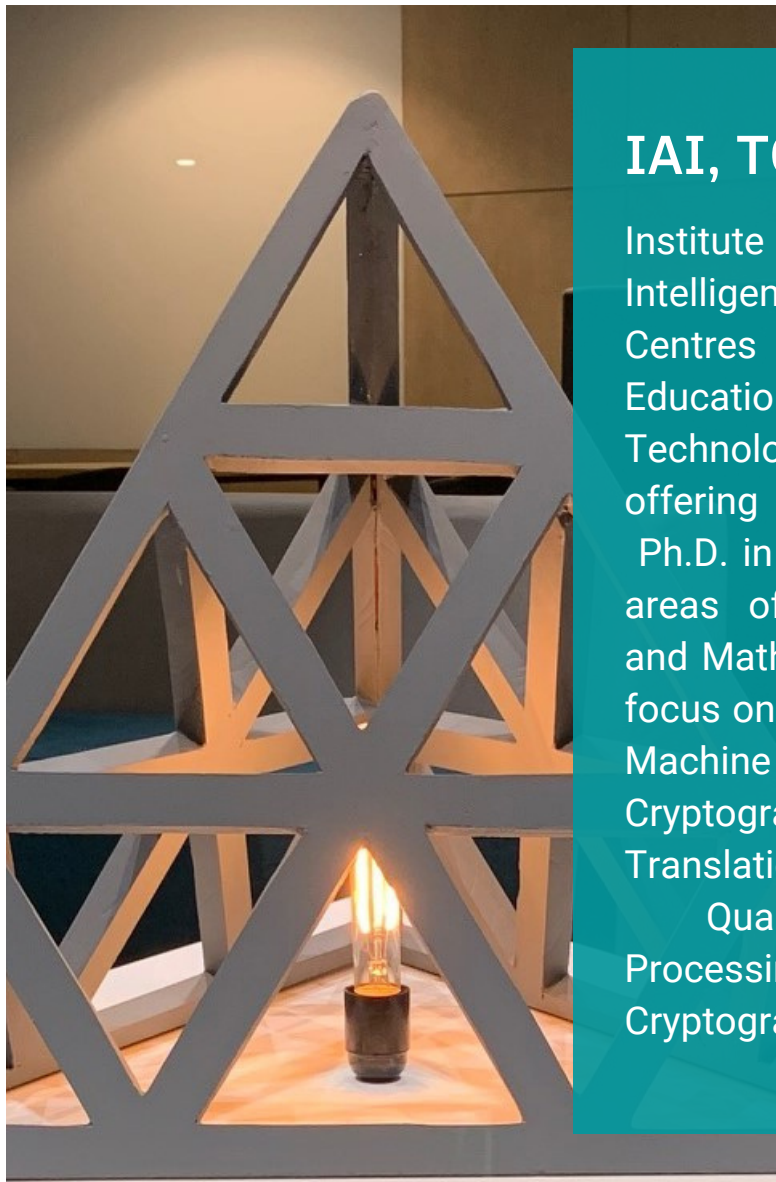




TCG

Centres for Research and Education
in Science and Technology

PH.D. PROGRAM



IAI, TCG CREST

Institute for Advancing Intelligence (IAI), under TCG Centres for Research and Education in Science and Technology (TCG CREST), is offering Ph.D. in Science or Ph.D. in Engineering in broad areas of Computer Science and Mathematics with special focus on Artificial Intelligence, Machine Learning, Cryptography and Security, Translational Mathematics, Quantum Information Processing and Quantum Cryptography.

Ph.D. @ IAI

The goal of the IAI Ph.D. program is to nurture students with raw talent and intellect and produce well-educated next-gen research leaders who will impact the future world. The degree will be offered under Academy of Scientific and Innovative Research (AcSIR) and we will follow the AcSIR guidelines.

At present, we offer Ph.D in Science and Ph.D. in Engineering degree in the broad areas of Artificial Intelligence & Machine Learning, Cryptology & Security and Translational Mathematics.



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Inventing Harmonious Future

visit <https://tcgcrest.org/iai-programs-2023/> for more details

Research Focus

AI / ML

Artificial Intelligence, Machine Learning, NLP, Image Processing, Pattern Recognition, Data Science, Digital Humanity and AI & Law.

Cryptology & Security

Cryptology, Quantum Cryptology, Lightweight Cryptography, Blockchain, Provable Security, Cloud Computation and Security, Cryptanalysis and Side Channel Cryptology.

Translational Research in Mathematics

Pure Mathematics and Application Areas, Functional Analysis, Operator Algebra, Topology, Algebra, Graph Theory, Combinatorics, Algebraic Geometry and application areas.

visit <https://www.tcgcrest.org/iai-research/> for more details



WHY?

01

Fellowship and Travel Support

At TCG CREST, we offer a competitive institute fellowship (including HRA) for a period of five years. Support towards national and international travel may be provided (subject to approval).

02

Facilities at TCG CREST

There are five digital classrooms with smart boards, audio and video systems. There is a state of the art computer lab with in-premise servers, GPU clusters and cloud based facilities.

03

Research Oriented Coursework

At IAI, students undergo detailed research focused courseworks in their first year of Ph.D. program. Our coursework is comparable to those offered at both national and international institutes of repute.

Admission

Eligibility

Ph.D. in Science (Mathematics)

All students who have successfully completed or are in their final year pursuing M.Sc / M.Stat / M.Math or equivalent degree in Mathematics, Statistics, Data Science or other areas of Quantitative Sciences may apply.

Ph.D. in Science (Cryptology & Security)

All students who have successfully completed or are in their final year pursuing M.Sc / M.Stat / M.Math or equivalent degree in Mathematics, Statistics, Physics or other areas of Quantitative Sciences may apply.

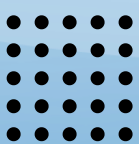
Ph.D. in Engineering (AI / ML)

All students who have successfully completed or are in their final year pursuing M.E / M.Tech / M.Engg or equivalent Master's degree in Engineering or Technology in Computer Science, Information Technology, Electronics and Communications, Electrical Engineering or other areas of Quantitative Sciences may apply.

Ph.D. in Engineering (Cryptology & Security)

All students who have successfully completed or are in their final year pursuing M.E / M.Tech / M.Engg or equivalent Master's degree in Engineering or Technology in Computer Science, Information Technology, Electronics and Communications, Electrical Engineering or other areas of Quantitative Sciences may apply.

It is desirable that candidates have qualified a nationally conducted written selection test for Ph.D. organised by CSIR or UGC or ICMR or DST or DBT or INSPIRE or RGNF or NBHM or JEST or GATE or other equivalent national level body.



Application Deadline

31st May, 2023.

Date of Examination

To be announced in our website.



Selection Process

Qualifying Test

All candidates must qualify a selection test – either a national level test or a national level test organised by TCG CREST.

A. The candidate will be selected as a Research Fellow of the Institute in the relevant discipline through a written selection test conducted by TCG CREST in the respective discipline. Only candidates qualifying the TCG CREST test will be eligible for TCG CREST Institute Fellowship. For final selection, a Selection Interview will be conducted.

B. The candidates who have been awarded a Fellowship by CSIR or UGC or ICMR or DST or DBT or INSPIRE or RGNF or NBHM or other equivalent national level body based on a nationally conducted written selection test should apply directly for enrollment for the PhD Program. However, candidates must clear the Selection Interview, if shortlisted.

Selection Interview

A. Based on the performance in the national level test or the TCG CREST exam and past academic records, candidates will be shortlisted for interview.

B. For final selection of the candidate, an interview will be conducted by the relevant JRF selection committee of the institute and the decision will be solely on the basis of performance in the final interview.

C. TCG CREST will retain its right to offer fellowship to candidates qualifying TCG CREST test.

Institute Fellowship

TCG CREST will provide a competitive fellowship for a period of five years. National and international Travel Support may be provided to selected candidates as per the norms of TCG CREST. In 2023-2024, Institute JRF of forty thousand rupees (inclusive of HRA) may be paid.

Team



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Bimal Kumar Roy, Honorary Director, IAI

Professor Bimal Kumar Roy is the Honorary Acting Director of IAI and also the Honorary Chairman of the Scientific Advisory Board of IAI. Prof. Roy is a Padmasree Awardee of 2015 and was previously the Chairman of National Statistical Commission, India, and is a professor at Indian Statistical Institute, Kolkata.

Key Scientific Members



Rajeeva Karandikar

Professor Rajeeva Karandikar is a Fellow of the Indian Academy of Sciences and Indian National Science Academy. He was previously the Director of Chennai Mathematical Institute.



Swagatam Das

Swagatam Das is a professor and the Deputy Director of the IAI. He received the B.E. Tel.E., M.E. Tel.E and Ph.D. degrees, all from Jadavpur University, India.



Rana Barua

Currently involved with IAI as an Emeritus Professor, Rana Barua was previously HOD of Stat-Math unit at ISI. He completed his Ph.D. at ISI and was Joint-Cordinator of Regional Maths Olympiad, Eastern India



Goutam Mukherjee

Professor Goutam Mukherjee is a visiting professor at IAI, TCG CREST and he is leading the TRIM group at IAI. He is a Professor at Stat-Math Unit at ISI, Kolkata and completed his Ph.D. at ISI, Kolkata.

About TCG CREST

The Chatterjee Group (TCG) launched the TCG Centres for Research and Education in Science and Technology (TCG CREST), a not-for-profit organisation, with an aspiration to become a leading member of the global science and technology driven innovation eco-system by collaborating with the global centres of excellence. TCG CREST is focused on creation of strong networks with reputed knowledge centres of the world – universities, research institutions, technology innovators and academic communities. It passionately inculcates a culture of continual knowledge exchange through joint projects, research, student exchange, faculty exchange, collaborative workshops, seminars and colloquiums for knowledge creation, knowledge application and knowledge dissemination for the overall benefit of human society.



About AcSIR

The AcSIR was established as an Institution of National Importance by an Act of Parliament in 2010 and has been set-up based on a 'Hub and Spoke' model where the hub (AcSIR-HQ at Ghaziabad) is responsible for centralized administrative functions. The spokes are located in the 38 CSIR institutes/units (AcSIR Academic Centres) and 15 non-CSIR Institutes (AcSIR Associate Academic Centres) spread along the length and breadth of India, which act as the academic campuses of AcSIR.

AcSIR is the largest Academic Institution for doctoral research in India having awarded 577 PhD degrees in 2022 and with more than 6100 students currently registered for PhD. Presently, AcSIR is ranked 3rd by "Scimago Institutions Ranking" (2023), 12th by "Nature Index" (2021-22) and 18th by "NIRF" (2022) in the Research Category, among the academic institutions in India.