

PRABODH DAHAL

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*An adept structural engineer-- honed with effective managerial, leadership and problem-solving skills from five years of professional and academic experiences in the diversified environment--seeking a full-time platform (**willing to relocate**) to utilize the expertise as a structural engineer or a structural analyst, and highly motivated to take PE and SE tests and strive for the excellence.*

TECHNICAL PROFICIENCIES

Core Technical Skills:

- Design and analysis of the structural systems (building, bridges, aircraft components) made up of steel, reinforced concrete, pre-stressed concrete, wood or any structural system with composite materials.
- Well familiar with National Codes and Standards: 2018 IBC, ASCE 7-16, ANSI/AISC 341-16, ANSI/AISC 360-16, AISC 325, ACI 318-14, ACI 360R-10, PCI Design Handbook.
- Linear/non-linear statics/dynamic analysis of structural systems.
- Performance-Based Design Approaches.
- Simulation of manmade and natural hazards (earthquake/ hurricane/ blast/ flood/ fire)
- Maintenance, retrofitting and construction of the infrastructural facilities.

Proficient Software Skills:

FEA and Design Software: ABAQUS CAE, SAP 2000, ETABS, OpenSees.

Other software Skills: PROKON, Auto-CAD, Land Development, Civil 3D, HAZUS-MH, GIS (ArcGIS and QGIS), Remote Sensing,

Materials Selection Software: CES EduPack.

Other Skills: Programing Languages (Python- SciPy and NumPy, C), MATLAB, Mathematica, Microsoft Office.

EXPERIENCES

Research Assistant

UNIVERSITY OF MISSISSIPPI, Oxford, Mississippi, United States, *August 2016- Present*

- *Research focus on stability analysis of structural systems and multi-hazard objective resilience of infrastructural facilities.*

Relevant Publication: Dahal P, Powell T, & Mullen C. (2019). "Hazard- independent Stability Sensitivity Study of Steel and RC Frame Structures", *Journal of Civil Engineering and Construction*,08(02), 63-69.

DOI: <https://doi.org/10.32732/jcec.2019.8.2.63>

Conference Proceedings/Presentation:

- "Consideration of Post-Earthquake Fire Scenarios for the Objective Infrastructure Resilience", Session: Multi-hazard Considerations for Objective Infrastructure Resilience, **EMI 2019**, Caltech, CA
- "Hazard-Independent Stability Sensitivity Study of Steel and RC Frame Structures", **International Conference on Applied Mechanics and Civil Engineering (AMCE)- Dec 29-30, 2018**, Hong Kong.
- "Hazard-Independent Study of the Stability Sensitivity of the Low Rise Frame Systems Subjected to the Extreme Loading Conditions", (with C. Mullen), ID: A0247, **Engineering Mechanics Institute (EMI) International Conference 2018, November 2-4**, Tongji University, China.
- "Comparison of Stability Sensitivity of Steel Frame and RC Moment Resisting Frame in terms of Asymmetric Hazard Independent Damage Scenarios," (with C. Mullen), Session: Robustness of Infrastructures, **EMI 2018**, Massachusetts Institute of Technology (M.I.T), Cambridge, MA
- "Enhancing Asset Modeling and Design to Improve Community Hurricane Resilience" (with C. Mullen), Session: Asset vs. Community Resilience, with lessons, applications, and knowledge gaps from hurricane Harvey Practice, **EMI 2018**, Massachusetts Institute of Technology (M.I.T), Cambridge, MA
- "Effect of Severe Scour on Seismic Vulnerability of Aging Highway Bridges," (with C. Mullen and Trey Powell), Session MS-91: Advanced Analysis for Earthquake Engineering, **EMI 2017**, San Diego, CA
- "Stability Sensitivity of Low-rise Steel Moment Frames to Asymmetric Distributed Damage States," (with C. Mullen and Trey Powell), Session MS-152: Robustness of Infrastructures (Progressive Collapse), **EMI 2017**, San Diego, CA.
- "Asset and System Modeling- Objective Resilience," (with C. Mullen), Session MS-163: Introduction to EMI Objective Resilience Manual of Practice, **EMI 2017**, San Diego, CA

Teaching Assistant

UNIVERSITY OF MISSISSIPPI, Oxford, Mississippi, United States, *August 2016- Present*

- Finite Element Analysis I, Senior Design, Design of Steel Structures, Structural Analysis, Lab Assistant, Soil Mechanics

Civil- Structural Engineer

WE WORLD ONLUS (International Non-Government Organization, Italian), NEPAL, *Feb 2016- July 2016*

- *Accomplished the reconstruction, retrofitting, and maintenance of school buildings affected by Gorkha Earthquake of 2015, Nepal. (44 Schools- RC and Masonry Structures)*

Technical Director (Board Member)

SAMRIDDHA NEPAL ENGINEERING SERVICES AND RESEARCH CENTER PVT. LTD., NEPAL, August 2015-August 2016

- *Founded an engineering firm and directed its technical aspects being aligned with the prime motto- "Enhancing Quality, maintaining integrity, and prospering sustainability"; estimated turnover ~ 85 Lacs NRs. (approx. 80 k USD).*

Structural Engineer

DIYO NEPAL, NGO / Creative Services Pvt. Ltd., NEPAL, May 2015- July 2015

- *Supervised the design, analysis and factory set-up for the starting phase of "Interlocking Bricks Technology of Construction"*

Civil Engineer

CADS CONSULTANCY & HYDRO-RESEARCH PVT. LTD., NEPAL, Oct 2014- April 2015

- *Responsible for the design, repair, maintenance and retrofitting of RC framed and masonry buildings; worked total on 17 buildings.*

Part Time Student Mentor

UNIVERSAL ENGINEERING AND SCIENCE COLLEGE, NEPAL, Nov 2014-April 2015

- Applied Mechanics, Theory of Structures, Design of Reinforced Concrete Structures

Crash-Course Instructor

GOODWILL ENGINEERING SOLUTIONS PRIVATE LIMITED, NEPAL, Jan 2015

- Auto-CAD, SAP 2000

Civil Engineering Intern

CADS CONSULTANCY & HYDRO-RESEARCH PVT. LTD., NEPAL, Jan 2014- Aug 2014

- *Worked under the supervision of senior engineers for drafting, estimating B.O. Qs and writing technical reports including the preparation of bid documents.*

EDUCATION

Ph.D. in Engineering Science, Civil Structural Engineering, 2016-2020 (Anticipated-May,2020)

UNIVERSITY OF MISSISSIPPI, University, Mississippi, United States **(4.0/4.0)**

Dissertation: *Incorporation of Post-Earthquake Fire (PEF) and Subsequent Aftershock for Multi-Hazard Analysis of Steel Buildings.*

Bachelor's in Civil Engineering, 2010-2014

TRIBHUVAN UNIVERSITY, Central Campus, Pulchowk, IOE, Kathmandu, Nepal **(3.85/4.0)**

PROFESSIONAL REGISTRATIONS

E.I.T.- Mississippi Board (not enrolled yet, Passed F.E. Exam, August 2018)

Category 'A' Civil Engineer – Nepal (11373- NEC registration number)

PROFESSIONAL SOCIETY MEMEBERSHIP SERVICES

American Society of Civil Engineering (ASCE) -Student Member (ID:11302279)

Earthquake Engineering Research Institute (EERI)- Student Member (ID: 19467)

Structural Engineering Institute (SEI)

Advisor, Nepalese Students' Association at Ole miss (NEPSA)

Registered Engineer, Nepal Engineering Council (Reg. no: 11373)

Past Member, Civil Engineering Students' Society (CESS Nepal, Pulchowk Campus), Public Relation coordinator

LEADERSHIP

Technical Director, Samriddha Nepal Engineering Services and Research Center Pvt. Ltd., NEPAL, Est. 2015

Public Relation Coordinator, 6th National Civil Engineering Exhibition cum Competition, CESS NEPAL, Dec. 2013

HONORS AND AWARDS

Student Development Grant Award (April, 2019)- Division of Student Affairs, Ole Miss.

School of Engineering Award (May 2018)-Wood Society, School of Engineering, Ole Miss.

Graduate School Fellowship (May 2017 & May 2018)- Graduate School, Ole Miss

Graduate Assistantship (August 2016-May 2020)- Department of Civil Engineering, Ole Miss

Merit Based Scholarship (December 2010-December 2014)- IOE, Nepal