



**Somesh Yadav**  
**Engineering Physics**  
**Indian Institute of Technology Bombay**  
**Specialization: Nanoscience**

**12D260002**  
**UG Second Year**  
**Male**  
**DOB: 06/06/1995**

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2014	6.51
Intermediate/+2	Maharashtra State Board (HSC)	Lords Universal College of Science and Commerce	2012	87.67
Matriculation	Maharashtra State Board (SSC)	S.T.S. Mission English High School	2010	90.18

## SCHOLASTIC ACHIEVEMENTS

- Secured All India 98.75 %ile out of half a million students in IIT-JEE 2012 [March-2012]
- Awardee of national scholarship for 99+ percentile in Intermediate Boards Examinations [March-2012]
- Topped the Intermediate Boards Examinations amongst all the Junior colleges under Universal Educational Group [March-2012]

## POSITIONS OF RESPONSIBILITY

Institute Cultural Mentor - Photography and Fine Arts, IIT Bombay [July '13 - Till Date]

- Mentorship of the complete Freshmen batch of 2013 and fostering them in the cultural field of Photography and Fine Arts & planning/organisation of cultural events with the Cultural Council

Creatives Co-Ordinator, Mood Indigo, IIT Bombay (Asia's largest Cultural Fest) [July '13 - Till Date]

- Part of Ideation of the Design and Development of the Official Android Application of Mood Indigo

## KEY ACADEMIC & TECHNICAL PROJECTS

Contact-free Tracking interface (Institute Technical Summer Project) [April '13-June '13]

- Built a Contact free 3-D tracking Interface using simple home-based materials and an Arduino with Processing Software
- It uses the theory of capacitance coupling between the operators hand and the device, calibrating the device shows the exact position of the user's hand in 3-dimensional space
- Future development and studies possible will have a significant contribution in advanced motion tracking, development of a 3D mouse and Design Pen Interfaces

Non-Linear Dynamics [July '13 - Till Date]

Guide: Prof. Punit Paramananda

- Prepared a report on the chaotic behaviour executed by a Double Pendulum
- Programmed simulations to study the doubling route to chaos and other properties of logistic maps and other bifurcation diagrams

## Crystal Radio

[July '13-Till Date]

Guide: Prof. Parinda Vasa

- Is working on the production of a **Crystal Radio** out of a plastic bottle, enamel coated magnet wire, germanium diode and few other easily available stuff

## Virtual Bus Transport Navigation Program

[Autumn '12]

Guide: Prof. Abhiram Ranade

- Developed a **virtual environment** of city traffic and a program to **track and calculate** the time to be taken by the bus to reach the destination using **Recursive Self-correcting Mechanism**
- Applied the properties of **multi-dimensional arrays**, structures and **graphic packages**

## RELEVANT COURSES

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- **Department courses** – Modern Physics, Electricity and Magnetism, Optics, Non-Linear Dynamics, Classical Mechanics and Data Analysis and Interpretation in Engineering Physics
- **Technical labs** – Electronics laboratory, Experimental and measurement laboratory, Mechanical Workshop and Engineering Drawing
- **Mathematics** - Calculus, Linear Algebra, Differential Equations, Complex Analysis
- **Others** - Computer Programming and Utilization, Electrical and Electronic Circuits, Chemistry, Economics
- **Additional courses** – Product Design and Sensitisation

## EXTRA –CURRICULAR ACTIVITIES

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- **Cultural:**
  - Winner at various Inter-Collegiate competitions like Malhar, Mood Indigo in **Fine Arts, Dance** and other atypical genres
  - Awardee of the Hostel **Special Mention** for extra ordinary performance in **Dramatics and Production** in the **Performing Arts Festival 2013**, IIT Bombay
  - **Position Winner** at several Intra Institute Cultural Events in **different genres**
  - Active member of **Insync**(Dance Club), **Pixels**(Photography Club), **Silverscreen**(Film making Club) **Rang**(Fine Arts Club), **Fourthwall**(Dramatics Club) and the **Design Club** of IIT Bombay
- **Sports:**
  - Completed a 10-month course in **Weight Training** certified by National Sports Organization
  - Represented the hostel in **Cricket** in General Championship