

Vaishali Dagade, Ph.D.

Structural Engineer | FE Civil | PE Civil Structural Candidate

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PROFESSIONAL SUMMARY

Structural engineer with 10+ years of experience in reinforced concrete, steel, formwork systems, infrastructure, industrial supports, structural audits, construction documentation, shop drawing review, RFIs, and multidisciplinary coordination. Ph.D. in Structural Engineering with finite element research depth in composite, sandwich, and functionally graded shell panels. FE Civil certified and pursuing U.S. structural engineering licensure.

EXPERIENCE

Chartered Engineer and Proprietor | Vardhaman Engineers and Consultants

Pune, India | Jan 2015 - Dec 2022

- Founded and led an independent consultancy specializing in aluminum and wood formwork, RCC and steel structures, infrastructure work, and structural audits.
- Delivered formwork design packages, load calculations, connection detailing, shop drawing review, RFIs, site clarifications, and technical reports.
- Supported high-rise residential, commercial, municipal, and developer projects including TWG Garden Towers, Pristine Tower, and Prudentia Tower.

Structural Design Engineer | Sharp Engineers / Sharp Formwork

Pune, India | Aug 2009 - Jul 2011

- Designed RCC wall and slab systems, aluminum/wood formwork, facade railings, and construction-stage support systems.
- Modeled custom curved shell formwork for parabolic and hyperbolic concrete geometry, including Dusit Devarana Luxury Hotel work.
- Prepared STAAD Pro checks, SolidWorks models, AutoCAD drawings, fabrication details, material estimates, and site support responses.

Design Engineer | Clancy Global Consultancy Pvt. Ltd.

Mumbai, India | Nov 2007 - Aug 2009

- Analyzed and designed PT slabs, flat slabs, foundations, columns, walls, and framing systems for commercial and residential developments.
- Prepared calculations and coordinated drawings for Empire Mall Prozone, Meghmayur Mall, Amby Valley Villas, and residential tower/villa work.

Structural Designer | Bharti Engineering Pvt. Ltd.

Mumbai, India | 2007

- Designed industrial steel support structures, member checks, plates, bolts, welds, bracing, and anchorage for heavy silo support work.
- Used STAAD Pro, Tekla Structures, Descon Win, Descon Brace, AISC/LRFD logic, BS 5950, AutoCAD, and Excel calculations.

Assistant Professor | RMD Sinhgad School of Engineering and Dr. D.Y. Patil Institute

Pune, India | Jul 2011 - Jun 2015

- Taught structural analysis, strength of materials, concrete and steel design, applied mechanics, and theory of structures.
- Served as examiner, workshop coordinator, student mentor, and seminar coordinator for civil and structural engineering courses.

FIRST Robotics Mentor | FRC Team 2502 Talon Robotics

Eden Prairie, Minnesota | Apr 2022 - Jul 2024

- Mentored students in SolidWorks modeling, fabrication thinking, and structural response discussions for SkyWindFarm wind-energy research.
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EDUCATION

Ph.D., Structural Engineering

COEP Technological University / Savitribai Phule Pune University

Finite element analysis of composite, sandwich, and functionally graded cylindrical, spherical, and conical shell panels.

M.E., Structural Engineering

Government College of Engineering Aurangabad

B.E., Civil Engineering

Dr. B.A. Marathwada University

SELECTED PUBLICATIONS AND AWARDS

- Quadrilateral flat-shell element for static and dynamic analysis of composite and sandwich shell panels, Curved and Layered Structures, De Gruyter, 2022.
- Static and free vibration analysis of sandwich shell panels using a quadrilateral flat shell finite element, Materials Today: Proceedings, 2022.
- Free vibration response of cylindrical and spherical FGM shell panels using a quadrilateral finite element, Materials Today: Proceedings, 2022.
- Best Paper Awards: ICAMEN 2022 and NIT Kurukshetra 2021.

LICENSES AND CREDENTIALS

- FE Civil certified, NCEES
- PE Civil Structural candidate
- Chartered Engineer, India
- Licensed Structural Engineer, Pune Municipal Corporation
- Certified Structural Auditor, PCMC
- Lifetime member, Indian Society of Structural Engineers and Institution of Engineers (India)