

Vihar Vasant Nimje

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Area(s) of Interest	Design of Concrete Girder Bridges, Progressive Collapse and Earthquake Resistant Design of Buildings
Educational	<p>Indian Institute of Technology, Roorkee (2019-2021)</p> <ul style="list-style-type: none">- Master of Technology in Structural Engineering- Cumulative Grade Point Average (CGPA) : 8.5 / 10 <p>Visvesvaraya National Institute of Technology, Nagpur (2014-2018)</p> <ul style="list-style-type: none">- Bachelor of Technology in Civil Engineering- Cumulative Grade Point Average (CGPA) : 6.43 / 10
Qualifications	<p>Maharashtra State Board for Higher Secondary Education, Pune</p> <ul style="list-style-type: none">- Intermediate (XII Standard) (2012-2014)- Percentage of Marks : 86.62 / 100 <p>Maharashtra State Board for Secondary Education, Pune (2012)</p> <ul style="list-style-type: none">- Matriculation (X Standard)- Percentage of Marks : 94.91 / 100
Academic	<ul style="list-style-type: none">- Top 1 percentile in Maharashtra State Board (XII Standard)- Offered Scholarship of INR 80,000 per year for 5 years under INSPIRE GOI Scheme for education in natural science
Achievements	<ul style="list-style-type: none">- Top 1 percentile in Maharashtra Secondary Scholarship Exam (State Level)- Top 1 percentile in Graduate Aptitude Test in Engineering for Civil Engineering discipline (National Level)
Work	<p>Indian Institute of Technology, Roorkee</p> <p><i>Designation : Research Associate</i> (Aug 2021 - Present)</p>
Experience	<ul style="list-style-type: none">- Proposed and developed a simple method to include the effects of creep in assessment of structures utilising the catenary action of floors subjected to fire- Documented the effects of varying axial restraints and load factor on the axial force in a steel beam during elastic and inelastic stages
Projects	<p>Catenary Action in Restrained Steel Beams Exposed to Elevated Temperature</p> <p><i>Supervisor : Dr. Pradeep Bhargava (Professor)</i> (Aug 2020 - Jun 2021)</p> <ul style="list-style-type: none">- Performed a parametric study to observe the effects of different parameters of the beam affecting the catenary action- Simulated a composite steel beam subjected to fire using material properties from Eurocodes and commercial software ABAQUS- Demonstrated a method to use any general creep model in FE software using a FORTRAN-based user defined subroutine and to validate the simulation results

Fire Induced Progressive Collapse in High-Rise Buildings

Supervisor : Dr. Pradeep Bhargava (Professor) (Jan 2020 - Jul 2020)

Projects

- Explained the structural analysis procedure and acceptance criteria of both Direct (alternate Path Method) and Indirect method (Tying Force) to avoid progressive collapse as per International Standards
- Discussed different factors contributing to the collapse of structures subjected to fire
- Presented 2 literature studies, one with threat-independent approach and another with simulated fire approach

Proof Load Testing of RCC and PSC Structures

Supervisor : Dr. G. N. Ronghe (Professor) (Jul 2017- May 2018)

- Explained the detailed methodology and application techniques for Proof Load Testing, which are briefly mentioned in Indian codes and represented results as per acceptance criteria
- Compared the analytical and experimental results of Reinforced Concrete and Prestressed Concrete girder bridges
- Completed 3 case studies (1 RCC Bridge, 1 PSC Bridge and 1 Auditorium)

Technical

Software Packages:

- Abaqus, AutoCAD, ETABS, STAADPro

Skills

Computer Languages:

- C, Python and FORTRAN

Additional

Courses

- Earthquake and Fire Safety in Industrial Establishments (NIDM)
- Energy Simulation for Green Buildings (CII-IGBC)
- Comprehensive ETABS Professional Course (Udemy)
- Comprehensive STAADPro Certification Course (Udemy)
- AutoCAD : Basics for Beginners and Structural Detailing (Udemy)

Maharashtra State Mini Fencing Championship

(Maharashtra State Fencing Association) (2007)

- Represented the school as a participant for individual and team events in Epee and Sabre

Extra -

Curricular

Activities

City Co-ordinator at Dexter, AXIS'15 (2015)

- Organised the event for Annual Technical Festival in 4 schools with student participants belonging to standards 8 to 12

Volunteer at PRAYAAS, VNIT (Social Club) (2016-2018)

- Organised Blood Donation Camps on Independence Day and Republic Day, Participated in rallies creating awareness about Education and various social problems
- Taught basic science and mathematics to children of migrant workers working on ongoing construction in campus

German Language Examination conducted by GOETHE INSTITUTE

- Scored 81/100 at A1-Level with good as a remark (2018)

Languages

Known

- Hindi(R/W/S), Marathi(R/W/S), English(R/W/S), German (R/W)