

TATA INSTITUTE OF FUNDAMENTAL RESEARCH

(A Deemed University)

Homi Bhabha Road, Colaba, Mumbai 400005.

Phone: (022) 2278 2875/2629/2241 Fax: (022) 2280 4555/2278 2610/2611 Website: <http://univ.tifr.res.in> Email: gsch@tifr.res.in

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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 PH.D. PROGRAM IN MATHEMATICS (BENGALURU), PHYSICS AND BIOLOGY; M.SC. PROGRAM IN BIOLOGY

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

SUBJECTS: ★ Mathematics (Ph.D. and I-Ph.D. programs):
● School of Mathematics, Mumbai (<http://www.math.tifr.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.tifr.res.in/~sbp>). ● National Centre for Radio Astrophysics (NCRA), Pune (<http://ncra.tifr.res.in>). ● TIFR Centre for Interdisciplinary Sciences (TCIS), Hyderabad (<http://www.tifrh.res.in>): only Ph.D. program. ● International Centre for Theoretical Sciences (ICTS), Bengaluru (<http://www.icts.res.in>): only Ph.D. program in theoretical sciences. ★ **Chemistry (Ph.D. program):** ● Department of Chemical Sciences, Mumbai (<http://www.tifr.res.in/~dcs>). ● TIFR Centre for Interdisciplinary Sciences (TCIS), Hyderabad (<http://www.tifrh.res.in>). ★ **Biology (Ph.D., I-Ph.D. and M.Sc. programs):** ● Department of Biological Sciences, Mumbai (<http://www.tifr.res.in/~dbs>). ● National Centre for Biological Sciences (NCBS), Bengaluru (<http://www.ncbs.res.in>): Only Ph.D. and I-Ph.D. program. ● TIFR Centre for Interdisciplinary Sciences (TCIS), Hyderabad (<http://www.tifrh.res.in>): only Ph.D. program. ★ **Computer & Systems Sciences (Ph.D. program) including Communications and Math. Finance:** School of Technology & Computer Science (STCS), Mumbai (<http://www.tcs.tifr.res.in>). ★ **Science Education (Ph.D.):** Homi Bhabha Centre for Science Education (HBCSE), Mumbai. For admission procedure, see <http://www.hbcse.tifr.res.in>

GRADUATE SCHOOL (GS-2013): The academic year starts from August 1, 2013. **Stipend:** Ph.D. and Integrated Ph.D. students receive a monthly scholarship of Rs 16,000/- enhanced to Rs 18,000/- after registration. M.Sc. students receive a monthly scholarship of Rs 12000/-.

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. ● 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, M.Sc./B.Tech. (not in Physics/Engg. Physics). ● For Ph.D. program in TCIS: M.Sc. in Physics, Chemistry or Biology; B.Tech.(Engg. Physics). ● For Ph.D. program in ICTS: M.Sc. in Physics, Chemistry, Biology or Mathematics; B.Tech.(Engg. Physics).

★ **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 Ph.D. program in TCIS, M.Sc. in Physics, Chemistry or Biology.

The TIFR Nationwide Entrance Examination (GS2013) for Biology is also called the Joint Graduate Entrance Examination for Biology and Interdisciplinary Life Sciences (JGEEBILS). **Participating Institutions:** Centre for Cellular and Molecular Biology, Hyderabad (<http://www.ccm.b.res.in>), Centre for DNA Fingerprinting and Diagnostics, Hyderabad (<http://www.cdfd.org.in>), National Brain Research Centre, Manesar (<http://www.nbrc.ac.in>), National Centre for Biological Sciences, Bengaluru (<http://www.ncbs.res.in>), National Centre for Cell Science, Pune (<http://www.nccs.res.in>), Department of Biological Sciences, TIFR, Mumbai (<http://www.tifr.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 Math. Finance): For Ph.D.: B.E./B.Tech. / M.E. / M.Tech. / M.C.A. / M.Sc. degree holders 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 by fulfilling prescribed requirements (see <http://www.tifr.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 9, 2012 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, Visakhapatnam.

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

GATE score based applications in Systems Science (including Communications and Math. Finance): Students with exceptional performance in GATE examination of 2012/2013 in Electrical, Electronics and Communications Engineering 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, 2013. Last date for applying will be March 25, 2013. In case a student takes the 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.tifr.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-2013 (Subject). All others to 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:** 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:** Admissions Section, National Centre for Biological Sciences, TIFR, GKVK, Bellary Road, Bengaluru 560065. Enquiries to phd@ncbs.res.in or call 080-23666404. ● **For all other subjects:** University Cell, Tata Institute of Fundamental Research, Homi Bhabha Road, Colaba, Mumbai 400005. Enquiries to gsch@tifr.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 26, 2012.

Last date for GATE Score based applications in Systems Science (including Communications and Math. Finance): March 25, 2013.

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). 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 9, 2012

Physics, Chemistry, Computer & Systems Sciences: 9:30 a.m. to 12:30 p.m.

Mathematics and Biology: 2:30 p.m. to 4:30 p.m.