

PARUL PATANKAR

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EDUCATION

Master of Science - Structural Engineering

University of Illinois Chicago (UIC) – Chicago, IL

Graduating May 2021

(3.6/4.0)

- Advanced Design: Concrete Structures
- Prestressed Concrete Structures
- Value Engineering
- Seismic Steel Structures
- Earthquake Engineering: Concrete Structures
- Adv. Design: Metal Structures
- Structural Design of Tall Buildings
- Foundation Analysis and Design
- Design of Masonry Structures

Bachelor of Engineering - Civil Engineering

Nagpur University – Nagpur, India

July 2015 – May 2019

(3.4/4.0)

TECHNICAL SKILLS

Codes: ACI 318-19, ASCE 7-16, AISC (Steel and Seismic), PCI Handbook, IBC, TMS 402/602-16.

Software: AutoCAD, Revit, STAAD Pro, ETABS, SAP2000, Tekla Tedds, Bluebeam Revu, C, Microsoft Office

Memberships: American Society of Civil Engineers (ASCE), American Concrete Institute (ACI), American Institute of Steel Construction (AISC), Council on Tall Buildings and Urban Habitat (CTBUH), Structural Engineers Association of Illinois (SEAOI).

Licenses & Certifications: Fundamentals of Engineering Exam (In Progress).

EXPERIENCE

Hatfield Group, New York (Civil Engineering Intern)

August – December 2020

- Detailed, designed, and analysed structural engineering work for steel and concrete structures using Bluebeam, Tedds and SAP2000. Façade calculations for tall buildings.

University of Illinois, Chicago (Graduate Research Assistant-Transportation Lab)

January – March 2020

- Extracted land-use data from various sources, recorded them and processed the data in database management systems.

Design Cell, India (Structural Engineering Intern)

October – December 2018

- Coordinated structural framing plan with architectural drawing and services drawing.
- Designed beams and slabs as structural components of G+8 building using STAAD Pro and IS 456 & IS 800.
- Governed the structural work and its quality & correctness as per drawing on the construction site.

Nidhi Buildcon, India (Civil Engineering Intern)

May 2018

- Performed cost estimation and quantity surveying.
- Learned about government tendering and technical sanctioning of ongoing projects by studying specifications.

Nagpur Metro Rail Corporation Limited, India (Trainee Site Engineer)

July 2017

- Worked with Nagarjuna Construction Company Limited and inspected structural drawings of pile, pier and pier cap.
- Supervised labors during girder launching and prestressing tendons.
- Involved in precast segment casting at casting yard and Quality Control lab Bureau Veritas.

Patankar Consultant Private Limited, India (Intern)

November – December 2016

- Documented and inspected construction projects, overlooked the construction of structural components in phases.

ACADEMIC PROJECTS

Value Engineering study of Lincoln South Beltway, UIC

January – May 2020

- Suggested alternatives to improve the regional and interstate network by performing function analysis of project and evaluated alternatives by sensitivity analysis.

Design of intermediate level for Parking Structure, UIC

September – December 2019

- Calculated loads, performed structural analysis for the beams & girders and determined beam sizes based on PCI handbook.
- Performed detailed design calculations for beams and girders along with details of reinforcement.

Analysis and Design of a sixteen-story residential building, India

October 2018 – April 2019

- Designed and drafted rebar-footing, shear wall and structural members under earthquake loads using ETABS and AutoCAD.
- Executed earthquake detailing as per Indian Standard code (IS 1893, IS 456, IS 875-Part 1, 2, 3)
- Pioneered the application of Hilti HIT Method for the erection of column from hard-Vesicular Basalt rock surface, treating the rock as foundation without the provision of additional footing as deep excavation for foundation was unfeasible.

Structural Audit of Vidarbha Cricket Association Stadium, India

January 2019

- Evaluated the concrete quality and conducted health monitoring of a cricket stadium with a seating capacity of over 50,000.
- Investigated utilizing detailed visual inspection, material testing and Non-destructive Testing equipment such as rebound hammer, ultrasonic pulse velocity, carbonation, and dye penetrant inspection.
- The structure was found unsafe and hence was suggested to undergo retrofitting and strengthening, after which its results improved to acceptable limit.

PUBLICATIONS

- 'Advanced Construction Material: Self Compacting Concrete' 34th National Convention of Civil Engineers RAID 2018, India.

ACTIVITIES AND VOLUNTEER

- National Level chess competitor. Participant of Commonwealth Chess Championship (2008).
- Volunteered to educate orphans at a non-government organization 'Care for Millions Multipurpose Foundation'.