



Ashwini Jain
Civil Engineering
Indian Institute of Technology Bombay

110040023
UG Third Year (B.Tech.)
Male
DOB: 18/09/1993

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2014	8.09
Intermediate/+2	SMPS	CBSE	2010	80.00
Matriculation	SMPS	CBSE	2008	84.00

- Awarded **Undergraduate Research Award** (URA) for exemplary research work in steam curing of concrete [2012]
- The only second year student to be selected for **Teaching Assistant** (TA) of Structural Mechanics 1 [2013]
- Bestowed with Vilas Karnik Grant Scholarship by an alumnus of IIT Bombay [2013]
- Pursuing Honors in Civil Engineering by undertaking additional advanced courses

RESEARCH PUBLICATIONS

- Co-authored an **International Journal Paper** titled "*Influence of Steam Curing Cycle on Compressive strength of Concrete*" in Vol. 1 No. 2 issue of International Journal of Construction Materials and Structures (IJCMS) [Dec '13]
- Presented a poster titled "*Projecting Wind Energy Potential under Climate Change with Ensemble of Climate Model Simulations*" in **American Geophysical Union (AGU) Fall Meeting 2013** held in San Francisco, USA [Dec '13]

WORK EXPERIENCE

Construction Manager and Health & Safety Officer, Team SHUNYA, Solar Decathlon Europe 2014 [May 13-Present]
First Indian team ever (competing against 19 teams from 15 countries) to participate in international competition organized by U.S. Dept. of Energy to design, construct and operate life-size zero-energy solar house

- Supervising and coordinating a 30 member team working on construction of a 700 sq. ft. house
 - Determined critical path for construction schedule, ensured adherence to deadlines, planned contingencies
 - Conceived efficient modular assembly and disassembly procedure to enable construction in **10 days**
- **Establishing protocols** to ensure adherence to health and safety (HS) regulations on site; **identifying construction risks** and proposing measures to minimize risks in on site activities
- Devised novel footing capable of adapting to undulations of **2 feet** instead of normal level ground
- Analysed different weather parameters of competition site with the help of moving average and bilinear interpolation technique for the simulations of house of zero net energy consumption

LARSEN & TOUBRO (L&T) | Omkar Worli Sales Project, South Mumbai (2 Towers of 81 floors each) [May-Jun '13]

- Learnt different aspects of Construction Industry including Execution, Quality Assurance, Costing and Safety
- Observed working methodology of **Client** and **Contractor** side separately
- Worked on **Hydraulically** operated column form-work by DOKA, structural and architectural drawings

AMBUJA CEMENT | Comparative Studies of Mortar Strength using Pozzolana Materials [Dec '12]

- Designed various mixtures having good packing density using **EMMA** and **4-C Packing** software
- Analysed the strength of mortar cubes containing different Pozzolanic Materials
- Proposed 2 new samples of cement having **high strength**, **good durability** and **low cost** to satisfy rapid construction

RESEARCH & ACADEMIC PROJECTS

Projecting Wind Energy Potential under Climate Change with Ensemble of Climate Model Simulations

(Guide: Prof. Subimal Ghosh, IIT Bombay)

[Feb '13- Present]

- Assessed impact of climate change on wind energy potential; evaluated with multiple General Circulation Models
- Designed wind mills Sustainably which requires understanding the impacts of climate change
- Observed **spatially** and **temporally** varying global change of wind energy density by using Bayesian Method, quantile based superensemble and multi-linear regression approach
- Proposed the change in design standards of wind mills at different locations, considering climate change and at the same time the requirement of **height modifications** for existing mills to produce same energy in future

Influence of Steam Curing Cycle on Compressive strength of Concrete

(Guide: Prof. Prakash Nanthagopalan, IIT Bombay)

[May '12-Apr '13]

- Optimized the different factors by using "**Design of Experiment**" and "**ANOVA**" method
- Investigated and reported the effects of different parameters i.e. delay and steam curing period & ambient temperature of the curing tank on initial and final compressive strength of concrete & compared it with normal curing
- Executed various tests to calculate slump, fineness modulus, specific gravity, bulk modulus, water absorption etc.
- **Best entry** from IIT Bombay in National Paper presentation symposium of IITB civil engineering department festival

- Kudankulam Nuclear Power Plant Project |** (Guide: Prof. Pankaj Dutta) [Jul-Nov '13]
- Led a 5 membered team of students from different departments for the overall perspective of the power plant project
 - Worked on the different project management strategies such as WBS, Organisational structure, Techno-Economic Feasibility report, Planning, Monitoring, scheduling and cost estimation
- IIT Bombay Transportation Management |** (Guide: Prof. Tom Mathew, IIT Bombay) [Jul-Oct '12]
- Reduced Road congestion problem in IITB considering **sustainable** and **eco-friendly** development in the campus
 - Proposed bus route for around 30 buses catering to 8000 students and faculty members
 - Designed the map and construction of a suitable Bus-Bay using **AutoCAD 2013**
- Square Wave Generator |** (Guide: Prof. S.D. Gupta, IIT Bombay) [Aug-Nov '12]
- Prepared a digital clock by analysing **NE 555 Timer IC circuit** and its application
- Computer Programming and Utilization Project |** (Guide: Prof. D.B. Phatak, IIT Bombay) [Sep-Nov '11]
- Debugged and suggested major changes in the program of "Basket The Ball" game using C++ and E-Z Windows

TECHNICAL SKILLS

- Programming: C++, Matlab, Scilab, R software
- Web designing : HTML, CSS
- Application Software: SAP, AutoCAD, SketchUp, MS Project, MS Office, Tekla

RELEVANT COURSES UNDERTAKEN

- Core Courses: Engineering Mechanics, Numerical methods, Solid Mechanics, Fluid Mechanics, Structural Mechanics 1, Geodesy and surveying, Hydraulics Engineering, Advance Solid Mechanics, Environmental Engineering, Soil Mechanics, Design of RCC Structures, Applied Statistics, Project Management, Water Resources Engineering, Structural Mechanics 2, Soil Mechanics 2*, Design of Steel Structures*, Transportation Engineering*,
 - Other Courses: Data analysis and Statistics, Computer Programming and Utilisation, Economics, Differential Equation, Linear algebra, Calculus, Topics in Operation Research*, Industrial Engineering and Operations Research*
- * indicates courses running this semester

POSITIONS OF RESPONSIBILITY

- Class Representative, Batch 2015, Civil Engineering Department IIT Bombay** [Apr '12-Mar '13]
- Acted as a mediator between professors and class of **120** students to address their academic problems
 - Organized an Industrial visit at a construction site for the entire class without any fee
 - Involved with Placement and Training cell in organizing workshop and fundae sessions concerning internship and practical training
- Coordinator, Student Alumni Relations Cell (SARC)** [Apr '12-Mar '13]
- Member of **Web and Software** team of SARC, helped to design its website from scratch
 - Arranged alumni visit to hostels and departments during alumni Hostel reunions
- Coordinator, Media and Marketing, Techfest 2013** [Apr '12-Jan '13]
- Contacted reporters of newspapers in **Rajasthan** and educational magazines and published 14 articles
 - Coordinated with **DOORDARSHAN** and other well-known news channels and newspapers to cover the Techfest
- Organiser, AAKAAR 2012 (Civil Department Festival)** [Mar '12]
- Assisted in organization of symposium and on the spot event paper bridge competition
 - Aided the publicity of the event by giving valuable inputs for advertising

EXTRA-CURRICULAR ACTIVITIES

- Secured 1st position in district level Kho-Kho [2002-2003]
- Member of the hostel cricket team winning the **Freshman Cricket GC-2011**
- Secured 2nd position in Hindi Creative Writing during Freshizza [2011]
- Awarded several prizes in the intra-college debating and literary arts competitions
- **Guinness and Limca World Record Holder**- Part of the largest group in the world solving the Rubik's cube simultaneously (937) in less than one hour
- Attended a series of lectures on **concrete** conducted by Mr C. M. Dordi, Product and Quality Head, Ambuja Cement which deals with the practical life scenario in the **construction** work
- Attended the workshop of **ESRGSR** and **Struds** in AAKAAR 2012, IIT Bombay Civil Engineering Department festival
- **Other Interests**: Attending Guest Lectures, Massive Open Online courses (MOOC), Teaching, Cricket, Badminton, Literature, Music