# PhD Handbook

**IIT Bombay**

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Compiled by



Team RSF 2007-08
Research Scholars' Forum
IIT Bombay, Mumbai

# Disclaimer

Though the Team RSF has taken enough care while compiling the handbook, neither the Team RSF, nor the Institute, can be held responsible for errors/ inadequacies that may inadvertently creep in. This handbook can not be used as a basis for making a claim on facilities/ concessions/ interpretation of rules/ statutes or the like. If there is some critical information to which a reader of this handbook refers, it is with his or her own responsibility that it is put to use, with cross verification if need be.

# Foreword

It gives me great pleasure and satisfaction to see this PhD Handbook take shape. We have always believed, as an institution, that the students in the Doctoral programme of IIT Bombay are very precious to us. They are the foundation, in the student community, of the Research and Developmental Activities of the Institute. They are the mature leaders among the student community, on whom rests the onus of setting an example of academic dedication, enthusiasm and scholarship. Even so, the PhD programme is always more of an individual endeavour - and therefore it is best that all possible means be worked out to bring the PhD students together and work together, for their common good, at least in some dimensions of their life at IIT Bombay and beyond.

This handbook is one step towards encouraging all PhD students to come together, and share the responsibility of making their student experience at IIT Bombay a very pleasant and memorable one. It may kindly be noted that this is a handbook "of the PhD student, by the PhD student, for the PhD student", to adapt a popular phrase ! One assumes that those who compile this handbook, and continue to update it with new information and evolving changes, do their very best in being accurate and providing authentic information and data. However, neither the authors, nor the Institute, can be held responsible for errors/ inadequacies that may inadvertently creep in. In particular, for example, this handbook should not be used as a basis for making a claim on facilities/ concessions/ interpretation of rules/ statutes or the like. If there is some critical information to which a reader of this handbook refers, it is with his or her own responsibility that it is put to use, with cross verification if need be. None of its creators and facilitators should be thought of as sharing the responsibility.

Notwithstanding this little official note of warning and caution, there is every reason to congratulate the Research Scholars' Forum for having made this handbook possible. It is done beautifully in its first version, and can only become better with time ! It must continue to be updated every semester, or at least every academic year, to reflect the latest in the life of a PhD student at IIT Bombay. On behalf of the Postgraduate Academic Performance Evaluation Committee (PGAPEC), we wish all PhD students a very pleasant, memorable and fruitful student experience at IIT Bombay !


Prof. V. M. Gadre
Convenor, PGAPEC

# Preface

The PhD Handbook is a significant milestone as it records a steady upgradation in the value of research activities, infrastructures and other facilities available to all research scholars during their tenure at IIT Bombay. The handbook is meant for **Us** and is **For**, **Of** and **By** research scholars. It compiles information, important data with the vision of simplifying the academic process for any research scholar. There are many major issues like approaching for administrative help, financial help and related queries which have been particularly addressed in the handbook. It is designed for every individual who is grappling with the research process in IIT Bombay.

The PhD handbook is not a one individual endeavor. It is the result of the undying effort of the entire Research Scholars' Forum (RSF) and a vision of a year and a half. The PhD Handbook was an initiation of the Team RSF (2006-07) lead by Sushant Sharma, RSF Coordinator (2006-07). A rough sketch of the handbook was drafted during Nov 2006 and was shown to Prof. V. M. Gadre and other Professors in the PGAPEC meeting. With their encouraging words, the current RSF team lead by Hemant Rath, RSF Coordinator (2007-08) started working on Mission "PhD Handbook" with great zeal. A google group was created in June 2007 and Team RSF (2007-08) began pouring their inputs into various sections of the handbook. Finally it was converted from google document to LATEX by Amey Karkare (PG Nominee Acad and Adviser RSF). The draft version was circulated among many people (including Professors) for their feedback and ultimately it saw the light of the day in print. "PhD Handbook, IIT Bombay" was released by Prof. Ashok Misra, Director IIT Bombay on 3rd September, 2007.

The handbook is a dream of the collective. Every individual in Team RSF has put some effort in making this dream come true. The aim was simple: *enabling research to be hassle free and to make relevant information accessible to research scholars without complexities and confusion*. The information given in this handbook are subject to changes with policy changes of the institute and other concerned organizations. It is an initiation process, and we hope the tempo is kept alive by the future RSF Teams. Right from designing the cover pages, to blurb and preface writing, to the sections and subsections of the handbook, to "LATEXing" it, etc; everything has been executed by research scholars with an unparalleled enthusiasm. The handbook is a witness to the strength of research scholars when they decide to unite in order to achieve a goal, finding time from their individual research for a collective good.

The Team RSF sincerely hopes that you enjoy your journey into the alleys of research during your stay at IIT Bombay.

Wishing you success and luck in Ph.D.

Team RSF (2007-08)

# Contents

# 1 Academic Information

## 1.1 First Year at IITB

- **Joining the Department:** Research scholars have to sign the joining form available in the "kit" and submit the same in the department office.

- **Registration for Courses:**. Research scholars should register for the required number of courses and seminar(s) after consulting their faculty advisers or guides. Successful completion of two courses and a seminar is a pre-requisite for registration for Ph.D. program. However some departments, for example, Electrical Engineering, Computer Science and Engineering, have their own norm for minimum course work, namely four courses and a credit seminar.

- **Communication Skills (HS 699):** This is a four credit, pass/fail (PP/NP) course that is to be taken in the first semester of joining the Ph.D. program. This course is compulsory for all research scholars.

  Students who join the Engineering stream for Ph.D. after completing B.Tech./B.E./M.Sc. have to fulfill different criteria for the course work before registering for Ph.D. Detailed information about the minimum credit requirement for such students can be found in Ph.D. rulebook.

- **Registration for Ph.D.:** After successful completion of course work, students are eligible for registering for Ph.D. program. The registration form should be submitted to the department office with guide's signature. The registration form contains the the research topic and the list of Research Progress Committee (RPC) members for review of annual progress seminars and thesis.

## 1.2 Annual Progress Seminar

Every 12 months after joining the Ph.D. program, a Ph.D. student must present an Annual Progress Seminar (APS) to the Research Progress Committee (RPC) describing the work that has been carried out throughout the past year. The APS is usually presented in August/January depending on the semester (Autumn/Spring) of joining the Ph.D. program. Some departments have different rules about the date of progress seminars. For example, the last date of presenting progress seminars in Mechanical Engineering is 31st July/31st December. In Chemical Engineering, a research scholar has to present a progress seminar every six months after first year of the Ph.D.

In the first APS, a generic list of points that are to be covered are as follows:

1. Literature survey

2. Problem definition

3. Date of Joining the Ph.D. program

4. Paper published, if any

In the second and third APS, a generic list of points that are to be covered are as follows:

1. Problem definition

2. Work done so far

3. Preliminary/Secondary data collection and results obtained

4. Papers published, if any

## 1.3 Presynopsis

Prior to submission of Ph.D. thesis and synopsis, a comprehensive internal assessment of the research work is made in the presynopsis seminar. All the work that is carried out by a research scholar during his/her Ph.D. is examined and only after the permission of the RPC, one is allowed to submit the thesis and synopsis within four months from the date of presynopsis seminar.

Presynopsis is different from annual progress seminars, because in each APS, one can show the work that is done in the previous one academic year, whereas in presynopsis seminar, one has to compile the work and show it in complete totality. Presynopsis seminar can be considered as rehearsal for your Ph.D. defense.

## 1.4 Thesis Submission

After presenting the presynopsis seminar and incorporating the changes that are suggested by RPC members, one submits the final thesis and synopsis with multiple copies in department office. Before submitting the thesis, the RS has to get clearances from hospital, department, accounts section and hostel.

## 1.5 Defense

After the Ph.D. thesis is reviewed by referees (both from India and abroad) and approved, your Ph.D. adviser (guide) arranges for the Ph.D. defense (viva voce). Ideally, the Ph.D. defense should occur within 6 months of submitting the thesis. This is an open seminar (lasting 60-90 minutes) and you are supposed to defend your work and answer the queries that are raised by examiners and audience.

One should submit the thesis after incorporating the corrections that are sent by the referees and then submit the thesis. You have to submit 4 copies of the thesis to the department, central library, adviser and yourself! Abstract needs to be submitted to the library as well as one is required to submit an electronic copy of thesis to central library using Electronic Theses and Dissertations (ETD) submission link on library webpage `http://www.library.iitb.ac.in/`

A very good documentation about the what to do from presynposis to defense can be found on RSF webpage:
`http://gymkhana.iitb.ac.in/~rsf` The same website can also be accessed as:
`http://www.researchscholarsforum.org/`

# 2   Job Related Information

After graduation, a Ph.D. student (research scholar) has several career options:

- Job in a public/private sector company

- Post Doctoral Fellowship (PDF) abroad or in India

- Teaching in a government/private institution

- Entrepreneurship (starting his/her own company)

## 2.1   Job in a Public/Private Sector Company

A Research Scholar (RS) applies for jobs either via the placement office in the IIT Bombay campus ("on campus") or by forwarding his/her resume to his/her contacts in industry ("off campus").

An RS who is in the final stages of his/her work is eligible for campus placements. All campus placements are handled by the Placement Office, $4^{th}$ floor, Gulmohar Building, IIT Bombay. The placement office comprises the Professor in charge - Placements, placement office staff, institute placement nominees and department placement nominees. The placement season usually begins in the month of December in the current academic year and goes on till the month of June.

Only research scholars who are in the Teaching Assistant (TA), Research Assistant (RA), Project Staff (PS), Fellowship Categories and Full Time Self Financed category are eligible for placements, since research scholars from other categories (Sponsored, QIP, DRDO, Army/Navy/Air Force) usually have to work for their employer after their Ph.D. program. It is recommended that a research scholar can apply for placements for a maximum of two placement seasons (two years).

Usually, a prospective employer hires a research scholar for a Research & Development (R&D) position. It is advisable to prepare your resume carefully clearly indicating the abstract of your thesis, publications, patents, talks and TA/RA/PS responsibilities. After examining the resumes carefully, a company shortlists candidates for a written test, followed by group discussion and few rounds of interviews (both technical and non-technical). You may also be called to appear for the interview at the company's office (outside Bombay).

The following students are responsible for handling the placements of research scholars:

- Institute Ph.D. placement nominee

- Ph.D. placement representative for Sciences

- Ph.D. placement representative for Engineering

- Ph.D. placement representative for Inter Disciplinary Programs (IDPs)

For more information, visit: `http://placements.iitb.ac.in/`
Email: `placementcell@iitb.ac.in`

## 2.2 The Entrepreneurial Spirit

A research scholar who obtains good results after in-depth research for 4-6 years should also consider starting his/her own company ("be your own boss"). The Society for INnovation and Entrepreneurship (SINE) administers a business incubator which provides support for technology based entrepreneurship at IIT Bombay. SINE extends the role of IIT Bombay by facilitating the conversion of research activity into entrepreneurial ventures. The SINE office is located in the $3^{rd}$ floor of CSRE building, IIT Bombay.

For more details, visit: `http://www.sineiitb.org/`

Email: `sine@sineiitb.org`

## 2.3 Post Doctoral Fellowship

After graduation, a research scholar can be employed by a university abroad (usually USA or Europe) or in India for a fixed duration of time, usually between 1 and 3 years – this is termed as Post Doctoral Fellowship (PDF). The duties of a post doctoral researcher include performing active research in collaboration with his/her employer (a professor or a researcher), guiding doctoral/masters students and also taking lectures. A research scholar whose ambition is to be a professor in a reputed institute should definitely consider an intermediate post doctoral fellowship option.

A research scholar can apply for post-doctoral fellowship directly by emailing his resume to the appropriate professor, who will then take the process (request recommendation letters, list of publications) forward.

Another method is to directly apply to a foundation which supports international fellowships. The following foundations support international fellowships:

1. Alexander von Humboldt Foundation: For details, visit
   `http://www.humboldt-foundation.de/en/`

2. Max Planck Institutes: For details, visit `http://www.mpg.de/english/`

## 2.4 Teaching in a Government/Private Institution

After defending his/her Ph.D. thesis, a research scholar can directly apply for a teaching post (assistant professor, associate professor) at a reputed institute in India. The following institutes/organizations are actively seeking candidates with doctoral degrees for teaching positions:

1. Indian Institutes of Technology (IIT) at Bombay, Madras, Kanpur, Delhi, Kharagpur, Guwahati and Roorkee.

2. National Institutes of Technology (NIT).

3. All India Council for Technical Education (AICTE).

4. Indian Institutes of Information Technology (IIIT) at Hyderabad, Pune, Allahabad, Bangalore, Gwalior, Kerala and Jabalpur.

For more details, contact the Head of Department of the institution in which you are interested.

# 3    Scholarships and Fellowships

## 3.1    Categories of Ph.D. Candidates

IIT Bombay admits Ph.D. candidates under the following categories:

### 3.1.1    Full-time Research Scholar

1. *Institute Research Scholars with Teaching Assistantship (TA)*
   Students under this category are entitled for Institute Teaching Assistantship (Refer to Item No. 9 of Ph.D. brochure for financial support).

2. *Government / Semi Government Fellowship Awardees (QIP, CSIR, UGC, DAE, DST, DBT, NBHM)*
   These candidates are financially supported under various Government / Semi Government schemes. The admission procedure and other requirements are same as applicable to Institute Research Scholars.

3. *Sponsored candidates*
   These candidates are sponsored by recognized R&D organization for doing research work in the institute on a full time basis. Candidates are expected to be released for full time research work at the institute for a minimum period of three years. They will not receive any financial support from the institute. Sponsorship letter (Appendix I) should be attached to the application form.

4. *Self Financed (Indian)*
   This category refers to Ph.D. candidates with work experience and with good research / industry track record to join the doctoral program. They are admitted along with the regular research students through the usual admission procedure but they would not get any financial support from the institute. If admitted, these students have to complete their program without any financial support from the institute.

5. *Self Financed (Foreign)*
   These students are admitted through Embassy of the government of a foreign country after obtaining approval from the Ministry of External Affairs and No Objection Certificate from Ministry of Human Resources Development, Department of Education, Govt. of India.

6. *Study Leave*
   This category refers to candidates who are released from governmental or educational institutions on study leave for a period not less than three years for doing research work at the institute. Employer's letter (Appendix II) should be produced at the time of joining, if selected.

7. *Indian Council for Cultural Relations (ICCR) Awardees (Foreign Students)*
   These students are sponsored by their respective governments and awarded scholarship by them. They should apply for admission through the Indian Embassy in their country.

### 3.1.2  Part-time Research Scholar

1. *Institute Faculty / Staff (IS)*
   This category refers to Ph.D. candidates who are permanent employees of the institute with more than 2 years of service remaining before their retirement.

2. *Project Staff (PS)*
   This category refers to candidates who are working on various projects undertaken by the institute and admitted to the Ph.D. program, if the duration of the project at the time of admission is around 3 years.

3. *Research Assistants (RA)*
   Depending upon the requirements, each Department / Centre / School may induct one Research Assistant every year. Students under this category are entitled for Institute Research Assistantship (Refer to Item No. 9 for financial support).

4. *Sponsored External candidates (EX)*
   After fulfilling one semester (M.Tech. / M.E. / equivalent) or two semesters (B.E. / B.Tech. / M.Sc. or equivalent) of residential requirement at the Institute, these candidates will be allowed to register for Ph.D. with a supervisor from the Institute (Internal) and other from their parent organization (External) where they will be doing the research work. Sponsorship certificate from the organization must be attached to the application form.

5. *College Teachers (CT) /Candidates from Educational Institutes*
   They carry out research work during weekends, holidays and vacations, at IIT Bombay. After fulfilling one (M.Tech. / M.E. / equivalent) or two semesters (B.E. / B.Tech. / M.Sc. or equivalent) of residential requirement at the institute, these candidates will be allowed to register for Ph.D. with a supervisor from the institute (Internal) and other from their parent organization (External) which is optional based on recommendations of the supervisor and respective DPGC / IDPC / PGC. Sponsoring certificate from the organization (Appendix III) must be attached to the application form. Candidates admitted under this category will be treated at par with Self Finance category as far as payment of fees and deposits are concerned.

   Place of work will be IIT Bombay even though the candidate may be carrying out part of work at their college/institute. These candidates are required to be available to the supervisor (Internal) during weekends, holidays and vacations.

## 3.2  Scholarship/Fellowships

### 3.2.1  Institute Teaching Assistantship (TA)

- Those students having B.E. / B.Tech. / B.Arch. / M.Phil. / B.Sc.(Engg)/ M.Sc. / M.A. / M.Com. or equivalent and who have either a valid GATE or National Level test / UGC / CSIR / NBHM / DBT etc. (Junior Research Fellowship) will be considered for monthly assistantship of Rs. 8,000 p.m. for first 2 years and at an enhanced rate of Rs. 9,000 p.m. for remaining 3 years.

- Those students having M.Tech. / M.E. / M.Arch / M.Sc.(Engg) or equivalent / M.B.B.S. / M.D. / M.S. and Management students with M.B.A. qualification with Engineering / Technical background will be considered for monthly assistantships of Rs. 9,500 p.m. for first 2 years and at an enhanced rate of Rs. 10,000 p.m. for remaining two years.

- Management students with M.B.A. qualification with Science / Commerce background will be considered for monthly assistantships of Rs. 8,000 p.m. for first 2 years and at enhanced rate of Rs. 9,000 p.m. for remaining three years.

- The assistantship is payable for maximum period of 5 years for candidates with B.E./ B.Tech./ M.Sc. as qualifying degree & maximum period of 4 years for candidates with M.E. / M.Tech. / M.S. as qualifying degree or date of submission of thesis, whichever is earlier.

- The above assistantship requires that the students must assist in teaching or research, as assigned by the institute, to the extent of 8 hours of work per week.

- The continuation of the assistantship (TA/RA) will be subject to satisfactory performance of the duties assigned by the Department / Centre / School as well as satisfactory academic performance.

- As per MHRD directives, the employees of any organization undergoing Ph.D. / Post Graduate Programs by availing study leave with or without pay are not eligible for Teaching/Research Assistantships. Such candidates, if found suitable, will have to complete their program as Self Finance / Sponsored full time or part time, as the case may be.

- Students getting assistantships (TA/RA) from the Institute can join projects sponsored by external agencies like Aeronautics Research & Development Board (ARDB), Department of Science & Technology (DST) and Council for Scientific & Industrial Research (CSIR), and obtain corresponding fellowships in lieu of TA/RA ship.

Above scholarship/fellowship amount are under revision by the concerned agencies viz., MHRD/CSIR/UGC etc.

### 3.2.2 Research Assistants (RA)

- Students with B.E. / B.Tech. / M.Sc. or equivalent qualification and valid GATE / CSIR / UGC / NBHM / DBT (Junior Research Fellowship) offer will only be considered for research assistantship.

- The amount of monthly assistantship for students who have B.E./ B.Tech./ M.Sc. or equivalent qualifications: Rs. 10,000 p.m. for first two years and Rs. 11,000 p.m. for next three years. The amount of assistantship for students who have M.E./ M.Tech. or equivalent qualification: Rs. 11,500 p.m. for first two years & Rs. 12,000 p.m. for next three years.

- The assistantship is payable for maximum period of 5 years (irrespective of qualifying degree) or date of submission of thesis, whichever is earlier.

- These research assistants have to maintain/supervise the laboratories and also assist in teaching or research or other work assigned by the Head of the Department / Centre / School or Convener IDPC. They are required to work for about 16 -20 hours a week. They have to complete the Ph.D. program in five years.

- The continuation of the assistantship (TA/RA) will be subject to satisfactory performance of the duties assigned by the Department / Centre / School as well as satisfactory academic performance.

- As per MHRD directives, the employees of any organization undergoing Ph.D. / Post Graduate Programs by availing study leave with or without pay are not eligible for Teaching / Research Assistantships. Such candidates, if found suitable, will have to complete their program as Self Finance / Sponsored full time or part time, as the case may be.

- Students getting assistantships (TA/RA) from the Institute can join projects sponsored by external agencies like Aeronautics Research & Development Board (ARDB), Department of Science & Technology (DST) and Council for Scientific & Industrial Research (CSIR), and obtain corresponding fellowships in lieu of TA/RA ship.

Above scholarship/fellowship amounts are under revision by the concerned agencies viz., MHRD/CSIR/UGC etc.

### 3.2.3  National Doctoral Fellowship (NDF)

- All India Council for Technical Education (AICTE) offers 50 scholarships per year.

- Amount of scholarship is Rs. 12,000 p.m. for 3 years and is extended to one more year after MHRD approval. Contingency grant of Rs. 25,000 p.a. is also provided.

- Overhead charges of Rs. 20,000 p.a. is provided per candidate to the host institution, i.e., institution where the candidate will be pursuing Ph.D./Doctoral Program.

- Eligibility: The candidate should be less then 35 years of age. However age relaxation of 5 years would be given to candidates belonging to SC/ST, Women & Physically challenged categories. The candidate must have secured admission on or after $1^{st}$ September (refer to advertisement for exact details) during the academic year as a full time candidate and be in the first year of his/her doctoral program.

- Selection is based on the performance of the candidates in the interview conducted by AICTE at New Delhi.

  For details, visit `http://www.aicte.ernet.in/national_doc.htm`

### 3.2.4  Other Scholarships/Fellowships

**Ph.D. Program offered jointly by IIT Bombay and Monash University**

- Starting in 2007, applicants to Ph.D. program at IIT Bombay will also have an opportunity to opt for a co-badged Ph.D. Program offered jointly by IIT Bombay and Monash University, Australia. Exceptional students will be enrolled at both the institutions and they will have at least two supervisors, one in each Institute.

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- The student admitted in IIT Bombay will be governed by the rules and regulations of the Senate of the Institute. The scholarship will be paid by the Monash University. The joint Ph.D. program will initially apply to the Engineering and Science disciplines.

- Candidates selected for the joint Ph.D. program will be required to spend a minimum of 3 months for research work in Australia after they have completed the required course work at IIT Bombay and the first Annual Progress Seminar report formalities of the program.

- Scholarship support will be available for the IITB-Monash Ph.D. scholars for a maximum of 4 years in the program. English language proficiency is an additional requirement of this program.

- Since this is the first year of the program, the co-badged program will be available only in select areas of research which will be announced at the time of selection for Ph.D.

**Microsoft Research Fellowship**

- For each academic year, Microsoft Research India will award five Ph.D. Fellowship awards (maximum of one per institution). Each award will amount to USD 25,000 to be disbursed over a period of 4 years (that is, the equivalent of approximately USD 5000.00 per year for tuition, books, stipends, and/or any other expenses, plus the equivalent of an additional USD 5000.00 for travel to conferences and seminars during the term of the Fellowship). In addition, the Fellow will have the option of a 3 to 6 month internship at Microsoft Research India, the terms of which will be decided at the discretion of Microsoft Research India.

- The provisions of the award, eligibility criteria and application process are discussed with the university that the Fellow will be enrolled in. Nominations for the Microsoft Research India Ph.D. Fellowships are invited from select schools in India from the Mathematics, Computer Science/Engineering and Electrical Engineering departments at your university (a maximum of two nominations per department).

  For details, visit
  `http://research.microsoft.com/aboutmsr/jobs/fellowships/apply_india.aspx`

### 3.2.5 Department Specific Scholarships/Fellowships

**Department of Metallurgical Engineering & Materials Science**
Few fellowships (stipend Rs. 14,000 p.m.) are also available in the department of Metallurgical Engineering & Materials Science, sponsored by the International Advanced Research Centre for Powder Metallurgy & New Materials.

**Department of Electrical Engineering**
One fellowship for two years and two fellowships for one year duration are provided with amount of Rs. 15,000 p.m. (+ Travel + Contingency + Book Grant) by Phillips India. Microsoft Research Fellowship is also available to Electrical Engineering RSs as discussed earlier.

**Shailesh J. Mehta School of Management**

Few Shailesh J. Mehta School of Management (SJMSOM) Endowment Fund Scholarships are provided up to four years with an amount of Rs. 10,000 p.m. to full-time Ph.D. students of SJMSOM who have CPI of 8.0 or above during the coursework.

For details of all scholarships available, visit:
`http://www.iitb.ac.in/academic/All_scholarship_details.pdf`

# 4   Publications & Travel Assistance

Prior to the submission of the synopsis and thesis, the following requirements students must have (Ref. $177^{th}$ Meeting at the Senate held on $19^{th}$ October 2005):

> At least two papers published/accepted for publication in refereed journals of repute, or, at least one paper published/accepted for publication in a refereed journal of repute and at least one paper published/accepted for publication in the proceedings of an international conference.

The concerned Post Graduate Committees (PGCs) will be the authority to decide upon the quality of journal and standard of publications and its equivalence. The list of reputed journals and conferences are usually available in the office in each department.

## 4.1   Travel Funding

IIT Bombay encourages research scholars to attend national and international conferences / workshops / seminars by providing partial / full funding. Funding is also available for the registration fees of conferences. For details of institute funding, visit:
`http://www.iitb.ac.in/academic/International_Conferences.pdf.`
The necessary forms and instructions are available at the website. One can also approach to Dean R&D for travel grants. For details visit IRCC website:
`http://www.ircc.iitb.ac.in/.`
The details of funding schemes available for research scholars for attending conferences are described in the following subsections.

### 4.1.1   National Conferences

- For national conferences, the students need to apply to Dean Academic Programs (Dean AP), with the approval of their thesis adviser and Head of Department (HoD). One can obtain funding for more than one conference / workshop / seminar per year.

- Students can also avail travel assistance from the department development fund. For this, they have to contact the Head of Department (HoD) of the concerned department.

### 4.1.2 International Conferences

- For international conferences, one can avail funding from IIT Bombay once in the first three years of his/her Ph.D.. Funding for a second time and in the $4^{th}$ year of the Ph.D. program is possible only if the student has a journal publication in the first three years of his/her research. The exact details of the application process along with the necessary documents are available on:
  http://www.iitb.ac.in/academic/finalAsstWeb/financialAsst.htm.

- Other than IIT Bombay, various other funding agencies, namely, CSIR, INSA, DST, IARCS and J.N. Tata Memorial Trust can be approached for international travel grant.

- Students can also avail travel assistance from the department development fund. For this, they have to contact the HoD of the respective department.

- Research scholars who have been awarded fellowships, from say, IBM, Infosys, Philips India or Microsoft Research India, can avail the travel grants available to them in the fellowship scheme.

### 4.1.3 Journals

As per the discussion and assurance of Dean R&D and Deputy Director in the RS Open Session held in the academic year 2005-06, if required, IRCC will pay the fees for journal publication.

## 4.2 Other Funding Agencies for International Travel

1. Department of Science and Technology (DST)
   http://www.serc-dst.org/application_for_travel_support.htm

2. Council of Scientific and Industrial Research (CSIR)
   http://csirhrdg.res.in/es_fore_tra.htm

3. Indian Association for Research in Computing Sciences (IARCS)
   http://www.iarcs.org.in/activities/grants.php

4. Indian National Science Academy (INSA)
   http://www.insaindia.org/download%20form/download.htm

5. Sir Dorabji Tata Trust
   http://www.dorabjitatatrust.org/ind_grants/ind_ietg.asp

6. Mahindra Trust
   http://www.mahindra.com/socialinitiatives/socialinit_education_
   kcmtrust_encouraging_students.htm

7. Private Companies (like Infosys, IBM and TCS). One has to apply to the university relations / HR section of the respective companies.

**Note:** All necessary forms for the funding agencies are available at the RSF website:
`http://gymkhana.iitb.ac.in/~rsf`

## 4.3 International Travel/Visa/Financial Assistance Tips

Make sure that your passport is ready with ECNR (Emigration Check Not Required) stamp. While applying for visa, one needs to fill up the form with confidence and correct information. The following are important documents that you should keep ready before applying for any financial assistance and/or visa:

1. An invitation letter from the organizer

2. A visa assistance letter from the organizer

3. A copy of your paper

4. A copy of the call for papers of the conference

5. A copy of the list showing your talk/paper

6. No objection certificate from Dean AP/ HoD

7. Some countries, esp. USA, UK, require details of funding during the visa interview. You should have a confirmation letter showing adequate assistance for the travel from any organization during the interview.

8. Some European countries require police verification before granting any visa. Since police verification is a tedious process and is time consuming, one should keep enough time in hand for the visa process.

9. It is better to have a proper travel plan before the visa interview. Tentative booking of air tickets is also advisable before the interview.

10. If you are applying government funding agencies like DST, CSIR, INSA, etc., make sure to submit a travel plan from Air India for the flight fare in Air India and associated flights.

11. For the visa interview, you should reach in time with all necessary documents. There is no need to panic during the interview. Sensitive terms like "bio", "nuclear", etc., should be avoided to speed up the visa process. Before answering the queries/questions, you should carefully and patiently "listen" to the questions.

It is better to travel with an International Credit Card to avoid hassle in payments (in most of the western countries). Before going abroad, one should obtain an insurance policy (medical, travel, baggage) for the travel period.

# 5   Accommodation

## 5.1   Hostels

Hostels at IIT Bombay are one of the best hostels around to stay in. They double up as living and refreshing place for all students. For details of hostels, visit:
`http://www.iitb.ac.in/students/hostels.html`

**Allotment of Hostel**

1. Students desirous of hostel accommodation can tick the hostel required column in application form of admission to the institute. They would be directly allotted a hostel.

2. Students who have not mentioned hostel accommodation in application form, but are desirous of getting hostel at any stage during their Ph.D. program, can contact Hostel Coordination Unit (HCU, contact number 8900). You may give your preference for a particular hostel. However, it may not always be possible to allot you the preference.

**Hostel Fees**
Students desiring hostel accommodation have to pay fees every semester for

- Hostel rent (included in the semester fees).

- One time refundable security deposit.

- Mess advance.

**Hostel Management**
Each hostel has an administrative body which includes the warden, assistant warden, hall manager and mess manager. Almost all day to day hostel matters are sorted out and managed by the students. The students' body is composed of the general secretary, council members and secretaries. They are available to address the problems of students.

**Hostel Facilities**
The hostels are well equipped with various facilities. The rules governing the use of these facilities vary from hostel to hostel and can be obtained from the hostel council.

- *Hostel mess:* Food is given four times a day: breakfast, lunch, tiffin and dinner. The food menu varies from hostel to hostel.

- *TV room:* Common TV room with cable connection, large TV screen and high volume sound system is available in each hostel, and can be used anytime round the clock.

- *Computer Room:* State of the art computer room with high speed Internet access, headphones, speakers etc. is available in each hostel. It can be accessed 24 hours a day.

- *STD/PCO, Xerox/Printer:* Open till late night, can really be a lifeline during exams and project submission days. Photocopying and printing is done at nominal charges with discounts on bulk order.

- *Canteen:* Apart from hostel mess, a separate canteen is present in each hostel to care for your late night hunger pangs. They remain open till the wee hours of the night catering to most of the food items one can think of.

- *Gymkhana:* Equipped with most equipments, its a busy place for all health freaks.

- *Hostel Library:* Each hostel has a good collection of books which can be issued for a prescribed period. The days and timings for book issue vary form hostel to hostel.Apart from books, newspapers and magazines in different languages are also available.

- *Sports Equipment:* Equipments for various games and sport activities, e.g., cricket, football, basketball, hockey, volleyball, badminton, carrom and chess are available in hostels. These can be borrowed against one's identity card.

## 5.2   Tulsi and Type -1 Quarters

These quarters are given only to married research scholars for staying with their spouse and children.

- **Allotment:** The quarters are allotted by Hostel Coordination Unit (HCU) on first come first serve basis. Those who are unable to get at first attempt are placed in waiting list and get accommodation as and when vacancy arises. The allotment is done after application in prescribed form at HCU.

- **Charges:** The charges include house rent, water, electricity charges etc. These charges have to be paid every month and are termed as Estate office bills. These will be dispatched every month to the concerned department where the research scholar can collect the same.

- **Duration of Stay:** The quarters are allotted for maximum period of three years. Two extensions of three months each may be given after that.

## 5.3   QIP Quarters

Quality Improvement Program (QIP) aims upgrading the expertise and capabilities of the faculty members of the degree-level institutions in the country by allowing them to pursue their further studies in various departments of IIT Bombay.
Contact number of QIP Office - 25767048
Email: `amoharir@iitb.ac.in`, `qip@iitb.ac.in`
The accommodation information is available at
`http://www.ee.iitb.ac.in/uma/~manojcr/GHrules.pdf`
QIP also has a forum for research scholars which extends all possible help to make the stay of students comfortable. The website for QIP forum is:
`http://www.ee.iitb.ac.in/uma/~manojcr/qipforum.html`

# 6   Students' Activity Center (SAC) Activities

## 6.1   Cultural Activities

The institute provides excellent facilities to promote cultural activities among students. For efficient handling of different aspects, student nominees are appointed every year. The student nominee posts include:

1. Dramatics Secretary

2. Music Secretary

3. Dance Secretary

4. Literary Arts Secretary

5. Fine Arts Secretary

6. Debating Secretary

7. Photography Secretary

The institute also has various cultural associations like Tamil, Telugu, Marathi, Malayalam and Oriya cultural association which conduct year around cultural specific activities. For more details of cultural activities, visit: `http://gymkhana.iitb.ac.in/~cultural/`

## 6.2   Clubs

1. **The Quiz Club:** The oldest and best established clubs in IIT Bombay, the Quiz Club meets every Wednesday at 9:00 p.m. in the Hostel-8 lounge. Each meeting covers questions on wide variety of topics like sports, food, India, cartoons, music, history, science fiction, films and love & marriage! The Quiz Club is largely responsible for the resurgence of quizzing and other literary events in IIT Bombay. The wide exposure to trivia and the recycling of outside quizzes also helps.

2. **The Scrabble Club:** Not having firm grounds as yet, this club intends to hold workshops, fundae sessions, Scrabble based puzzles, competitions and tournaments, etc. Very soon you could hear it hit the notice boards.

3. **The Speakers' Club:** Formed just recently, this club focuses on all kinds of speaking events, debating, extempore speaking, elocution and jamming, the latter being an event in which IITB used to dominate. Other activities on the cards are in-house competitions, presentations and fundae sessions with experienced jammers.

4. **The Hobbies Club:** This club includes hobbies like electronics, astronomy, HAM radio and aeromodelling. The electronics room in SAC, accessible at any time, has the facilities and literature for students to design, experiment with and construct various electronic circuits. Even the required components are provided, free of cost. Apart from this, lectures are held every Tuesday and Thursday between 6:00 p.m. - 8:00 p.m. The HAM

club seems to have lost momentum since last year. Aeromodelling kits and equipments are being arranged for the aeromodelling club. The Astronomy club organizes periodic star-gazing sessions and field trips to places like the GMRT, IUCCA and the Nehru Planetarium. Besides star charts and other literature, the club has a 6" Newtonian reflector telescope.

5. **The Swimming Club:** The Swimming club started functioning in 1983. Since then, every year, one or more swimmers, have regularly been selected by Maharashtra, to represent the State at the Nationals. Several campus youngsters have got motivated to join, and have excelled at the sub-junior/junior level.

   The IIT Swimming club regularly holds National Sports Organization (NSO) swimming activities for students. Advanced swimming camps are held year round for swimmers showing promise. The IIT Aquatic team has made a habit of returning with the GOLD from almost all Inter IIT Aquatic meets held so far. Every year, triathlon competitions are held for IIT students and campus children. A 12-hour SWIMMATHON, is an annual event eagerly awaited and gleefully participated by IIT students and campus children. For details, visit:
   `http://www.iitb.ac.in/students/swimclub.html`

6. **The Group For Rural Activities (GRA):** This is a group of service minded people dedicated to uplifting rural India. Child education at the Phulenagar slum just outside the campus, is one of the GRA activities. The GRA also maintains a wall magazine outside the Central Library to create rural awareness. The group also holds discussions, seminars, and attends various camps regarding the NGOs and rural activities. For details, visit:
   `http://gymkhana.iitb.ac.in/~gra/dokuwiki/doku.php`
   Email: `gra@iitb.ac.in`

7. **Unnati:** For details, visit
   `http://gymkhana.iitb.ac.in/~unnati/`

## 6.3   Sports

IIT Bombay Sports encompasses recreational, training and competitive activities round the year, in various sports and games. Be it formal participation in sports/games like football, athletics, chess, basketball and cricket, or such activities as walking, jogging, cycling, mountaineering, or going to the gymnasium, you will find something to match your interests and abilities.

Student nominees are selected each year who along with sports coaches give you every input and help so that you can excel in your field. Different sports events that are organized include:

1. An Inter Hostel General Championship (GC)

2. Intra Hostel and Open events

3. For post-graduates, a PG sports event is organized every year which includes both individual and team games.

The best in the institute also get a chance to represent IIT Bombay at various local tournaments/leagues and inter-university competitions and at the Inter IIT Sports Meet. For details, visit: `http://gymkhana.iitb.ac.in/~sports/`

## 6.4   Events

1. **Mood Indigo:** IIT Bombay's annual cultural festival, Mood Indigo (Mood I, MI), is about competitions, workshops, professional performances by renowned musicians and theater personalities, aquagames, exhibitions, fashion shows, informal events – all this and a lot more. Thousands of students from hundreds of different colleges come to MI each year and set the campus afire with their zing and talent. Pt. Hari Prasad Chaurasiya, Ustad Zakir Hussain, Lucky Ali, Euphoria, Parikrama, Shankar Mahadevan and several other maestros of our time have weaved their magic on the swaying audiences of Mood Indigo. Quizzes, debates, dramas, music and fine arts competitions set up a platform for the very best amongst the youth talent to slug it out for fame and cash! Vogue, the fashion show at Mood I, has provided a break to many a budding model and designer. Mood I is one of the largest and most awaited fest in the college calendars of India. Surely you won't want to miss out on Mood Indigo!!. For details, visit: `http://www.moodi.org`

2. **Techfest**: The technological festival of IIT Bombay, Techfest, has over the years grown to become the biggest of its kind in Asia. Competitions that set the mind ablaze, Yantriki (India's largest robotics event), lectures that give you the chance to come face-to-face with those you idealize, workshops to experience the technology in your hands, exhibitions to visualize the matter that for long existed in your dreams, from movies to Sci-tech Olympiad to demos, documentaries and things that seemed real only for the dreamers, Techfest has seen and presented everything that is branded as technology. For details, visit: `http://www.techfest.org`

3. **PAF:** Every year in March, we hold a Performing Arts Festival (PAF). PAF is a mega inter-hostel event. During PAF, the legendary hostel spirit about which we talked earlier, will flare you up.

4. **SPIC-MACAY:** The Society for Promotion of Indian Classical Music and Culture among Youth (SPIC-MACAY) is very active on the campus. If you are a classical music fan, get in touch with any of the SPIC-MACAY crowd.

5. **Technical General Championships (Tech GC):** Tech GC provides a competitive environment among the hostels and also provides an opportunity for the students to improve their technical skills. Competitions in Tech GC include Yantriki, Last straw, Aeromodelling workshop, Maths Olympiad, Techfest Competitions and Computer Science programming contest.

## 6.5   Institute Magazines

The institute publishes various magazines, both hard copies and soft copies. Magazines like Campus Diary, R&D Spectrum and Update are published by the institute, whereas Awaaz and InsIghT are published by the students. The details of the magazines can be found at:

1. **InsIghT:** `http://gymkhana.iitb.ac.in/~insight/`

2. **Update:** `http://www.ircc.iitb.ac.in/update.html`

3. **R&D Spectrum:** `http://www.ircc.iitb.ac.in/R&DSpectrum/`

4. **Campus Diary:** `http://www.iitb.ac.in/campusdiary.html`

# 7 Library Facilities

IIT Bombay library is one of the finest libraries in the country. It caters not only to the needs of students but also to needy outside students and people. To browse through the list of available books and access electronic copies of various journal and conference papers, visit:
`http://www.library.iitb.ac.in/`

## 7.1 Library Hours

| | |
|---|---|
| Monday through Friday: | 0900-2300 hrs |
| Monday through Friday: | 0900-0100 hrs (during examination) |
| Saturdays / Sundays / Holidays: | 1000-1700 hrs |
| Saturdays / Sundays / Holidays: | 1000-0100 hrs (during examination) |

The library remains open on all days of the year except on $26^{th}$ January, $15^{th}$ August and $2^{nd}$ October (National Holidays).

## 7.2 Circulation

**General books:** At any time, a maximum of 9 books can be issued by a research scholar. A book is typically issued for 30 days, after which it can be reissued if no one else has a claim on it. The timings for issuing books are:

| | |
|---|---|
| Monday through Friday: | 0900-1800 hrs |
| Saturdays: | 1100-1300 hrs |

**Reference books:** Reference books are marked **R** and Rare Reference books are marked **RR**. Only one reference book can be issued at a time from the first floor issue counter, between 0900–1800 hrs. Reference books can be issued for a period of 1 day only.

## 7.3 E-Resources

The Central Library provides web-based access to over 450 books, 10,000 full text journals and 10 databases $24 \times 7$ on institute-wide network as per the following details:

1. Books: `http://www.engineeringvillage.com/`

2. Journals: To know the list of all journals to which IIT Bombay has electronic access, visit the Central Library homepage: `http://www.library.iitb.ac.in` ; some representative examples are:

   - IEEE Explore: `http://ieeexplore.ieee.org`

- Elsevier's Science Direct: `http://www.sciencedirect.com`

- ACM Digital Library: `http://portal.acm.org/portal.cfm`

- JSTOR - The Scholarly Journal Archive: `http://www.jstor.org`

- Project MUSE - Scholarly Journals Online: `http://muse.jhu.edu`

3. Electronic Databases

4. Multimedia (Intranet, CD-net)

5. Electronic Theses & Dissertations: `http://etd.library.iitb.ac.in`

6. Institutional Archive: `http://dspace.library.iitb.ac.in/dspace/`

## 7.4   Libraries Outside IIT Bombay

(Other IIT Libraries, TIFR, BARC, Mumbai University Library) - The Central Library offers inter-library loan service to its users for the books and periodicals not available in the IIT Library by procuring them from other libraries within Mumbai. The IIT Bombay Library, in turn, also lends its resources to the libraries of other government and academic institutions including IITs, BARC, NITIE, NCST, IISc, IIG, TIFR, IGIDR, TISS and NICT on reciprocal basis. Under a collaborative arrangement, transport is available every Wednesday to visit BARC library. However, visitors need to register before hand for BARC security entry. The IIT Libraries already have an ongoing inter-library cooperation program. Under the program, the photocopies of research articles are exchanged on request amongst several libraries.

The document procurement service is also made available from NISCAIR, British Library Lending Division and other document delivery services if the user is willing to bear the expenses involved. Members interested in borrowing books or obtaining photocopies of articles from other libraries may contact Circulation Counter for details.

# 8   Hospital

IIT Bombay has a 60-bed hospital with full time doctors and visiting specialists. The hospital has its own pathological labs, X-ray and ECG facilities and a physio-therapy section. An ambulance is available on a telephone call (internal #1110) . The OPD timings are 8 am to 6 pm. The doctor on duty in the wards will see you at other times in cases of emergency. The medical facilities are available free of cost to the students.

All full time Medical Officers are entitled to provide medical certificates when medical leave is indicated. Certificates should be collected within 7 days.

The hospital has a website: `http://www.iitb.ac.in/hospital/`. The website contains all the information about the hospital including OPD schedules for doctors and specialists.

## 8.1   Important Rules

- All bonafide students of the institute are entitled to free medical attendance & treatment available in the institute hospital in the campus.

- Cost of medicines purchased from the market as well as pathological / radiological charges incurred in recognized hospitals on the advise of the AMA is reimbursable.

- Expenditure on indoor treatment, under the advice of the AMA in a recognized hospital in an entitled class of accommodation equivalent to Group C employees will be reimbursed by the Institute subject to a ceiling of Rs.15,000 at a time (for one illness episode).

## 8.2 Cases Referred to other Hospitals

The following hospitals are recognized for the students for treatment.

1. Government/Municipal Hospitals

2. Shushrusha Hospital, Dadar

3. Ranbaxy Pathology Centre

4. Jupiter Scan Centre

5. Nivaran Scan Centre

6. Lions Club Hospital (Hindu Mahasabha), Ghatkopar

7. Kaushalya Medical Foundation Trust Hospital, Thane

8. Raptokos Brett Testing Lab – for pathological investigations

Treatment of chronic cases or prolonged illness requiring special medical treatment for a long period will be responsibility of the parents/guardians of the students.

**Note:**  Prolonged illness may be that which requires treatment in any authorized hospital for a period of over 30 days.

- Any treatment taken outside the headquarters during vacation will be the responsibility of the parents. The institute will not reimburse such expenditure.

- Only the spouse of the institute research scholars are entitled to get OPD treatment from the Institute Hospital. No reimbursement envisaged.

- QIP Research Scholars are treated at par with the other students of this Institute. They are entitled to medical attendance/treatment and reimbursement as other students, as stated in the previous paragraphs.

- The spouse and children of QIP Scholars are treated as entitled persons so far as the treatment/facilities available in the Institute Hospital. No reimbursement is admissible to them.

## 8.3 Entitlement of students for the approved Hospital

- Shushrusha Hospital : General Ward

- Lions Club Diagnostic Centre : General Ward

- Tata Memorial Hospital : General/Free Ward

- Kaushalya Hospital, Thane : General Ward

The reimbursement of Medical Claims on account of accidents should be made from Medical Insurance for students through Dean SA (Students' Affairs).

## 8.4 Hospital Ambulance

Ambulance is provided for in-patients and for emergency transport of campus residents / students to the IIT Hospital.

- For transfer of patient from IIT Hospital to other hospital and other hospital to IIT Hospital.

- Invalid patients on bed rest who need transfer in lying down position. (The decision will be taken by the Medical Officer on a case to case basis).

- On Call for any Campus emergency.

- If hospital ambulance is not available for any emergency, outside ambulance is called as decided by AMA on case-to-case basis.

# 9 Miscellaneous Facilities

## 9.1 Security

IIT Bombay has a large and efficient security force, offering its services to all the buildings, including the residential areas, the gates, etc. Security kiosks are present at accessible distance from all points in the campus. The telephone numbers of security are as follows:

- **Security Control Room**: 1100, 1122, 1112, MTNL: 2576 7912, 2572 8000 **(24 hrs)**

- **Security Officer**: 8987 (Office), 8017 (Residence)

## 9.2 Computer Center (CC)

Computer Centre provides computational facilities to all users in the Institute. Eligible students, staff and faculty from all Departments, Schools and Centres in the campus can obtain accounts on the High End Systems. CC provides electronic mail, world wide web, DNS, FTP and other services. CC also provides various advanced and special purpose software such as Ansys, Matlab, Mathematica for all the campus users. For details, visit: `http://www.cc.iitb.ac.in/`

1. **Computing Facilities:** Computer centre provides exhaustive computing facilities round the clock. Users with a valid identity card can use the computer centre any time without any difficulty. Computer centre also provides Compaq HPC Server Machine, Linux Clusters, FTP Services, etc. for computation and for various other purposes. For details, visit: `http://www.cc.iitb.ac.in/cfs/index.php`

2. **Bighome Storage:** Computer Centre has decided to allot a fixed disk space for any LAN user who has a Roll number, for personal use. This storage server is called BIGHOME, and it also contains all the files and settings from your CC user hall. CC has decided to allot 250 MB for under graduate students (includes all B.Tech, Dual Degree and Int. M.Sc.), 300 MB for post graduates, 400 MB for research scholars (Ph.D. students), 400 MB for project staff and 500 MB for faculty use.

   The most useful thing about this space available to you, is that, instead of being a static storage that you can access only from fixed points in network, this space can be used from any computer inside the LAN. In order for any computer to recognize this space of yours, you have to connect to the storage server BIGHOME, a process known as MOUNTING in Linux and Mapping a network drive in Windows parlance. For details, visit: `http://www.cc.iitb.ac.in/faq/storagefaq.php`.

3. **Web Page Upload:** Users with bighome account can create webpages and can upload their webpages through computer centre. The details of home page creation and upload is available at: `http://www.cc.iitb.ac.in/faq/homepages.php`.

## 9.3   Transportation Facilities

1. **Internal Transport:** For moving around within IITB, one may avail local transport service (popularly known as "Tum-Tum"). These mini-buses run on predetermined routes and charge a fixed charge for going from any point to any other point on the route. Monthly passes are also available for using tum-tums.

2. **Motorized Vehicles:** Students are not permitted to operate and maintain motorized vehicles of any type in the campus, except on medical grounds.

# Further Details

For details or queries, please contact institute authorities and/or RSF office bearers. The websites are:
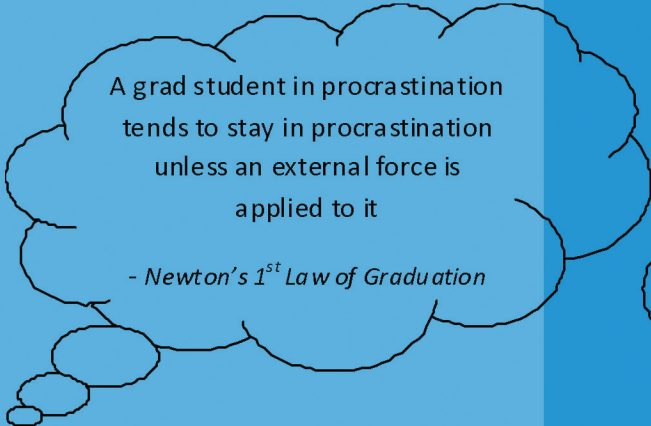`http://www.iitb.ac.in`
`http://gymkhana.iitb.ac.in/~rsf`

# A  List of Forms

Available at `http://gymkhana.iitb.ac.in/~rsf`

- Form 1: Registration for Ph.D.
- Form 2: Annual Progress Seminar Form
- Form 3: Rescheduling of APS
- Form 4: Leave Form
- Form 5: Medical Reimbursement Form
- Form 6: Guest House Booking Form
- Form 7: HCU Guest Room Form
- Form 8: Leave Travel Allowance Form
- Form 9: Travel Funding Form
- Form 10: Fellowship Advance Form
- Form 11: RSIC/SAIF Facilities
- Form 12: Extension of Ph.D. Form
- Form 13: Presynopsis Form
- Form 14: Thesis Submission Form
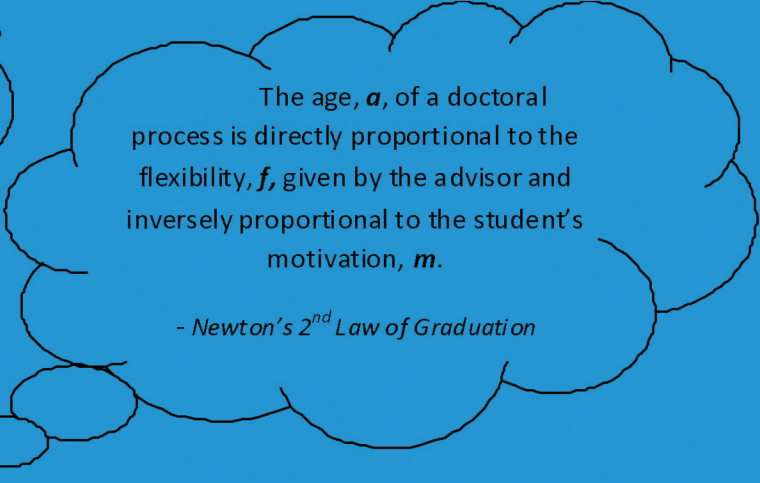- Form 15: RSF Award Form

# Team RSF 2007-08

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A grad student in procrastination tends to stay in procrastination unless an external force is applied to it

*- Newton's 1st Law of Graduation*

The age, *a*, of a doctoral process is directly proportional to the flexibility, *f*, given by the advisor and inversely proportional to the student's motivation, *m*.
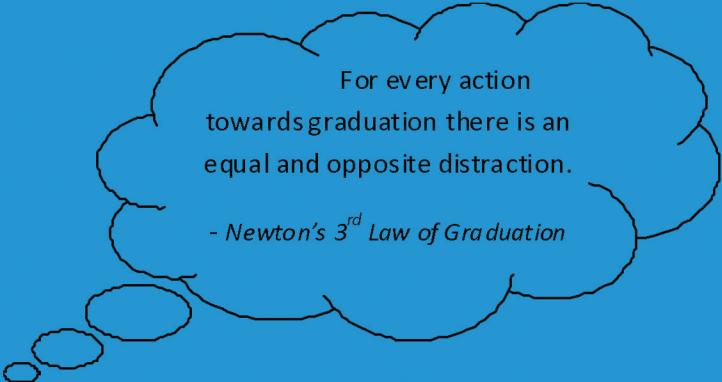
*- Newton's 2nd Law of Graduation*

Grappling in the wilderness of research and academics? Feeling undecided for having chosen the less trodden path? Juggling with the dos and don'ts of research in IIT B???

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--- Team RSF 2007-08

For every action towards graduation there is an equal and opposite distraction.

*- Newton's 3rd Law of Graduation*

Newton's Laws of Graduation:
"Piled Higher and Deeper",
by Jorge Cham (www.phdcomics.com)