

TATA INSTITUTE OF FUNDAMENTAL RESEARCH

(A Deemed University)

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Research opportunities for exceptionally talented and strongly motivated students

PH.D. PROGRAM IN MATHEMATICS, PHYSICS, CHEMISTRY, BIOLOGY, COMPUTER & SYSTEMS SCIENCES AND SCIENCE EDUCATION; INTEGRATED M.Sc. - PH.D. PROGRAM IN MATHEMATICS (BENGALURU), PHYSICS AND BIOLOGY; M.Sc. PROGRAM IN BIOLOGY (DBS) AND WILDLIFE BIOLOGY & CONSERVATION, BENGALURU

The Tata Institute of Fundamental Research invites applications for admission to its M.Sc., Integrated M.Sc.-Ph.D. (I-PhD), and Ph.D. Graduate Programs in the subjects given below:

SUBJECTS: ★ Mathematics (Ph.D. and I-Ph.D. programs):

★School of Mathematics, Mumbai (<http://www.math.tiffr.res.in>): only Ph.D. program ★Centre for Applicable Mathematics (CAM), Bengaluru (<http://math.tifrbng.res.in>): Ph.D. and I-Ph.D. programs in Applicable Mathematics. ★Physics (Ph.D. and I-Ph.D. programs): ★Department of Astronomy & Astrophysics, Department of Condensed Matter Physics & Materials Science, Department of High Energy Physics, Department of Nuclear & Atomic Physics, Department of Theoretical Physics (all at Mumbai campus) (<http://www.tiffr.res.in/~sbp>). ★National Centre for Radio Astrophysics (NCRA), Pune (<http://ncra.tiffr.res.in>). ★TIFR Centre for Interdisciplinary Sciences (TCIS), Hyderabad (<http://www.tiffr.res.in>): Theoretical and experimental activities in physical, chemical, biological and engineering sciences, within and across disciplines. ★International Centre for Theoretical Sciences (ICTS), Bengaluru (<http://www.icts.res.in>): Activities in all theoretical sciences.

★Chemistry (Ph.D. program): ★Department of Chemical Sciences, Mumbai (<http://www.tiffr.res.in/~dcs>). ★TIFR Centre for Interdisciplinary Sciences (TCIS), Hyderabad (<http://www.tiffr.res.in>). ★Biology (Ph.D., I-Ph.D. and M.Sc. programs): ★Department of Biological Sciences, Mumbai (<http://www.tiffr.res.in/~dbs>). ★National Centre for Biological Sciences (NCBS), Bengaluru (<http://www.ncbs.res.in>). M.Sc. in Wildlife Biology & Conservation at NCBS, Bengaluru (http://www.ncbs.res.in/msc_program). ★TIFR Centre for Interdisciplinary Sciences (TCIS), Hyderabad (<http://www.tiffr.res.in>): only Ph.D. program. ★Computer & Systems Sciences (Ph.D. program) including Communications and Applied Probability: School of Technology & Computer Science (STCS), Mumbai (<http://www.tcs.tiffr.res.in>). ★Science Education (Ph.D.): Homi Bhabha Centre for Science Education (HBCSE), Mumbai. For admission procedure, see <http://www.hbcse.tiffr.res.in>

GRADUATE SCHOOL (GS-2014): The academic year starts from August 1, 2014. Stipend: Ph.D. and I-Ph.D. students receive a monthly scholarship of Rs 16,000/- enhanced to Rs 18,000/- after registration. Monthly scholarship for M.Sc. and M.Sc. Wildlife Biology & Conservation students is Rs 12,000/- and Rs 10,000/- respectively.

ELIGIBILITY: (Candidates in the final year of qualifying degree can also apply).

★Mathematics: ★For Ph.D. (Mumbai): M.Sc./B.E./B.Tech./M.Tech./M.A./B.A. /B.Sc. ★For Ph.D.(Bengaluru): M.A./M.Sc./M.Tech. ★For I-Ph.D.(Bengaluru): B.A./B.Sc./B.E./B.Tech. (M.Sc. candidates are not eligible).

★Physics: ★For Ph.D.: M.Sc. (Physics)/B.Tech. (Engg. Physics)

★For I-Ph.D.: B.Sc./B.E./M.E./M.Tech./B.Chem. or equivalent degree in Science/Engineering/Medicine, M.Sc. (not in Physics)/B.Tech. (not in Engg. Physics).

In addition,

I-Ph.D. candidates with four or more years of university education who clear the written test may be considered by **TCIS for their Ph.D. program.**

I-Ph.D. candidates with an engineering degree who clear the written test may be considered by **NCRA for their Ph.D. program.**

★Chemistry: ★For Ph.D.: M.Sc./B.E./B.Tech./M.Tech./B. Pharm./M. Pharm. B.Sc. candidates with advanced knowledge of the discipline are also eligible to apply. ★For Ph.D. program in **TCIS**, M.Sc. in Physics, Chemistry or Biology.

★Biology: ★For Ph.D.: Masters in Basic Science or Bachelors in Applied Science. These include, M.Sc.(Ag.), B.Tech., B.E., B.V.Sc., B.Pharm. (4 years course), MBBS, BDS, M.Pharm. Candidates will be short-listed for interview based on written test marks, CV and Scientific Writeup. ★For I-Ph.D./M.Sc.: Bachelors in any Basic Science. ★For M.Sc. **Wildlife Biology & Conservation**: Indian nationals who have a Bachelor's degree in any discipline (with a minimum of 50% in core subjects), less than 35 years of age as on July 1, 2014 and a strong interest in wildlife research and conservation. Graduate nationals of South and Southeast Asian countries, with similar qualifications, are also eligible to apply. ★For Ph.D. program in **TCIS**, M.Sc. in Physics, Chemistry or Biology.

The TIFR Nationwide Entrance Examination (GS2014) for Biology is also called the Joint Graduate Entrance Examination for Biology and Interdisciplinary Life Sciences (JGEEBILS). **Participating Institutions:** Indian Institute of Science Education and Research (IISER): Bhopal (<http://www.iiserbhopal.ac.in>); Kolkata (<http://www.iiserkol.ac.in>); Mohali (<http://www.iisermohali.ac.in>); Pune (<http://www.iiserpune.ac.in>) and Thiruvananthapuram (<http://www.iisertvm.ac.in>), Centre for Cellular and Molecular Biology, Hyderabad (<http://www.ccmf.res.in>), Centre for DNA Fingerprinting and Diagnostics, Hyderabad (<http://www.cdf.org.in>), National Brain Research Centre, Manesar (<http://www.nbr.ac.in>), National Centre for Biological Sciences, Bengaluru (<http://www.ncbs.res.in>), National Institute of Immunology, New Delhi (<http://www1.nii.res.in>), Institute for Stem Cell Biology and Regenerative Medicine, Bangalore (<http://instem.res.in>), National Centre for Cell Science, Pune (<http://www.nccs.res.in>), Department of Biological Sciences, TIFR, Mumbai (<http://www.tiffr.res.in/~dbs>). Each participating institution has its own admission procedure, and only the test scores of the TIFR exam (JGEEBILS) are common. Students need to apply separately to the concerned institution, indicating the TIFR Entrance Test Reference Code. **Please refer to the individual websites of participating institutions for details of their admissions process.** Results of the TIFR Entrance Test for Biology (JGEEBILS) will be shared by all participating institutions.

★Computer & Systems Sciences (including Communications and Applied Probability): **For Ph.D.:** B.E./B.Tech./M.E./M.Tech./M.C.A./M.Sc. degreeholders in Computer Science / Information Technology / Electronics & Communications Engineering / Electrical Engineering. Exceptionally well qualified students with B.E./B.Tech./ M.E./M.Tech./M.Sc. or equivalent degrees in other disciplines may also be considered.

Candidates not holding a Master's degree and admitted to a Ph.D./I-Ph.D. program can receive an M.Sc. degree in some subjects by fulfilling prescribed requirements (see <http://www.tiffr.res.in/~gsoffice> for details).

ADMISSION PROCEDURE: The admissions procedure (in all subjects except Science Education) consists of a written test at one of the several nationwide centres followed by interviews of shortlisted candidates. The written test will be held on **Sunday, December 8, 2013** in the following cities: Ahmedabad, Bengaluru, Bhubaneswar, Chandigarh, Chennai, Cochin, Delhi, Guwahati, Haldwani, Hyderabad, Indore, Jammu, Jaipur, Kanpur, Kolkata, Madurai, Mangalore, Mumbai, Nagpur, Patna, Pune, Srinagar, Varanasi and Visakhapatnam.

Interviews: For information on subsequent interviews, please check our website.

GATE score based applications in Systems Science (including Communications and Applied Probability): Engineering students with exceptional performance in GATE examination of 2012-2014 in Electrical, Electronics and Communications Engineering, Mathematics may apply for the Ph.D. program without appearing for the TIFR Entrance Test. The link for GATE score based applications will be made available on our website on February 1, 2014. Last date for applying will be two weeks after the GATE 2014 results are displayed on their website. In case a student takes the Systems Science TIFR Entrance Test and also submits a GATE score based application, the better of the two performances will be considered.

APPLICATION PROCEDURE: Submit online applications at <http://univ.tiffr.res.in>

Only students from remote areas who have no access to internet may send their request for application form along with a self-addressed stamped (Rs. 20/-) envelope (size 25cm x 17cm) superscribed GS-2014 (Subject). All others should submit online applications only.

APPLICATION FEE (Non-Refundable): Rs 500/- for applications submitted online and Rs.550/- for applications sent manually by post. **Female candidates are exempted from payment of application fee.** Payment can be made online by Credit/Debit cards OR by Demand Draft drawn on State Bank of India.

★For Biology and M.Sc. **Wildlife Biology & Conservation:** DD to be drawn in favour of "National Centre for Biological Sciences", payable at Bengaluru.

★For all other subjects: DD to be drawn in favour of "Tata Institute of Fundamental Research", payable at Mumbai.

Hall Tickets will be issued only after the receipt of the application fee. Online applicants sending DD (Rs 500/-) by post should write their reference code, name and telephone number behind the DD and send it to the address as given below. Students applying manually should send the DD for (Rs 550/-) along with the filled-in application form.

Address for mailing application/DD : ★For Biology and M.Sc. **Wildlife Biology & Conservation:** Admissions Section, National Centre for Biological Sciences, TIFR, GKVK, Bellary Road, Bengaluru 560065. Enquiries to phd@ncbs.res.in or call 080-23666021 and Wildlife Biology & Conservation to mscwildlife@ncbs.res.in or call 080-23666414. ★For all other subjects: University Cell, Tata Institute of Fundamental Research, Homi Bhabha Road, Colaba, Mumbai 400005. Enquiries to gsch@tiffr.res.in

A waiver of application fee on grounds of financial distress may be requested by a letter from the Principal or the Head of the Department justifying the request. Students may apply online and send the waiver letter/request from the Principal/HOD (on their letter head duly signed and stamped) by post with a covering letter mentioning the reference code. Manual applicants may send the waiver letter along with the filled-in application form. These requests would be considered depending on availability of seats in each Centre and cannot be guaranteed.

Candidates may appear for the written test in multiple subjects if the timings do not clash. Please send/submit separate application (including Demand Draft) for each subject.

Last date for receiving applications for Hall Tickets: October 20, 2013.

Last date for GATE Score based applications in Systems Science (including Communications and Applied Probability) will be two weeks after the GATE 2014 results are displayed on their website.

WALK-IN CANDIDATES: Some candidates without hall tickets may be admitted if seats are available. In this case the application fee is Rs 800/- (no waivers). Female walk-in candidates are exempted from payment of fees. Please be present at the Centre 2 hours early for Biology and 1 hour early for other subjects and bring a demand draft of Rs 800/-, 2 passport-size photos and any photo identity card.

DATE AND TIME OF NATIONWIDE ENTRANCE EXAMINATION : SUNDAY, DECEMBER 8, 2013

Physics, Chemistry, Computer & Systems Sciences and M.Sc. Wildlife Biology & Conservation: 9:30 a.m. to 12:30 p.m.

Mathematics and Biology (JGEEBILS) : 2:30 p.m. to 4:30 p.m