Standard Operating Procedure (SOP) for the CHANAKYA Fellowship

TECHNOLOGY INNOVATION HUB FOR IoT & IoE
TRUST IN TECHNOLOGY

A VENTURE OF
INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

TIH FOUNDATION FOR IOT & IOE
3rd Floor, IITB-Monash Research Academy Building
IIT Bombay Campus, Mumbai 400076 Maharashtra, India
office.tih@iitb.ac.in | www.tih.iitb.ac.in
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5 Executive Summary

The present document provides the detailed guidelines and rules of the procedure for the Comprehensive and Holistic Advancement of National Knowledge Yield and Analytics (CHANAKYA) fellowship. This fellowship is offered by The National Mission on Interdisciplinary Cyber Physical Systems (NM-ICPS) through TIH-IoT to motivated key learners/researchers/teachers across all levels in the world/India who want to work in the area of IoT and IoE.

Along with the objectives and deliverables to NM-ICPS, this document describes the guidelines for awarding fellowships in two major categories namely Mentored and Individual. Mentored category is focused mainly on students whereas an Individual category is focused on faculty members across PAN India. In the Mentored category, the fellowship will be awarded to the UG, PG, PhD and Post-Doctoral students whereas in the Individual category, the fellowship will be awarded to the faculty members and chair professors. The modes of interactions between TIH-IoT and Host Institute for achieving the objectives are stated in this document. This document acts as a guide which can be referred to for all aspects of CHANAKYA fellowship at a broader level. The SOP is prepared based on the inputs from NM-ICPS detailed project report and tripartite agreement between the TIH-IoT, the IITB, and the DST.

6 Introduction

The CPS and associated streams and on all aspects of ICPS research in India will be coordinated under the umbrella of NM-ICPS with a broader scope of Translational Research, Technology Development, HRD, Start-up development. The Mission would institute research through academic collaborations and foster in-depth investigations to understand the processes and phenomena that are in operation leading to the development of CPS applications. A dedicated group of scientists, in collaboration with several other national academic and research institutions of excellence, associated with industry, would carry out major research programmes under directed research and extramural funding mechanisms to meet the requirements of Ministries/Departments/ Industry. To achieve the mission one of the pillars is the research on these topics by providing the fellowship to students and faculties and thus the concept of the CHANAKYA fellowship is evolved.

7 Objective

The CHANAKYA fellowship is provided to meet the following broad level objectives.

- Create a pool of trained professionals in Cyber Physical Systems (CPS) domain to be problem-solvers or turn entrepreneurs
- Provide support for motivated young researchers in the area of CPS and groom them as an independent researcher
- Initiate Curriculum for UG Students in CPS and allied areas
- Provide a platform for PG students to work on a real problem of industry and solve it using CPS
- Provide support for Doctoral candidates to do an in-depth analysis in CPS by applying independent methodologies of scientific research and creating new scientific knowledge/ technology solutions in CPS
- Provide support to faculties heavily engaged in research and teaching in CPS or related areas and complementing the ongoing work in the Host Institution in the areas of CPS Domain
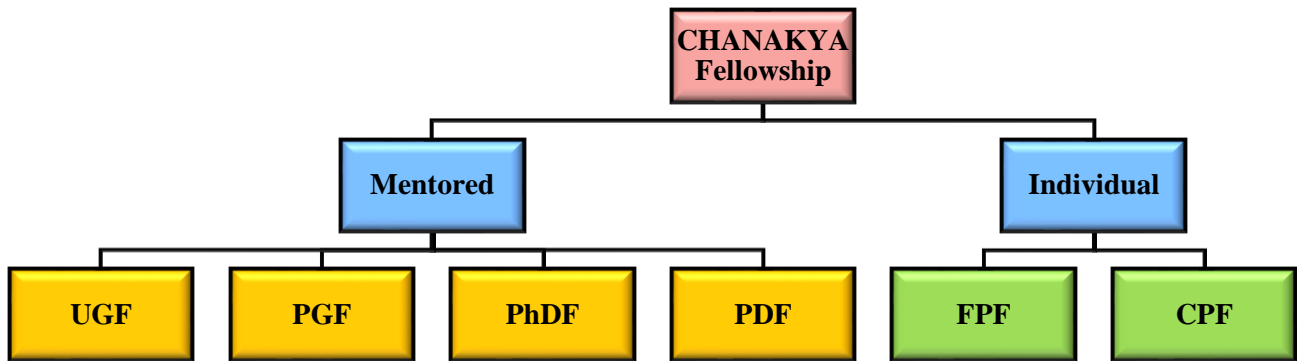
8 Fellowship

8.1 Expected Outcome of Fellowship

Following outcomes are expected with these fellowships

- New deployable products/technology to different industries
- Technology commercialization
- Develop new application areas for IoT
- Exposure of Entrepreneurship to students
- Technology solutions for India
- New products/ processes
- Manpower of high order skills
- Intellectual property generation

8.2 Types of Fellowship

The CHANAKYA fellowship is divided into two major categories: Mentored and Individual. Mentored category is focused mainly on students whereas an Individual category is focused on faculty. The chart below shows the details of the CHANAKYA fellowship categories.

UGF – Undergraduate Fellowship

PGF – Postgraduate Fellowship

PhDF – PhD Fellowship

PDF – Post Doctoral Fellowship

FPF – Faculty Professor Fellowship

PDF – Chair Professor Fellowship

NM-ICPS has mandated TIH-IoT to have following target fellowships over next 5 years. The details of the fellowship are provided in the table below:

SOP for the CHANAKYA Fellowship

Sr. No.	Fellowship Type	No. of fellowships for 5 years	Fellowship Amount	Duration of Fellowship	Qualification Criterion
1	Chair Professor Fellowship (CHANAKYA-CPF)	6	INR 80,000 per month + INR 1,20,000 (for annual contingencies/Travel/ Miscellaneous costs) + INR 1,00,000 (or annual institutional overhead)	3 years	Associate Professor or Professor or a person with R&D experience from industry, retired professors, faculty from other countries
2	Faculty Professor Fellowship (CHANAKYA-FPF)	6	Grant- INR 80,000 per month	3 years	Assistant Professor/Associate Professor/ Professor
3	Post-Doctoral Fellowship (CHANAKYA-PDF)	25	INR 80,000 per month	2 to 3 years.	PhD with <2years of experience. Research scholars who have submitted their thesis
4	Doctoral Fellowship (CHANAKYA-PhDF)	25	• INR 31,000/month for 1st and 2nd year • INR 35,000/month for 3rd and 4th year • Fellowship can be extended up to 5th year to INR 35,000/month based on committee recommendation	4 years extendable to 5th year	Fresh PhDs admitted to AICTE/UGC approved PhD program
5	Post Graduate Fellowship (CHANAKYA - PGF)	62	INR 12,400 /month	2 years	GATE/CSIR-NET. Admitted to AICTE/ UGC-approved post graduate program like MTech/ ME/ MS program in any Indian university
6	Under Graduate Fellowship (CHANAKYA - UGF)	340	INR 10,000 /month	10 months	2nd or 3rd year (2 students per project)

Note: TIH will come up with the various schemes for the individual and team projects proposal.

8.3 Eligibility Criterion for Mentored Fellowship (UGF, PGF, PhDF, PDF)

This section provides the details of the eligibility criterion for the CHANAKYA fellowship for the students. Following are common requirements to be fulfilled by the candidate and Host Institution to be eligible for the fellowship:

a) The student can be of any discipline of engineering/science to be eligible for the fellowship

b) The student should not be availing any other fellowship or doing internship

c) The student must have a minimum Cumulative Grade Point Average (CGPA)/ Cumulative Performance Index (CPI) of 6.0 on the scale of 0-10 in the previous year or a minimum of 60% marks in aggregate or a First Class as specified by the University without any backlog.

d) For PGF, PhDF and PDF, applicant should have a host institute and must have identified a guide/supervisor

e) For PGF, the applicant should have obtained the degree as B.E./ B.Tech./ B.Sc. (Engineering), Bachelor of Planning, B. Pharm. / BDS (4 yr. Degree) from UGC/AICTE-approved Indian universities or earned through Associate Membership Examinations conducted by recognized professional bodies (like Institution of Engineers (India), Institute of Chemical Engineers, Aeronautical Society of India, Institute of Electronics & Telecommunication Engineers, Indian Institute of Metals, etc.)

f) For PhDF, the applicant should have obtained the degree as M.Sc. (Engineering) recognized equivalent to ME/MTech and Master of Planning / M.C.A. / MBBS / M. Pharm. / MDS from UGC/AICTE-approved Indian universities or earned through Associate Membership Examinations conducted by recognized professional bodies (like Institution of Engineers (India), Institute of Chemical Engineers, Aeronautical Society of India, Institute of Electronics & Telecommunication Engineers, Indian Institute of Metals, etc.)

g) For PDF, the applicant should have obtained PhD degree from UGC/AICTE approved Indian universities and demonstrated very good experience of research, publications in reputed journals and conferences, patents, laboratory/course development and other recognized relevant professional activities**.**

h) Proposals from academic institutions having infrastructure, laboratories and faculty in the areas of CPS will be considered.

i) The institutions will be provided support for augmenting their infrastructure, supplementing the faculty, industry interaction (visits, student projects), etc.

j) Rules of host institutes where the fellowship is tenable will be applicable; research grants/ overheads to be paid to host institute. (*Ref: Pages No. 123, 125, 126 of NM-ICPS DPR*)

8.4 Eligibility Criterion for Individual Fellowship (FPF, CPF)

This section provides the details of the eligibility criterion for the CHANAKYA fellowship for faculty:

a) For FPF and CPF, the faculty is expected to engage heavily in research and teaching in CPS or related areas and should preferably; complement the ongoing work in the host institution.

b) The applicant should have demonstrated very good experience of research and guidance of postgraduate and Ph.D. students, publications in reputed journals and conferences, patents, laboratory/course development and other recognized relevant professional activities.

c) Chair Professors are faculty, who are offered positions as an acknowledgement of contribution to research and teaching. It is proposed to create positions of chair professors in academic institutions excelling in CPS and allied area. They are highly valued in academic circles due to the prestige attached to them on the one hand and to the contribution, the faculty makes during the tenure, on the other.

d) Rules of host institutes where the fellowship is tenable will be applicable; research grants/ overheads to be paid to host institute. *(Ref: Page No. 127 of NM-ICPS DPR)*

8.5 Documents Required for Fellowship

1. Applicant need to submit the proposals under the registered guide with his/her host institute and submit a consent letter in a prescribed format. (Research proposal to be submitted along with details of guide)

2. Grantee to send the self-attested hard copy of following documents: -
   a) Degree certificate
      i. UG- Degree certificate – BE/BTech/ BSc.
      ii. PG- Degree certificate: M.Sc./ME/MTech qualifying degree certificate.
   b) GATE/CSIR-NET examination – qualification certificate (Valid score is not necessary).
   c) Bonafide certificate from the college where admission for ME/ MTech/ MS has been secured.
   d) Resume in prescribed format.

e) Research proposal in prescribed format.

f) Undertaking form from candidate.

g) Consent form from mentor.

8.6 Project Progress Review

- The responsibility of monitoring academic progress of all CHANAKYA student fellowships (UGF, PGF, PhDF) lies with the Host Institute as per the norms and rules for Host Institute whereas the responsibility of monitoring the progress of project lies with TIH-IoT.

- In case of individual projects, TIH-IoT will work with the faculty (called as Project Investigator, (PI) for the project deliverables.

- PIs have to submit progress reports and make presentations before TIH-IoT, as per the decided time schedule.

- TIH-IoT would be able to suggest the PI to modify the course of action, if it doesn't match with the project proposal's deliverables.

- In case of the student-driven projects, the monitoring of the progress of project will be done by the mentor/technical staff and subsequently by the TIH-IoT.

9 Responsibility Matrix

9.1 Responsibilities of TIH-IoT

- Funds will be disbursed to the Host Institute. Eligibility and terms and conditions will be stated/conveyed in the sanction order.

- TIH-IoT will monitor the progress of the projects and provide suggestions if required

- Add nominal budget for consumables, contingency, national and international travel etc. for each fellowship as per the recommendations of the advisory committee.

9.2 Responsibilities of Host Institute

- Host Institute will monitor academic progress of all CHANAKYA fellowships as per the norms and rules of the institute.

- Host Institute will take care of the eligibility criteria and funds disbursal as per the terms and conditions stated.

10 Terms and Conditions

1. Every call for proposal for fellowship should be submitted in the prescribed format.

2. All applicants from academia should apply through their official email address. Any changes to this email address after submission of application and without necessary cause may result in cancellation of their application.

3. The selection of a Project under the Program and the amount of funding available to selected Projects shall be based on the scrutiny by the review committee approved by the CTO of TIH-IoT. The decision of the review committee of TIH-IoT shall be final and binding.

4. The mode and process of provision of fellowship shall be governed by TIH-IoT's internal policies and will either be specified in the Offer Letter or notified to the official email.

5. All correspondence will be primarily via email.

6. The funds provided under this Program should not be used for any purpose other than for the Project. The amount of fellowship which is not utilized should be returned to the TIH-IoT.

7. TIH-IoT reserves the right to call for periodic information on progress. If sufficient progress has not been made, the report should state the reasons for the same and provide details of the adjustments the applicant is making or propose to make to get back on track.

8. The Grantees shall, if requested by TIH-IoT, attend meetings to exchange information and ideas and progress of the Project with TIH-IoT. The Grantees may also be invited to attend events or activities organized by TIH-IoT. The funds for travel may be reimbursed by TIH-IoT from the travel funds allocated under the awarded amount.

9. Confidentiality:

    a. Any information provided by the Grantees, that is not explicitly marked as confidential, shall be considered as available to TIH-IoT for purposes of public education or dissemination without further consultation with the information provider.

    b. A strict confidentiality will be exercised with regards to all projects including, but without limitations to, the R and D work and know-how generated and

prevent disclosure thereof, for any purpose. All parties related to the project/collaboration with TIH-IoT will also ensure confidentiality as required by TIH-IoT except the disclosure is warranted by operation of law.

10. Grantees may publish the results of a Project in conferences or peer reviewed journals and in any such publication, they shall include the following credit:

    "The authors acknowledge the support of TIH Foundation for IoT and IoE, IIT Bombay for support of this research."

11. Intellectual Property Rights will be as per the TIH-IoT policy.

12. TIH-IoT may publicly disclose information about the award of a Grant/Grant fellowship.

13. In carrying out the Project, the Grantees will comply with all applicable laws, regulations, and rules and will not infringe, misappropriate, or violate the intellectual property, privacy, or publicity rights of any third party.

14. The Grantee shall maintain complete and accurate accounting records and copies of any reports submitted to TIH-IoT related to the Project for at least three years after the submission of final report of the Project.

15. Termination: TIH-IoT reserves the right to cancel the Grant/Grant fellowship at any point in the event:

    a) of any breach of the terms and conditions stated herein,

    b) TIH-IoT determines that the progress made under the Project is not satisfactory,

    c) TIH-IoT discovers or has reason to believe that the Grantee has provided false or misleading information, in which case the Grantees will be liable to refund any Grants/Grant fellowships funds, or

    d) TIH-IoT does not receive funds from its funding sources. The decision of TIH-IoT shall be final and binding upon the Grantees. TIH-IoT may, at any time, reassess Grantee's entitlement to the Grant/Grant Fellowships and the Grantee will be liable to refund to TIH-IoT the total sum of any payments incorrectly made to Grantee.

16. The Grantees shall not assign or transfer any of their rights or obligations under this Agreement without TIH-IoT's prior written approval.

17. General: TIH-IoT's obligations to a Grantee shall be strictly restricted to those expressly stated in the Grant/Grant Fellowship Offer Letter. Grantees agree to hold harmless TIH-IoT in case of any claims for damages or loss arising from a Project.

18. Disclaimer: TIH-IoT accepts no liability for any consequences, whether direct or indirect, that may arise from operation of this Program, this Project, use of the Grant/Grant Fellowship funds, or from suspension or termination of the Grant/Grant Fellowship.

19. Dispute Resolution: In case of any concerns or disputes regarding the interpretation of these Terms or Grant/Grant Fellowship funds, the Grantees shall contact the TIH-IoT and both parties shall use all reasonable endeavors to negotiate in good faith and settle amicably such disputes. If the dispute cannot be resolved, the Grantees may escalate the matter in writing to the CEO/COO of TIH-IoT, whose decision shall be final in the matter.

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