



THE INSTITUTION OF ELECTRONICS AND TELECOMMUNICATION ENGINEERS

IETE RESEARCH FELLOWSHIP SCHEME

Fellowship scheme: The IETE has instituted a Research Fellowship scheme for two research projects at a time since 2004 in commemoration of its Golden Jubilee. Under this scheme selected researchers are provided financial assistance to pursue advance level research in the following major and related fields of interest to IETE:

- Emerging Wireless Technologies
- Microwave and Radar Engineering
- Science & Technology of Electronics
- Telecommunications
- Information Technology
- Electromagnetics
- Instrumentation & Measurements
- Circuits and Systems
- Medical Electronics
- Bio-Technology & Bio-Informatics
- Electronic Devices & Components, Nano Technology and Nano Materials
- Opto Electronics
- Power Electronics
- Effects of development in Electronics, Telecommunication and Computers on Human Body
- Any other related disciplines including "Technology, Systems and Management" of interest to IETE

Nature of Support: The financial support will include a Fellowship of up to a maximum of Rs 16,000/- per month initially for two years and contingency grant as reimbursement on actual basis not exceeding Rs 12,000/- per year. The grant for fellowship is subject to the conditions that:

- a) Research Fellow should not be receiving any salary, Fellowship, freeship or funds for the proposed Research work from any other source or organization. The salary, fellowship, freeship or funds, if any, being received by the candidate would be deducted from the amount of IETE Research Fellowship, (Rs 16000/- per month).
- b) The contingency / stationary grant of a maximum amount of Rs 12000/- per annum will be admissible on production of supporting cash vouchers and documents, to be approved by IETE on the recommendation of BoRIS
- c) The procedure for processing the monthly payment of IETE Research Fellowship will be initiated on receipt of the satisfactory quarterly progress certificate as per Annrxure-5 from the guide of the Research Fellow, countersigned by the Dean Research/Head of the Institution.

Duration: The duration of the Research Fellowship will be initially for a period of two years which is extendable by one year based on the performance and approval of BoRIS and IETE Governing Council. The candidate should have published at least 2 research papers in the indexed journals. He/she will have to submit a certificate from supervisor stating the reason for extension and the date by which the scholar is likely to submit his/her thesis dissertation.

Scope of Research work: Research work should be in the field of interests to IETE as listed above either by the Research Scholar leading to the award of Ph.D degree or equivalent credits from an **Institution of national eminence**. Applicant / Researcher should be attached to a reputed organization/Institution for undertaking the proposed research work. The application and the proposal is required to be submitted and recommended by the guide of the researcher and counter signed by the Head of the Institution where the applicant / Researcher is enrolled.

Selection: Selection is made by the IETE Board of Research Innovation & Standards (BoRIS) and approved by IETE Governing Council.

Monitoring: The Research programme is monitored at regular intervals against pre-set targets / deliverables to be submitted at the time of the commencement of the research project by a Monitoring / Evaluation Committee nominated by the IETE Board of Research. **Quarterly progress report** as per Annexure-5 is to be submitted by the researcher through the guide for review by BoRIS for improvement and continuation, if any.

Funding: IETE Research Fellowship funding is done through donations / sponsorship either on monthly basis or one time corpus or as a mix of the two as convenient to the donors / contributors. Contributions received are exempt from income tax as per the prevailing provisions of Income Tax Act.

Application: Detailed norms of eligibility for the award of research fellowship, guidelines for the formulation of research project proposal and application format are available on IETE website: www.iete.org. Application in duplicate as per Application Format (to be downloaded from the website) should be forwarded to the Secretary General, IETE, 2, Institutional Area, Lodi Road, New Delhi-110 003 by date as notified in the circular for the call of application for award of Ph.D fellowship.

INSTITUTION OF ELECTRONICS & TELECOMMUNICATION ENGINEERS

NORMS AND GUIDELINES FOR AWARD OF IETE RESEARCH FELLOWSHIP

1. General

The IETE Board of Research Innovation & Standards (BoRIS) has been established at the IETE Headquarters by the Governing Council of the Institution to support/conduct specialized research study relating to the areas of interest of IETE. In this direction, the IETE has instituted since 2004 Research Fellowship scheme to commemorate its Golden Jubilee. Under this scheme selected professionals / researchers would be provided financial assistance to pursue advance level research in the areas of interest to IETE as listed in coversheet. The initial sanction would be for two years, extendable by one year at a time as per need, progress and approval of IETE.

2. Eligibility

Fellowships/grants are open to all IETE members and researchers in India. However, subject to the discretion of the Board of Research Innovation & Standards these fellowships may also be awarded to other than IETE members conditional to their becoming IETE life members.

3. Minimum Qualification: Postgraduate Engineering degree in Electronics/ Telecommunications/ IT/ Computers or M.Sc Physics with specialization in Electronics & Telecommunication. The researcher/ applicant should be registered with an engineering institution of national eminence for the proposed research work.

4. Submission of proposal

A synopsis of the research proposal (seven copies) shall be submitted by date as notified in the circular for the call of application for the award of Ph.D fellowship to the IETE-HQ for consideration of the IETE Board of Research Innovation & Standards. The proposal should contain the focus and scope of the project, a framework in the form of chapters, a bibliography, details of field work if any, and the methodology of research; **it should indicate the precise contribution which the project is expected to make to the existing body of knowledge on the subject.** A copy of the research scholar's and the guide's bio-data should accompany the proposal. Formats for the formulation of research proposals are given at the end of these guidelines.

5. Processing and decision for award of Fellowship

The IETE Board of Research Innovation & Standards (BoRIS) will examine the proposals in detail. Should the Board consider it appropriate, it may invite potential research scholars to make a brief personal presentation of the synopsis and Board may suggest modifications, if necessary, before a final decision is taken. After detailed consideration of the various proposals, the IETE Board of Research under the aegis of IETE Governing Council will decide which of the proposals are to be accepted and the research scholars will be apprised accordingly.

6. Conduct of Research

All research projects under this scheme will commence after approval and normally to be completed under the stipulated time from the date of commencement. Extension of time will be accorded in exceptional cases based on the performance and the need. No major changes to research design will be made without reference to and concurrence of the Board of Research Innovation & Standards. Research scholar of each project will periodically discuss the progress of the project with the guide and a designated member of the Board of Research who in turn will apprise the Board at its periodic meetings. Certificate of quarterly

progress as per Annexure-5 is to be forwarded by the researcher through the guide, countersigned by the Dean Research/Head of the Institution for the release of grant for that quarter.

7. Termination of Fellowship Grant

Should the Board of Research Innovation & Standards determine that progress on a project is unsatisfactory or that the provisions of these rules are being violated, it reserves the right to terminate the fellowship grant for the project without assigning any reason. The decision of the Board will be final. In such an eventuality, the research material available at that point in time will be handed over to IETE for use by another selected researcher.

8. Presentation cum discussion and final report

After one year and nine months into the research project, an interim report is to be submitted and a presentation, if required, should be arranged by the scholar in coordination with the IETE-HQ to elicit views and opinions from experts on related disciplines that may be relevant to the topic for the preparation of the final report. The final report will be submitted to Board of Research Innovation & Standards in triplicate on completion of the project period, but not later than three months thereafter. It should be comprehensive enough to be published as a technical report. Timely submission of the final report will be the responsibility of the Guide of the researcher / Dean Research/Head of Institution. 5 copies of the Ph.D thesis upon award of the degree should be forwarded to IETE HQ for use in library and for information of the Board. The Board of Research Innovation & Standards would greatly appreciate the inclusion of the following aspects in the final report:

- a. Implications for further research
- b. Implications for policy. These should be enunciated clearly and adequately so that these could be brought to the notice of relevant industry, government bodies and/or other concerned authorities.
- c. Scope leading to startup and transfer of the technology to the Industry

9. Publication of the Project, Copyright and IPR

The IETE reserves the right to publish the final report of the project sponsored by it. Such a report shall be published by the IETE within a year of the acceptance of the report and the decision to do so will be communicated to the research scholars within six months of the receipt of the report. The copyright of all publications relating to the research project shall vest with the IETE. The work sponsored by IETE must lead to publications of National or International importance preferably leading to Ph.D Degree/ equivalent credit. Any Research Report published must acknowledge the sponsorship of IETE. In case of commercial utility, 50% of earnings must be given to IETE. All actions and expenses for patenting / IPR procedures are to be undertaken and met by the concerned Research Institution.

10. Variations to suit special cases

Depending on the merits of each case, the BoRIS shall have the authority to delete or modify any of the conditions laid down in these guide lines or to impose such additional conditions as it may deem expedient. In all such variations, however, the reasons for making the alterations shall be recorded in writing. The same will be communicated to IETE Council.

11. Research scholars should furnish a research proposal covering the following:

(A)

- a. Statement of the problem
- b. The hypotheses to be tested or the main research questions
- c. The definition of key concepts
- d. The research design

- e. The sampling frame and the type of sampling procedure
- f. Mode of data collection
- g. Time schedule indicating deliverables.

(B) The research proposal should be a sort of blue print. A well conceived research proposal will later help its efficient implementation. The following characteristics are common to all research proposals:

- a. Formulation of the problem for the research
- b. Delimiting the boundary of the proposed research and elaboration of its substantive components
- c. Data analysis

(C) Formulation of research design.

a. **The Title of the project:** It should be self explanatory

b. **Guide:** A willing expert in the field or a similar person with excellent professional standing may be chosen as a guide who will be able to do constructive criticism of the research/study and also guide the research scholar.

c. **Statement of the problem:** In the opening paragraphs of the research proposal, the problem to be investigated should be stated clearly and briefly. The key questions and the location of the problem in the theoretical context of the concerned discipline should be specified. The significance of the problem, the contribution which the proposed study is expected to make to theory and methodology as well as its practical importance, and national relevance should be specifically indicated.

d. **Overview of literature :** Summarizing the current status of research in the area, including major findings, the project proposal should clearly demonstrate the relevance of the findings or approaches for the investigation of the problem at hand.

e. **The conceptual frame work :** Given the problem and the theoretical perspective for investigating the problem, the proposal should clearly indicate the concepts to be used and their relevance for the study. It should further specify the dimensions of empirical reality that need to be explored for investigating the problem.

f. **Research questions or Hypotheses :** Given the conceptual framework and the specification of dimensions, the specific questions to be answered through the proposed research should be sharply formulated. In the case of an explanatory research design, specification of variables and posting of relationship among them through specific hypotheses must form a part of the research proposal.

g. **Coverage:** Proposals involving sampling should indicate details of sampling procedure proposed to be utilized and describe the rationale.

h. **Data collection:** The different types of data proposed to be gathered should be specifically mentioned. The sources for each type of data and techniques proposed to be used for collecting different types of data should be specified.

i. **Data processing :** The manner in which the different types of data will be processed, the tabulation plan and the types of data that will be processed through the computer should be explained in detail.

j. Experimentation: If experimentation is involved the same may be indicated. This should include the equipments to be used.

k. Time line : The project should be broken up into suitable stages probably as per the following sequence and time required for the completion of each stage of work should be specified. Such stages may cover the following.

- i) Preparatory work that includes literature survey
- ii) Preparation and submission of synopsis
- iii) Completion of mandatory course work
- iv) Start of experimentation for research work
- v) Drawing of sample
- vi) Data collection
- vii) Data processing
- viii) Data analysis
- ix) Writing research paper on the findings and publishing in indexed journals
- x) Defending your findings in the research seminars
- xi) Report writing

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Proposal Format

Format of Application for Ph. D Fellowship under the IETE

1. a) Name of Research Scholar :
b) Designation & Affiliation :
c) Correspondence Address :
d) Phone No. and e mail id :
2. a) Name of Research Supervisor :
b) Designation & affiliation :
c) Correspondence Address :
d) Phone No. and email id :
e) Bio Data of Supervisor to be enclosed :
3. Title of Proposed Research under Ph.D :
4. Name of Co-Supervisor, if any Including details as 2 (b) – 2 (e) :
5. University/Institution where enrolled for Ph.D (Attach enrolment letter of the University/Institute)
6. Date of Enrolment & Enrolment No. :
7. Type of Enrolment (Full/Part Time) :
8. Date of Completion of Pre-Ph.D Course Work (Attach result card of the University/Institute) :

DECLARATION

I have carefully read the terms and conditions for Ph. D. fellowship under the IETE and agree to abide by them. I also agree to submit the Ph.D thesis within two years from the date of grant of the said fellowship

Signature
Research Scholar

Signature
Research Supervisor
Date:

Signature
Co-Supervisor, if any
Date:

Counter signed by Dean Research / Head of the Institution with seal
Place : Date:

Bio-data of the Investigator (s) & Guide(s) -for each on a separate sheet:

1. Name :
2. Age :
3. Designation :
4. Degrees conferred (begin with bachelor's degree);

Degree	Institution conferring the degree	Field/Specialization	Year

5. Research experience (in chronological order):

Duration	Name of Institution	Nature/Title of work done

6. Major scientific fields of interest:
7. List of publications/Awards/Presentation/Workshop/Patents
8. Number of PhD guidance completed/awarded
9. Number of PhD currently enrolled as per UGC norms
10. Research projects Completed/Ongoing
11. Number of Patents awarded/In pipeline

Proposal Preparation Format

(To be signed by the Research Scholar, Guides and the Dean Research/Head of Institution)

1	Project Title	
2	Synopsis of the proposed research: A simple concise statement about the investigation, its conduct and anticipated results in not more than 200 words	
3	Objectives: A brief definition of the objectives and their scientific, technical and techno-economic importance	
4	A brief history and basis for the proposal and a demonstration of the need for such an investigation preferably with reference to the possible application of results to IETE and engineering community. A reference should also be made to the latest work being carried out in the field and the present state-of-art of the subject.	
5	Approach: A clear description of the concepts to be used in the investigation should be given. Details of the method and procedures for carrying out the investigation and expected time schedules should be included. All supporting studies necessary for the investigation should be identified, the necessary information of any collaborative arrangement, if existing with other	

	<p>investigators for such studies, should be furnished, The Principal Investigator is expected to have worked out his collaborative arrangement himself. IETE's laboratory where available and library facilities can be used by the investigators (for further elaboration refer the guidelines)</p>	
6	<p>Data reduction and analysis: A brief description of the data reduction and analysis plan should be included. If any assistance is required from IETE or any other organization for data reduction purposes, it should be indicated clearly.</p>	
7	<p>Available Institutional facilities: Facilities such as equipment, etc.</p>	

Declaration of Commercial Utility of Research

I/We here by agree to abide by the rules and regulations of IETE research fellowship and accept to be governed by all the terms and conditions laid down for this purpose. In case of commercial utility arising out of this research work, I / we agree to pay 50% of the earnings to IETE.

Signature(s)

Name of Scholar(s)

Date

Signature(s)

Name of the Guide(s)

Date

Countersigned by the Dean Research/Head of the Institution with seal

Undertaking of No-Fellowship from Other Sources

I give this undertaking that I am not receiving any Salary, Fellowship, Freeship or financial assistance from any other source for my Ph.D research work titled

I shall inform the IETE immediately if I get any such fellowship or financial assistance from any other source and shall be bound to refund the fellowship amount received from IETE.

Signature(s)

Name of Scholar(s)

Date

Signature(s)

Name of the Guide(s)

Date

Countersigned by the Dean Research/Head of the Institution with seal

Quarterly Progress Report for PhD Fellowship

1. Name of the Scholar:	
2. University/Institution:	
3. Enrolment No.	
4. Name of the Supervisor: Name of the Co-Supervisor:	
5. Title of Thesis:	
6. Progress report for the Period:	Fm: To:
7. Research Papers Published in the cited journals during the period with Impact Factor (Attach hardcopy and send soft copy through email)	
8. Research Papers Published in the Conference Proceedings during the period (Attach hardcopy and send soft copy through email)	
9. Conferences/Seminars/workshops attended during the period (Attach copy of certificate)	
10. Brief summary of the research work carried during the period (300 words) Attach as Annexure if required	
11. The status of the research work	
12. Any other relevant information, if any	

It is certified that all information mentioned in the quarterly progress report is correct to best of my knowledge.

Date:

Full Signature of the Research Scholar

Signature of the Co-Supervisor with Seal

Signature of the Supervisor with Seal

Date:

Date:

Counter Signed by the Dean Research/Head of the Institution with Seal

Date: