Sudan Pandey

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CV Date: 01/30/2026

EDUCATION

Ph.D., Civil Engineering, University of Arizona (Expected May 2026)

M.S., Structural Engineering, Asian Institute of Technology, Thailand, 2017

B.E., Civil Engineering, Tribhuvan University, Nepal, 2010

EXPERIENCE

2020- 2026 Graduate Research Assistant, Civil & Architectural & Engineering Mechanics, University of Arizona, Tucson

- Member of a multi-university collaborative research team focused on studying behavior and seismic performance of collector connections.
- Developed 3D and 2D finite element models of steel seismic collector connections, including roof and floor systems, using ANSYS to evaluate structural behavior and performance.
- Led the development of instrumentation plans, loading protocols, post-processing of experimental data, finite element model validation, high-fidelity collector connection models, and parametric study.
- Performed nonlinear modeling of archetype steel buildings and conducted Nonlinear Time History Analyses (NLTHA) to evaluate seismic demands on collector connections.
- Designed large-scale steel collector connection test specimens in accordance with AISC 360, AISC 341, and ASCE 7 provisions.
- Conducted 3D and 2D finite element modeling of welded joints between cast steel and HSS sections using ANSYS, including failure prediction using ductile fracture index and void growth index.
- Integrated numerical and experimental research focused on the prequalification and fatigue performance of cast steel–HSS welded joints.

2022- 2026 Graduate Teaching Assistant, Civil & Architectural & Engineering Mechanics, University of Arizona, Tucson

- Served as an instructor for Behavior of Building Systems, Materials Testing Laboratory, and Statics for undergraduate students.
- Served as a TA for multiple courses, including Statics, Steel Design, and Mechanics of Solids, across different semesters.

2018- 2020 Project Engineer, AIT Solutions, Asian Institute of Technology, Thailand

- Performed performance-based seismic design of tall building structural systems in accordance with PEER TBI, LATBSDC, ASCE 7, ASCE 41, and ACI provisions, including development of seismic design methodology, performance objectives, acceptance criteria, and nonlinear modeling and analysis using Perform-3D and ETABS.

2017-2018 Wind and Structural Engineer, AIT Solutions, Asian Institute of Technology, Thailand

- Conducted wind tunnel testing including High Frequency Force Balance (HFFB) tests using rigid models and force sensors, cladding pressure tests using rigid models and pressure sensors, and pedestrian-level wind speed tests using Irwin probes to evaluate wind loads and comfort criteria.
- Performed post-processing of wind tunnel test data using MATLAB, including development of design wind loads, cladding pressure coefficients, and pedestrian-level wind comfort analyses.

2015 Civil Engineer, ERMC Pvt. Ltd. Nepal.

- Responsible for reconnaissance of the national highway bridges.

HONORS AND AWARDS

- Delbert R. Lewis Graduate Fellowship, University of Arizona, Academic Year 2025-2026
- Dr. Russell D. Whitenack Endowed Scholarship, University of Arizona, Academic Year 2025-2026
- Roots for Resilience (R4R) Program Scholarship, University of Arizona, Fall 2024
- Received the “Award for Excellence at the Student Interface” for outstanding performance as a Teaching Assistant, Academic Year 2022–2023
- Nepal Bidhya Bhusan ‘Kha’, Government of Nepal’s highest academic honor, awarded for excellence in Master of Engineering, 2018
- His Majesty The King’s Scholarships, Full scholarship for Master of Engineering in Structural Engineering, Asian Institute of Technology, Thailand, 2015-2017
- Tribhuvan University Merit Scholarship, Awarded for Bachelor of Engineering in Civil Engineering, Kathmandu, Nepal, 2010-2014

PUBLICATIONS

Google Scholar: https://scholar.google.com/citations?user=3by7zkIAAAAJ&hl=en

Journal Publications

Bokhari, I., Pandey, S., & Fleischman, R. B. (2025, April). Experimental evaluation of welded interfaces between steel castings and round HSS for building construction. *In Structures* (Vol. 74, p. 108521). Elsevier.

Conference Publications

1. S. Pandey, R. Sause, R. Fleischman, J. Ricles, Thomas M. Marullo. Large-Scale Experiments of Steel Seismic Collectors. *Proceedings of the 13th National Conference in Earthquake Engineering*, Earthquake Engineering Research Institute, Portland, OR. 2026. (*In Review*)

2. S. Pandey, R. Sause, R. Fleischman, J. Ricles, C.M. Uang, C. Li. Behavior and Performance of Steel Seismic Collector Connections. *Proceedings of the 11th European Workshop on the seismic behavior of Irregular and Complex Structures (EWICS 2026)*, Seville, Spain, October 15-26. 2026. (*Abstract Accepted*)

3. S. Pandey, R. Fleischman, R. Sause, J. Ricles, C.M. Uang. Large-Scale Experiments of Steel Seismic Collectors. *Proceedings of the 10th International Workshop on Connections in Steel Structures*, American Institute of Steel Construction (AISC), Cincinnati, Ohio, July 7-10, 2026. (*Abstract Accepted*)

4. Pandey S, Fleischman R, Sause R, Ricles J, Uang CM, Behavior of Seismic Collectors in Steel Building Structures. *12th National Conference on Earthquake Engineering*. 2022; EERI, Salt Lake City, UT.

5. Najam, F, Joshi S, Pandey S, Vasanthapragash, N, Warnitchai, P, A Response Modification Analysis (RMA) Procedure to Determine Nonlinear Seismic Demands of High-Rise RC Shear Wall Buildings. *17th World Conference on Earthquake Engineering*. 2020; WCEE, Sendai, Japan.

6. Pandey, S., Warnitchai, P., Vasanthapragash, N., Najam, F. (2017). Development of Modal Hysteretic Model for the Seismic Response Analysis of Tall Buildings with RC Shear Wall. *In Proceedings of the 7th Asia Conference on Earthquake Engineering*. 2017; ACEE, Bangkok, Thailand.

PRESENTATIONS

"Performance of Collector Connections under MCE Loadings," Graduate Research Seminar, University of Arizona, 05 November 2025.

"Use of NHERI Facility to Understand the Behavior of Seismic Collectors in Steel Building Structures," ATLSS Engineering Research Center at Lehigh University, 25 June 2025.

"Overview of Large-Scale Testing of Steel Seismic Collectors in Steel Building Structures," Graduate Research Seminar, University of Arizona, 13 November 2024.

"Wind Tunnel Testing," 8th Joint Student Seminar on Civil Infrastructure, Asian Institute of Technology, Thailand, 12-13 September 2019.

TEACHING EXPERIENCE

Course #	*Title*	*Term*	*Enrollment*
CE 389	Materials Testing Laboratory	FALL 2022	26
CE 389	Materials Testing Laboratory	SPRING 2023	36
CE 214	Statics	SUMMER 2023	20
CE 214	Statics	SUMMER 2024	17
CE 214	Statics	SUMMER 2025	16
CE438	Behavior of Building Systems	SPRING 2026	31

TEACHING ASSISTANT EXPERIENCE

Course #	*Title*	*Term*	*Enrollment*
CE 333	Steel Design	FALL 2020	35
CE 438	Behavior of Building Systems	SPRING 2021	36
CE 215	Mechanics of Solids	SUMMER 2021	17
CE 214	Statics	FALL 2021	69
CE 214	Statics	SPRING 2022	37
CE 214	Statics	FALL 2023	90

VOLUNTEERING

- Rapid Visual Assessment of Buildings after the April 2015 Gorkha Earthquake, Kathmandu, Nepal, (April 2015)
- Bamboo Temporary Shelter Construction, Sindhupalchok, Nepal (June 2015)
- AIT Student Union, Asian Institute of Technology, Thailand, (2016)

SERVICE

- Paper reviewer for 12th and 13th U.S. National Conference on Earthquake Engineering (NCEE)
- President, Civil Architectural and Engineering Mechanics Graduate Association (CAEMGA), 2023-2024, University of Arizona
- Member, Civil Architectural and Engineering Mechanics Graduate Association (CAEMGA), 2022-2023, University of Arizona