ADS

Note: Do you have any ideas? Camera-Ready copy of these or other ads can be made available to your unit for placement and testing in local/national/international publications. Contact Mark Lucas to work out details.

Information Center Big Hit!

Over 300 of the new "Information Centers" have been ordered by or for local units for promotional purposes. The Center is shipped with a supply of membership material and is an excellent display for literature and membership material. To obtain one or more copies for your unit send payment for \$9.98 each to Membership Development at IEEE Headquarters.

Conferences - Fertile Membership Fields

IEEE sponsored or co-sponsored conferences and symposiums are fertile fields to promote IEEE membership among non-members and technical Society membership among current IEEE members.

If you know of an upcoming conference in your area arrange for an IEEE membership booth, or literature display well in advance. IEEE "Information Centers" and membership material are available from Membership Development.

Check IEEE Spectrum monthly for upcoming meetings. Section Chairmen also receive the master meeting calendar, produced quarterly which lists upcoming meetings and symposiums.



IEEE

Contact: Dolores Riker

Fellow Committee

ORDER FORM

IEEE FELLOW NOMINATION KITS

Staff Secretary, Fellow Committee
The Institute of Electrical and
Electronics Engineers, Inc.
345 East 47 Street
New York, New York 10017

Please mail _____ IEEE Fellow Nomination Kits.

Ship to: (Please print)

Name

Address

City State/Country Zip Code

Date Your Signature

MD Checklist - A quick review of things to do.

- Is your Membership Committee fully staffed? The Chairman cannot do the job alone. Solicit help at your next Executive Committee meeting, ask other members you know and put a call for help in your next Newsletter.
- Has the name of the MD Chairman been reported (L-4 reporting form available) to the Field Services Department? Chairmen are placed on the MD distribution list. Let us know who you are!
- Do you have copies of (1) MD Guide for Sections (2) How to run a Membership Desk at an IEEE Conference? If not, order copies from the MD Department at IEEE HQ.
- Have you placed your order for membership materials? New 1979 brochures will be available soon. Basic brochures available: Blue (long version of IEEE information with 4 applications included); Red (short version with one application); Student (already sent to Student Branches); Senior Member kits; Reinstatement applications (for someone out 2 or more years). Place your order soon.
- Have you held your 1979 organizational meetings? Plans for promoting higher grade members, arrears follow-up, transfers to Senior Member grade, Students, recent graduate retention should be discussed. All members should be familiar with requirements for membership and details on how to apply.
- If a conference will be held in your area, have you made arrangements for an IEEE booth or membership display? Contact the Conference Chairman to work out details. Have you ordered one or more copies of the IEEE Information Center"? See article in this insert.
- The 1979 membership year began on September 1, 1978. All applications received now with full dues payment will qualify for membership through December 31, 1979. Do you know that Sections receive a rebate credit of \$6.00 for each new higher grade member received & processed in 1978? Do you know that Sections receive a basic allowance of \$1.50 per member for each active member on their roster as of December 31, 1978, including students? Just a few additional reasons to promote new members and bring back those still in arrears now.
- Encourage applicants to submit all new applications with payment promptly. The sooner an application is received and processed the sooner the new member will begin receiving IEEE services.
- If you need assistance or have any questions contact (1) Mark Lucas - Membership Development, IEEE HQ. Tel: (212) 644-8080 or (2) your Region or Division representative to the MD Committee. See the August issue of Electrical Engineering for names, addresses & telephone numbers.

1979 Goals - Members of the Membership Development Committee are working toward establishing 1979 membership goals. With 1978 membership anticipated to reach 190,000 by year-end, it is expected that the 1979 goal will call for net growth of about 6,000 members or 3.0 percent increase over 1978. Region and Division MD Committee representatives will be discussing 1979 membership plans with their respective Regions and Societies.

MD Committee to Meet - The second 1978 meeting of the Membership Development Committee is being held in Denver, Colorado on October 14-15.

(For MD ACTION, contact Mark M. Lucas, NY Headquarters, (212) 644-8080)



IEEE

Contact: E.K. Gannett

Publications Board

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AUTHOR(S):

IEEE SPECTRUM
345 E. 47 St., 1st Floor
New York, N.Y. 10017

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Information to Authors

IEEE POLICY

Thank you for your interest in the IEEE. As you know, the IEEE distributes its technical publications throughout the world, and it is necessary to translate and abstract its publications, and articles contained therein, for inclusion in various compendiums and similar publications, etc. When an article is submitted for publication by the IEEE, the IEEE understands that its acceptance of the article implies that the IEEE has the rights to do all of the things it normally does with such an article.

In connection with its publishing activities, it is the policy of the IEEE to own the copyrights in its technical publications, and to the contributions contained therein, in order to protect the interests of the IEEE, its authors and their employers, and at the same time to facilitate the appropriate re-use of this material by others.

The new United States copyright law requires that the transfer of copyrights in each contribution from the author to the IEEE be confirmed in writing. It is therefore necessary that you execute either Part A-Copyright Transfer Form or Part B-U.S. Government Employee Certification on the reverse side of this sheet and return it to the Editor (or person who supplied this sheet) as promptly as possible.

AUTHOR/COMPANY RIGHTS

If you are employed and you prepared your paper as a part of your job, the rights to your paper initially rest with your employer. In that case, when you sign the copyright transfer form, we assume you are authorized to do so by your employer and that your employer has consented to all of the terms and conditions of this form. If not, it should be signed by someone so authorized.

NOTE RE RETURNED RIGHTS: Just as the IEEE now requires a signed copyright transfer form in order to do "business as usual," it is the intent of this form to return rights to the author and employer so that they, too, may do "business as usual." If further clarification is required, please contact: Ms. Patricia Penick, Manager, Publication Administrative Services, IEEE, 345 E. 47th St., New York, NY 10017 (212) 644-7550.

JOINT AUTHORSHIP

For jointly authored papers, only one signature is required, but we assume all authors have been advised and have consented to the terms of this form.

U.S. GOVERNMENT EMPLOYEES

Authors who are U.S. Government employees are not required to sign the Copyright Transfer form (Part A), but any co-authors outside the Government are.

Part B of the form is to be used instead of Part A only if all authors are U.S. Government employees and prepared the paper as part of their job.

NOTE RE GOVERNMENT CONTRACT WORK: Authors whose work was performed under a U.S. Government contract but who are not Government employees are required to sign Part A-Copyright Transfer Form. However, item 5 of the form returns reproduction rights to the U.S. Government when required even though the IEEE copyright policy is in effect with respect to the reuse of material by the general public.

Thank you for your prompt cooperation.



Contact: Richard Aseltine

Student Activities News

EACH MONTH THE STUDENT ACTIVITIES NEWS PAGE APPEARS IN THE EDITION OF SPECTRUM MAILED TO STUDENT MEMBERS (SUPPLANTING THE REGION NEWS PAGE). FOR THE INFORMATION OF EE READERS, THE OCTOBER STUDENT ACTIVITIES NEWS PAGE IS BEING REPRINTED.

BENDIX AWARD COMPETITION

The 1978-79 Bendix Award Competition provides the opportunity for IEEE Student Branches to compete for cash awards of up to \$500. The awards will be made to selected Branches based on the evaluation of proposals by a panel of judges. Projects can be either technical or nontechnical in nature and should be oriented toward the professional, technical, and educational development of Branch members.

In the 1977-78 competition, 19 of the 38 proposals submitted were funded for a total of \$7500. Since the program's inception in 1965, 98 projects have received funding for a total of more than \$36,000.

Proposals are limited to six pages in length; details on format may be obtained from Student Branch Counselors. Three copies of the proposal should be submitted to the IEEE Student Services Department at Headquarters, and should be postmarked no later than November 15.

30K CALCULATION MEMBERSHIP DRIVE

A goal of 30,000 Student members has been set by the Student Activities Committee for total IEEE Student membership by the end of the year. To recognize Branches that do an outstanding job in member recruitment, the 30K CALCULATION Membership Drive will award a programmable calculator to any eligible Branch that either: (1) recruits as many new Student members as it had members, according to IEEE statistics, as of August 31, 1978; or (2) recruits at least 60 new Student members. Details regarding eligibility requirements and rules are available from IEEE Headquarters. The new-member contest period is August 31 through December 15, 1978.

STUDENT PAPER CONTEST

The IEEE Student Paper Contest for 1978-79 provides Student members with the opportunity to win cash awards and to have their papers published by IEEE. Each year, the authors of the top three papers in each of the ten Regional Paper Contests are recognized by the publication of their papers in the IEEE Student Papers, a hardbound compilation of the 30 papers. They also will receive cash prizes of \$200, \$100, and \$50 for first, second, and third place respectively.

To qualify for a Regional contest, a paper must be sponsored by a Branch in the Region. For further information regarding Branch Paper Contests or Branch sponsorship of a paper, students should contact their Branch Chairman or Counselor.

BRANCH TOTAL CLIMBS TO 432

Southern Illinois University at Carbondale, Ill., has received the approval of the IEEE Regional Activities Board of its petition to form a Student Branch, thus bringing the total number of Branches in IEEE to 432. The Student Activities Committee, on behalf of the 25,000 Student members it represents, welcomes the new Student Branch to the Program.



Nominations and Appointments Committee

GUIDELINES FOR RECOMMENDATION FOR IEEE LEADERSHIP AND SERVICE

THE IEEE IS A VOLUNTEER ORGANIZATION IN A VERY FAST EVOLVING PROFESSION. IEEE NEEDS THE HIGH QUALITY LEADERSHIP AND SERVICE OF COUNTLESS TALENTED AND ENERGETIC VOLUNTEERS ON ITS BOARDS AND COMMITTEES AT THE SECTION, REGION, GROUP/SOCIETY, DIVISION, AND INSTITUTE LEVELS. IT IS VITAL THAT A POOL OF TALENTED AND ENERGETIC PERSONS BE CONTINUOUSLY AVAILABLE FROM WHICH QUALIFIED PERSONS CAN BE CALLED UPON FOR LEADERSHIP AND SERVICE ROLES IN IEEE ACTIVITIES.

Individual members and all IEEE organizational units are invited to submit names of candidates for possible election or appointment to IEEE Offices, Boards and Committees. The IEEE Organization Roster, furnished periodically to officers of IEEE organizational units, contains a list of all Institute Offices, Boards and Committees.

OBJECTIVES

This form shall be used in submitting the names of potential appointees to IEEE leadership and service positions on Institute Committees and Boards. It may also be used to submit names for IEEE positions at the Institute, Regional, or Divisional level and as deemed advisable by other IEEE entities. Since the nominee is often unknown to some members of the Selection Committee(s), it is most important for the nominator to provide as much information about the individual as possible. Care should be exercised in filling out the recommendation form to insure its completeness. The nominator is invited to list additional pertinent information which cannot be accommodated on the recommendation form. The completed form for recommendation for Institute-level leadership and service should be mailed to IEEE at the above address, attention Staff Secretary of the Nominations and Appointments Committee.

The general qualifications for service to IEEE are the same as those in any other position of leadership responsibility and trust: competence, experience, willingness to take on the task, availability of time to participate, enthusiasm, and vigor.

The responsibilities of the IEEE Directors and the tasks of the various Standing Committees and Boards are described in the IEEE Bylaws, and these should be consulted if the nominator is not certain of the tasks to be performed. Two types of competence are involved, technical and administrative. The technical tasks require knowledge of one or more engineering or scientific fields and the ability to make sound judgments. Administrative tasks involve the judgment of people and organizational operations, and the ability to develop appropriate Institute policies and objectives.

In judging candidates on the basis of experience, prior work in Institute affairs is, of course, important but should not outweigh ability. Since new vitality must be brought into the IEEE organization, equivalent experience outside the Institute (as in other organizations, or in connection with the candidate's professional employment) should be taken into account. In many cases a candidate having no experience bearing specifically on the task may be suitable if highly competent, since he or she will soon "learn the ropes."

Willingness to serve is, of course, essential. There is no rule against a nominee being consulted by the nominator to ascertain this. However, since candidates are proposed from many sources, there are usually more candidates than there are open positions. This is as it should be if the clearly qualified persons are to be identified. When consulting nominees, it should be made clear that they cannot be assured of appointment.

Availability of time to participate is usually an important consideration in the candidate's selection. Enthusiasm, vigor, creativity and dedication to the purposes of IEEE are, we believe, among the most important considerations. Electrical and electronics engineering is a fast moving profession, and the Institute needs a continual infusion of new talent and ideas.



RECOMMENDATION FOR IEEE LEADERSHIP AND SERVICE (FORM B-50)

Before filling in, please refer to attached guidelines.

Please type all information provided on this form.

RECOMMENDED POSITIONS (Indicate as many as appropriate)

INSTITUTE LEVEL	Officer: _____ Board: _____ Committee: _____
DIVISION LEVEL	Officer: _____ Committee: _____
REGION LEVEL	Officer: _____ Committee: _____
GROUP/SOCIETY LEVEL	Officer: _____ Committee: _____
SECTION LEVEL	Officer: _____ Committee: _____

NOMINEE: _____
First Name Middle Initial(s) Last Name

Grade and IEEE Number

AFFILIATION:

MAILING ADDRESS

Position

Address

Employer Name

Telephone Number

Employer Address

Telephone Number

GENERAL COMMENTS BY NOMINATOR: (including an evaluation of the nominee's particular experience and performance record for this nomination and the special attributes which prompted this nomination)

BIOGRAPHICAL SKETCH: Please provide a short biographical sketch of the nominee.

NON-IEEE SOCIETY AFFILIATIONS: Membership grades; leadership and service positions.

REFERENCES: List two or more additional references, including addresses. (This item is optional if recommendation is from a Nominating Committee of an IEEE organizational unit.)

Name	Address	Telephone No.
Name	Address	Telephone No.

Is this nominee in the "young engineer" category? (35 or under) Yes No

Is this nominee willing to serve in an IEEE leadership and service role? Yes

Name of Nominator _____

Address _____

Date _____ Telephone Number _____

If this nomination is being submitted by a Nominating Committee of an IEEE organizational unit, please so identify: _____



Awards Committee

Call for Nominations

Members, Sections, and Groups and Societies of the IEEE are invited to submit nominations for the 1980 Institute medals, awards, and prizes. All members of IEEE are urged to participate in the annual quest for the best-qualified candidates, who will be recognized by IEEE for their outstanding contributions to the field of electrical and electronics engineering.

The deadline dates for the receipt of nominations and supporting letters for the IEEE Medal of Honor, Major Annual Medals, and Service Awards is June 1, 1979, for the Field Awards, April 1, 1979, and for the

Prizes, Sept. 15, 1979.

Each nomination for the Medals and Awards should be accompanied by supporting letters from persons familiar with the accomplishments and qualifications of the nominee. Each award has a specially designed nominating form, which must be used. Requests for forms should specify the award or awards for which the nominations are contemplated.

The table below should be used as a guide when requesting nominating forms. The Forms and a descriptive brochure may be obtained by writing to the Secretary of the Awards Board, IEEE, 345 East 47 Street, New York, N.Y. 10017.

IEEE Awards

Name of Award	Distinctive Features	Presentation
Medal of Honor*		
IEEE Medal of Honor	The Medal of Honor shall be awarded for a particular contribution which forms a clearly exceptional addition to the science and technology of concern to the Institute. The award shall normally be given within a few years after the recognition of the exceptional nature of such contribution	When warranted, not necessarily to a member of IEEE. Gold Medal, Certificate and \$10,000. Date established: 1917
Major Annual Medals*		
Alexander Graham Bell Medal	For exceptional contributions to the advancement of telecommunications	One annually, to a member of IEEE. Gold Medal, Certificate and \$10,000. Sponsored by American Telephone and Telegraph Co. Date established: 1976
Edison Medal	A career of meritorious achievement in electrical science or electrical engineering or the electrical arts	One annually, to a member of IEEE. Gold Medal, Certificate and \$10,000. Date established: 1904
Founders Medal	For major contributions in the leadership, planning and administration of affairs of great value to the electrical and electronics engineering profession	One annually, to a member of IEEE. Gold Medal and Certificate. Date established: 1952
Lamme Medal	Meritorious achievement in the development of electrical or electronic apparatus or systems	One annually, to a member of IEEE. Gold Medal and Certificate supported by the Westinghouse Foundation. Date established: 1928
IEEE Education Medal	Excellence in teaching and ability to inspire students; leadership in electrical engineering education through publication of textbooks and writings on engineering education; innovations in curricula and teaching methodology; contributions to the teaching and engineering profession through research, engineering achievements, technical papers, and participation in the education activities of professional societies	One annually, to a member of IEEE. Gold Medal and Certificate. Date established: 1956
IEEE Field Awards†		
Cledo Brunetti Award	For outstanding contributions in the field of miniaturization in the electronic arts	One annually. Certificate and \$1000. Bequest of the late Cledo Brunetti. Date established: 1975
Harry Diamond Memorial Award	Outstanding technical contributions in the field of government service in any country, as evidenced by publication in professional society journals	One annually. Certificate and \$2000. Date established: 1949

* To be awarded at major IEEE meetings. Nominations are due at IEEE Headquarters not later than June 1.

† To be awarded at an IEEE meeting of wide scope and interest upon the recommendation of the Awards Board. Nominations are due at IEEE Headquarters not later than April 1.

William M. Habirshaw Award	Outstanding contribution in the field of transmission and distribution of electric power, to an individual or group	One annually. Bronze Medal, Certificate and \$1000. Sponsored by Phelps Dodge Cable & Wire Co. Date established: 1958
IEEE Award in International Communication in honor of Hermand and Sosthènes Behn	Outstanding contribution in the field of international communication, to an individual or group	One annually. Plaque, Certificate and \$2000. Sponsored by International Telephone and Telegraph Corporation. Date established: 1966
Morris E. Leeds Award	Outstanding contribution in the field of electrical measurement, to an individual or group. Special consideration given to value of contribution made before candidate reached 36th birthday	One annually. Illuminated Certificate and \$1000. Sponsored by Leeds & Northrup Foundation. Date established: 1958
Morris N. Liebmann Memorial Award	Important contribution to emerging technologies recognized during preceding three calendar years	One annually. Certificate and \$2,000. Date established: 1919.
Jack A. Morton Award	Outstanding contributions in the field of solid-state devices to an individual or group	One annually. Bronze Medal, Certificate and \$2,000. Sponsored by 20 semiconductor organizations of the United States, Europe and Japan. Date established: 1974
Frederik Philips Award	Outstanding accomplishments in the management of research and development resulting in effective innovation in the electrical and electronics industry, to an individual or group	One annually. Gold Medal, Certificate and \$2,000. Sponsored by N. V. Philips' Gloeilampenfabrieken. Date established: 1971
Emanuel R. Piore Award	For outstanding achievement in the field of information processing, in relation with computer science, to an individual or team of two individuals	One annually. Bronze Medal, Certificate, \$2,000 and \$2,500 international travel grant. Sponsored by International Business Machines Corporation. Date established: 1976
David Sarnoff Award	Outstanding contribution in the field of electronics, to an individual or group	One annually. Gold Medal, Certificate and \$1000. Sponsored by RCA Corporation. Date established: 1959
Nikola Tesla Award	Outstanding contributions in the field of generation and utilization of electric power to an individual or group	One annually. Plaque and \$1,000. Sponsored by IEEE Power Engineering Society. Date established: 1975
Vladimir K. Zworykin Prize Award	Outstanding technical contribution in the field of electronic television	One annually until 25 awards have been made. Certificate and \$1000. Date established: 1952
IEEE Service Award* Haraden Pratt Award	For outstanding service to the Institute	One annually, to a member of IEEE. Illuminated Certificate. Date established: 1971
IEEE Prize Paper Awards† W. R. G. Baker Prize Award	Outstanding paper in any of the IEEE TRANSACTIONS, JOURNALS or PROCEEDINGS issued between July 1 and June 30	One annually. Certificate and \$1000. Date established: 1956
Browder J. Thompson Memorial Prize Award	Outstanding paper by author(s) under 30 years of age in any IEEE publication issued between July 1 and June 30	One annually. Certificate and \$1000. Date established: 1945

† To be awarded at an IEEE meeting of wide scope and interest upon the recommendation of the Awards Board. Nominations are due at IEEE Headquarters not later than April 1.

* To be awarded at major IEEE meetings. Nominations are due at IEEE Headquarters not later than June 1.

Bylaw 305.11-Presentation of IEEE Awards. The Medal of Honor and the IEEE Major Annual Medals shall be presented at major IEEE meetings. All other awards shall be presented at times and places approved by the Awards Board. The Chairman of the Awards Board shall

be responsible for the review and approval of plans and arrangements for the presentation of IEEE Awards as well as for the format and content of IEEE Awards brochures.



Contact: Vincent Giardina

Continuing Education Services

PLAN NOW FOR YOUR 1979 EDUCATION PROGRAMS

For a successful program a full 5-month LEAD PERIOD should be included in your planning

A suggested approach is to:

- appoint a Continuing Education Chairperson and ask him/her to call Vince J. Giardina for plan or program discussion at (201) 981-0060, extensions 174/175

- select the courses you plan to schedule (either through a newsletter poll or knowledge of your area)

- review Continuing Education plans with your Executive Committee.

For guidance or recording of date and title call V. J. Giardina

We have developed many topical courses for your Section/Chapter use. Select the course of your choice from titles listed below. Then, return the form below completed to indicate your specific interest(s).

1043 There Is a Microprocessor in Your Future	1076 Developing Managerial Skills of Engineers & Scientists
1044 Assembly Language Programming for Microprocessors	1077 Financial Analysis for R & D Managers
1045 Computer Graphics	1078 Research Management
1046 Introduction to CAD/CAM	1079 R & D - Engineering and the Law
1047 Johnny Microseed	1080 Licensing in the U. S.
1048 Management Auditing of Computer Operations	1081 Technology Transfer Abroad
1049 Computer Security and Integrity - A Tutorial	1082 New Product Development
1050 Intensive Microprocessor Peripheral Applications	1083 New Venture Management
1051 Digital Continuous System Simulation	1084 Corporate Planning in the Technological Industries
1052 Operational Amplifier Theory and Applications	1085 Technological Forecasting and Assessment
1053 Structured Programming and Software Engineering	1086 International Corporate Planning
1054 Introduction to Computer Programming - Using FORTRAN (or COBOL or PL/1)	1087 International Marketing
1055 Introduction to FORTRAN (or COBOL or PL/1)	1088 Setting Up "Off Shore" Assembly/Manufacturing Operations
1056 Data Processing System	
1057 Statistical Processing Using SPSS	
1058 Introduction to Use of IBM 370 Computer Systems	
1059 Introduction to the Use of IBM Computer Systems via Interactive Terminals and TSO	
1060 Analysis, Design and Operation of EHV Transmission	
1061 Communication Satellite Systems	
1062 Circuit Interruption Theory	
1063 Solar Electric Systems	
1064 Radio Spectrum Management	
1065 Phase-Locked Loops: Design and Applications	
1066 Particulate/Gas Cleaning by Static Precipitation	
1067 Lightning and Grounding	
1068 Lightning Protection of Electronic Systems	
1069 Introduction to Accident, Safety, and Forensic Eng.	
1070 Radar Detection Calculation Procedures	
1071 Management of New Technology Projects	
1072 Expanding the Productivity of the Managerial Mind	
1073 How to Use Your Intuition in Systematic Decisions	
1074 How to Accomplish More in Less Time	
1075 The System Approach to Management	
	HOME STUDY COURSES AVAILABLE FOR YOUR MEMBER USE
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	HS9003 CDC PLATO Systems:
	HS9003.1 Financial Management
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	Understanding Microprocessors through Software Design
	Achieving Results Through Financial Management
	Achieving Results Through Engineering Management
	Modern Control Theory
	Digital Instrumentation
	Pulse-Code Modulation
	VIDEO COURSES AVAILABLE ON RENTAL BASIS
	VTC90178 Manufacturing Quality Control
	VTC90278 Engineering Economy
	VTC90378 Cooling of Electronic Equipment

I am Chairperson of the IEEE _____ My Address is _____

City _____ State _____ Zip _____ I am interested in programming the following courses in

1979 (list by number): _____

I am interested in purchasing the following Home Study programs (list by number): _____

I am interested in renting the following Video Courses (list by number): _____

Send me the complete IEEE Course Catalog for 1978-79 (please check box) Name _____



Please return completed page to V. J. Giardina, Manager Continuing Education, IEEE, 445 Hoes Lane, Piscataway, N.J. 08854.

FELLOW GRADE NOMINATIONS

New Fellow nomination kits for 1979 are now available upon request to the Staff Secretary of the Fellow Committee at Headquarters, att.: Dolores Riker. The kits include detailed guidelines to assist the nominator in the effective preparation of the nomination form. Nominators are urged to read the instructions carefully and to note the deadline dates.

All organizational units are encouraged to submit nominations by April 30, 1979, of candidates considered qualified for elevation to the Fellow grade. There is an order form for nomination kits on page 2M of this issue.

IEEE FOUNDATION APPEAL

IEEE's awards, which in past years have honored such engineering greats as Marconi, de Forest, Pupin, Bardeen, Bell, Westinghouse, Tesla, Sarnoff, and Goldsmith, are imperiled for lack of funding. This summer, IEEE President Ivan A. Getting sent a letter to all members in U.S. and Canadian Regions soliciting donations to the IEEE Foundation to help support the Institute's prestigious awards and scholarships. Dr. Getting has asked *EE* to reinforce his appeal by urging readers both to contribute to the IEEE Foundation and to encourage fellow members to do the same. Contributions should be sent to: IEEE Foundation, Inc., P.O. Box 811, Somerset, N.J. 08873. U.S. donations are tax-deductible.

USAB NEWS

NATIONAL PAC WORKSHOP

The second National PAC Workshop was held September 10-11 in Los Angeles. Especially well attended by local West Coast PAC representatives, the workshop brought Coordinators up-to-date on important aspects of PAC activities nationwide. Highlights of the gathering—which included briefings, panel presentations, and eight concurrent workshops on USAB programs—were the speeches by IEEE President Ivan A. Getting and Vice President for Professional Activities Bruno O. Weinschel, after which the two Institute leaders fielded a barrage of questions on professional issues.

EMPLOYMENT GUIDELINES

A second edition of the Professional Employment Guidelines, approved by the Intersociety Committee, is being printed by the Engineers Joint Council (EJC) for distribution in quantity to the endorsing societies. Copies are now available by request to either the IEEE Washington Office or the Piscataway Service Center, or through the EJC and other societies.

PENSIONS

Pension reform is still a hot issue in Washington, and USAB's Pension Task Force continues to press for legislation. In mid-August, a group was organized to make the rounds of Capitol Hill to enlist support for H.R. 13347—the IEEE supported pension reform for employed engineers. Calls on members of the House Ways and Means Committee were followed by a meeting with the Committee Chairman and other Representatives and included members of five other scientific societies.

Also in mid-August, IEEE's Pension Task Force Vice President Robert Barden appeared on NBC's *America Alive* to represent engineers concerns on pension reform and to underscore the particular problems of mobile professionals.

Call the USAB information line for updated information on pension reform and other issues: (202) 785-2180.

CONGRESSIONAL FELLOWS

Two new IEEE Congressional Fellows have been selected for 1979: David C. Lewis of Annandale, Va., and Ian Arthur Whyte of Pittsburgh, Pa. The IEEE Fellow program, begun in 1973 and formalized this September by the Board of Direc-

tors, places experienced, accomplished engineers on the staffs of Senators, Representatives, or Congressional committees to assist them in dealing with scientific and technical issues.

Mr. Whyte received his Diploma Technical in Telecommunications from The Polytechnic, London, England, and received postgraduate training at Mullard Research Laboratories, Redhill, England. Currently, he is principal investigator for several Westinghouse research projects involving utility communications, load management, and multirate metering.

Dr. Lewis received his bachelor's degree in electrical engineering and a master's degree in nuclear engineering from Pennsylvania State University, and his doctorate in applied physics from Cornell University. At present Dr. Lewis is a scientific officer for the Office of Naval Research, Washington, D.C., involved in such specific technological areas as fiber optics, space optical communications, submarine communications, RF lens and antenna development, and gyrospace technology. The specific assignments chosen by both new Congressional Fellows will be announced at a later date.

RECOGNIZING PROFESSIONALISM

The USAB Awards and Recognition Committee, under the chairmanship of Richard C. Benoit, Jr., has been designing and implementing a program to recognize the contributions and service of volunteers to the Institute's program of professional activities. A formal awards program, based on established Institute procedures, has been submitted to the IEEE Awards Board, and, if approved, would begin in 1979. In the interim, USAB has sought to honor individuals both within and outside the profession for outstanding service to engineering professionalism, occasionally presenting plaques or certifications to individuals in recognition of their contributions.

At this year's WESCON, Executive Vice President C. Lester Hogan presented the USAB Recognition for Professionalism to James H. Mulligan, 1976 USAB Chairman, and 1977 Chairman John J. Guarrera, for their outstanding contributions to professional activities. The Recognitions were also announced and presented during the National PAC Workshop in Los Angeles this September. The USAB Awards Committee will honor one other individual later this year.

TAB NEWS

The IEEE Information Theory Group will sponsor a workshop in conjunction with the USSR Academy of Sciences in October in Mount Kisco, New York. The first such joint effort took place in Moscow in December 1975 and laid the groundwork to continue scientific collaboration between the two societies. The National Science Foundation is providing partial financial support for the meeting, which will be structured in a manner to match the technical interests of both the IEEE and the Soviet participants.

The IEEE Power Engineering Society and the Energy Committee have agreed to participate with the Electric Power Research Institute in Edison's Centennial Symposium, to be held in San Francisco in April 1979. The Symposium will explore the relationship among science, technology, and the human prospect.

The Technical Activities Board has learned that the Marconi Council of the Aspen Institute for Humanistic Studies will offer its Fifth Marconi International Fellowship Award in the sum of \$25 000 to a person who has made outstanding advances in satellite and space technologies relevant to improving world communications. Nominations are being solicited with a deadline for submissions of November 15, 1978. Application forms may be obtained by calling the Council at (303) 443-1230.

STANDARDS NEWS

The IEEE is republishing all of its nuclear standards in a new two-volume, hardcover set. Purchased separately, the 44 documents included would cost \$195, but the set price is \$65.

The IEEE Standards Dictionary, originally printed in January 1978 is being reprinted. In its first nine months of publication 25 000 copies have been sold.

The IEEE is also reissuing another volume of its no-longer-current nuclear standards, which by government regulation must remain available. Further information on these publications, which are available from the IEEE Service Center and through John Wiley and Sons, publishers, may be obtained from Bert Stanleigh at Headquarters.

RAB NEWS

BALLOT ON REGISTRATION

In mid-September, Section Chairmen were sent a summary of the report to the Board of Directors on the issue of registration of engineers (see insert pp. 2A-2C) along with a ballot for their responses. Paul F. Carroll, Vice President for Regional Activities, urges each Section's executive committee to review the material, complete the ballot, and respond by November 10, 1978. Any Section Chairmen who have not received ballots should contact Robert K. Asdal at HQ.

MEMBERSHIP INVOLVEMENT SURVEY

Responses are wanted on the membership involvement survey published in the August issue of *Electrical Engineering*. Very few Councils, Sections, Chapters, or Branches have responded so far. Those who have not are urged to review the questionnaire and send returns to the Field Services Dept. at Headquarters. For another copy, contact Robert K. Asdal.

ELECTION IDEA

The three candidates for Region 4 Director met recently at a "candidates' night" meeting in the Chicago Section. Before a video camera they recorded their election positions, ideas of the needs and direction of IEEE, and replies to questions from the audience. Copies of the tape were flown and mailed to eight Sections in Region 4 for viewing by members. The program was designed to inform the members and get out the vote—an idea for other organizational units for next year's elections. For a report on results and more information contact Eric Aupperle, University of Michigan, Merit Computer Network, The Cooley Building, Ann Arbor, Mich. 48109.

EAB NEWS

CONTINUING EDUCATION ACHIEVEMENT UNITS

The IEEE Board of Directors has adopted the following Educational Activities Board recommendation:

"It shall be the policy of the IEEE that educational achievement units may be awarded to the attendee of any continuing educational program such as a short course, tutorial, lecture series, or workshop sponsored by IEEE or by any of its entities provided that prior evaluation and assignment of appropriate achievement units is obtained for a specific program from the IEEE Educational Activities Board.

"The IEEE educational achievement unit will be designated CEAU to distinguish it from the popular CEU (Continuing Education Unit). The CEAU will recognize the evaluation of individual performance while the CEU does not. Only IEEE educational achievement units, or other education units deemed by EAB to be at least equivalent, will be recorded in IEEE member files."

The above policy will in no way restrict local programs or those of entities of IEEE other than EAB. There is a need and a place for informal non-evaluated courses. The proposed policy will, however, insure a high degree of acceptance by engineers, management, and government bodies of those IEEE courses carrying the IEEE/EAB "stamp of approval."

NEW HOME STUDY PROGRAM

"Understanding microprocessors through software design" is a new course conducted entirely by correspondence. It is specifically aimed at creating a solid grounding in the application and effective use of microprocessors, based on the 8080A microprocessor chip. The course is written as an entirely new approach called a "professional reference program," and can be used either as a learn-by-doing program or as a professional reference for developing skills as they are needed. Additional information may be obtained by contacting the Educational Registrar at Headquarters.

PUB NEWS

REVISED COPYRIGHT FORM

A revised IEEE copyright form has been distributed to all periodical editors and will soon be available for conference publication chairmen. Authors receiving the form will be instructed to sign it, or have it appropriately signed, as a requirement for the publication of a paper in any IEEE publication. The form has been carefully revised to reflect the many inputs sought from and offered by major companies and company attorneys. Because use of the IEEE copyright form is now mandatory, its wide distribution is encouraged.

IEEE Transactions and Journals will each carry a printed version of the form, for reproduction and distribution, in the first issue of each year. Companies that so request will be sent copies of the form and will be free to reproduce it, so that eventually most papers submitted for review will be accompanied by the form. Assistance in distributing the revised form and spreading the word to prospective authors is eagerly solicited. A revised form is included as an insert on pp. 20-2P of this issue. For further information, contact Pat Penick, Publishing Services, (212) 644-7550.

STUDENT ACTIVITIES NEWS

FALL PROMOTION

Fall promotional packages have been sent to the Branches, and units needing more supplies or promotional materials should contact Richard Aseltine, Manager, Student Services Department at Headquarters.

SPECTRUM STUDENT PAGE

Students get something more in *Spectrum* now; the edition of *Spectrum* sent to student members will have a monthly Student News page (supplanting the Regional News page) as well as a quarterly newsletter with feature articles of particular interest to students. In every issue of *EE*, monthly pages from *Spectrum* will be reprinted as Student Activities inserts (see pp. 2Q-2R). Individuals desiring a complementary copy of the quarterly newsletter (which will not appear in editions sent to members in higher membership grades) should request to be put on the mailing list by writing to the Student Services Department.

OUTSTANDING BRANCH COUNSELOR RECOGNITION

The Outstanding Branch Counselor Recognition program was approved by the Board of Directors at its August meeting. The program will be jointly funded by RAB and TAB.

CHAPTER/SECTION NEWS

A Quantum Electronics and Applications Chapter of the Los Alamos Section was established.

A five-section Chapter of the Electrical Insulation Society was established in Region 7—in the Bay of Quinte, Hamilton, Kitchener-Waterloo, London, and Toronto Sections—to be administered in the Toronto Section.

The Victoria-Port Lavaca Subsection of the Corpus Christi Section in Region 5 was dissolved.