



Abhinav Chikhalkar
Metallurgical Engineering & Material Science
Indian Institute of Technology, Bombay
Specialization: Ceramics & Composites

09D11014
UG Third Year(Dual Degree)
Male
DOB: 08/08/1991

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2012	7.23
Intermediate/+2	Maharashtra State Board	Dharampeth Science College	2009	75.33
Matriculation	CBSE	Bhartiya Vidya Mandir	2007	90.40

Academic Achievements

- Amongst the 40 students to be selected from India for the **International Olympiad of Astronomy and Astrophysics** screening camp(2009)
- Awarded the certificate of appreciation by the Dean(R & D) IIT Bombay, for effectively showcasing IIT Bombay's research activities at the **5th Science Expo** held at Nehru Science Centre, Mumbai during 20th – 24th January, 2011
- Amongst the top 1% students to be selected for the **Indian National Chemistry Olympiad**(2009)
- Amongst the top 1% students of the State in the **Indian National Physics Olympiad** (2009)
- Qualified for the second round in the **40th National Level Mathematics Talent Competition** 2008 conducted by the Association of Mathematics Teachers of India, Chennai

Projects

- Synthesis of Boron Nitride Nanotubes (BNNTs)** [Ongoing]
- Working on designing an effective and efficient reactor to synthesize the BNNTs at temperatures of around 1500-1800°C
 - Ultimate goal is to synthesize pure BNNTs, study their properties practically and putting them to some good use
- Developing LASER based curvature measurement system** [Ongoing]
Guide: Prof. Prita Pant, Dept. of Metallurgical Engineering and Material Science, IIT Bombay
- Working to make an instantaneous LASER based curvature measurement system, for the in-situ measurement of the thin films in a range of temperatures
 - Aim to achieve below 10% error for radius curvatures of 2m to 400m
- Bubble Raft (Structure of Materials Project)** [Spring '10]
Guide: Prof A. S. Panwar, Dept. of Metallurgical Engineering and Material Science, IIT Bombay
- Created a working model of Bubble Raft
 - Modeled representation of two dimensional structural dislocations in a crystal lattice
 - Selected to be showcased at the **5th Science Expo, Nehru Science Centre, Mumbai**
- Stellar Population Synthesis** [Winter '10]
Guide: Prof. Yogesh Wadadekar, NCRA (TIFR), Pune
- Studied how dust and stars combine to form galaxies
 - The project involved detailed study about the different aspects about the evolution of the galaxy spectrum with age and using it to understand how the galaxy must have been formed
- Structural Analysis of the Golden Gate Bridge** [Autumn '10]
Guide: Prof K. Narasimhan, Dept. of Metallurgical Engineering and Material Science, IIT Bombay
- Modelled a structure of the Golden Gate Bridge depicting various structural aspects
 - Analysed the Golden Gate Bridge on the basis of strength, life, factor of safety and failure
- Study of Ancient Astronomical Instruments** [Winter '09]
Guide: Prof. M. N. Vahia, Department of Astronomy and Astrophysics, TIFR Mumbai
- Modeled an Astrolabe and a Sundial
 - Studied the works of ancient civilizations on timekeeping mechanisms
 - Studied how the ancient people observed the changes in the sky precisely

UID Software Project (Registration Protocol)

[Autumn '09]

*Guide: Prof. D. B. Phatak, CSE Dept., IIT Bombay**(Inspired by Nandan Nilekani's Unique Identification Database Nationwide Project)*

- Created a C++ program which was able to uniquely register a student, accept its biometric fingerprint and update it to the central database

Internships**Kennametal India Limited, Bangalore**

[Summer '11]

- Did an extensive literature survey, studying about the different ways of synthesis of BNNTs and the physical and chemical properties of the Boron Nitride Nanotubes(BNNTs)
- Tried to synthesize the BNNTs at lower temperatures using solid phase reaction with the available resources

GTL Infrastructure and Global Towers, Navi Mumbai

[Summer '10]

- Analysed the working of a company in general which encircled discussions from GTL starting as a Business Plan with a USP of sharing Infrastructure between multiple operators, GTL as a growing firm, to developing into a group of 7 firms together called the Global Group
- Gained basic knowledge about the structure of a Nation-wide company, constituent departments, work distribution, company vision and marketing strategies

Positions of Responsibility**Manager, Kritika, Astronomy Club, IIT Bombay (2010-11)**

- Planned and conducted lectures, workshops and competitions on astronomy and astrophysics
- Organized sky observation sessions for students and faculty of IIT Bombay on regular basis to bring them close to the field of Astronomy and develop and nurture their interest in the field

Events Co-ordinator, Techfest-2011

- Interacted with the technical secretaries of several colleges Pan-India and established Public Relations with them by taking their inputs on competitions, thus enhancing the participation from different colleges
- Planned and organized a complete event called Survivor, with the help of 15 organizers working under me
- Coordinated in organizing a lecture on Making and Handling of Telescopes during the festival

Co-Curricular Activities

- Secured 1st position in the Maths Talk competition from all over Nagpur city in the CENFEST Competition(2006)
- Awarded a special mention in an Impromptu Drama competition at IIT Bombay
- Represented school in the CBSE Basketball Clusters competition held at Gujarat Public School, Vadodara (2007)
- Stood 1st in the Intra-school Quiz Competition(2006)
- **Hobbies:** Playing violin, basketball, chess, trekking, star gazing, reading novels and photography