LIST OF PUBLICATIONS

Patent:

- **Bhartiya, R.,** and Hassan, A. (2025). "A method of constructing advanced rotated multi-cellular double skin tube columns (RMCDSTCs) for enhanced structural performance." Indian Patent Application Publication No. 202531071018 A, published on August 1, 2025.

Book Chapter:

- Sahoo, D. R., and **Bhartiya, R.** (2024). "Cyclic stress–strain model for circular concrete-filled steel tubular columns.", *Lecture Notes in Civil Engineering*, *Springer Nature*, 511 LNCE, 113-120.

Peer-Reviewed Journals:

- Ghate, N., **Bhartiya, R.**, and Adhikary, S. D. (2026). "Double-layered hybrid GFRP–steel reinforced concrete beams: flexural response, ductility, and failure modes." *Materials and Structures*, https://doi.org/10.1617/s11527-026-03320-0
- Rameshan, A. and **Bhartiya, R.** (2026). "Influence of slenderness, edge stiffeners, and built-up configuration on axial capacity of cold-formed steel columns." *Journal of Structural Design and Construction Practice*, **in press**. https://doi.org/10.1061/JSDCCC/SCENG-2400
- Choudhary, N., Gupta, T., Dwivedi, A., Samal, B. B., Roy, P., **Bhartiya, R.**, and Bhattacharya, B. (2026). "Peridynamics modeling and experimental investigation of wave isolation in shells and mechanical metasurfaces." *Thin-Walled Structures*, 114850
- Hassan, A., Dar, M.A., **Bhartiya, R.**, and Bhat, J.A. (2026). "Modified concrete confinement model for multi-cell double-skin tubular columns." *Journal of Structural Design and Construction Practice*, https://doi.org/10.1061/JSDCCC/SCENG-2225
- Sharma, K., **Bhartiya, R.**, and Das, S. K. (2026). "Sustainable mortars using overburden-derived M-sand and coal bottom ash: Mechanical properties, durability and life cycle assessment." *Construction and Building Materials*, 506, 144937.
- Hassan, A., and **Bhartiya, R.** (2025). "Multi-cell double-skin tubular columns with rotated inner tube: axial design and testing." *Journal of Constructional Steel Research*, 236, 110060.
- Hassan, A., **Bhartiya, R.**, and Ranjan, A. (2025). "Experimental evaluation and design recommendations for stiffener placement in square double-skin tubular columns." *Mechanics of Advanced Materials and Structures*, 2570523
- Mallikarjuna, A., Yadav, D., **Bhartiya, R.**, Oinam, R. M., and Sahoo, D. R. (2025). "Seismic retrofitting of existing non-ductile open-ground story RC frames by partial infilling with RC shear walls: Experimental study." *Engineering Structures*, 335(7), 120397.

- Sahu, S., Sahoo, D. R., and **Bhartiya, R.** (2025). "Lateral cyclic performance of shear-critical concrete beams reinforced with high-strength steel stirrups." *Structures*, 73(3), 108380.
- **Bhartiya, R.**, Sahoo, D. R., and Oinam, R. M. (2023). "Cyclic axial stress-strain model for circular CFST columns under compression loading." *Soil Dynamics and Earthquake Engineering*, 164, 107588.
- **Bhartiya, R.**, and Sahoo, D. R. (2021). "Prediction of axial compression behavior of rectangular RCFST columns with confining ties." *Journal of Constructional Steel Research*, 186, 106920.
- **Bhartiya, R.**, Oinam, R. M., Sahoo, D. R., and Utkarsh, K. (2021). "Modified confinement model for monotonic axial behavior of concrete-filled tubular columns." *Journal of Constructional Steel Research*, 180, 106570.
- **Bhartiya, R.**, Sahoo, D. R., and Verma, A. (2021). "Modified damaged plasticity and variable confinement modelling of rectangular CFT columns." *Journal of Constructional Steel Research*, 176, 106426.

Conference Proceedings:

- Pawar, N., and **Bhartiya, R.** (2026). "SRC–RC Hybrid Frames: Selective Column Replacement for Seismic Resilience." *12th International Conference on the Behaviour of Steel Structures in Seismic Areas (STESSA)*, IIT Delhi, India
- Choudhary, N., Gupta, T., Dwivedi, A., Samal, B. B., Roy, P., **Bhartiya, R.**, and Bhattacharya, B. (2026). "Peridynamics Shell Theory with Damping: Application to Wave Isolation in Mechanical Metasurfaces." *International Mechanical Engineering Congress & Exposition*, India, 3–5 September 2026 (Paper No. IMECE-India2026-188863)
- Pawar, N., Maheshwari, R., and **Bhartiya, R.** (2025). "Enhancing Earthquake Resistance in Reinforced Concrete Structures using Steel-Concrete Composite Columns." *International Conference on Smart Resilient and Sustainable Infrastructure (SRISTI)*, IIT (ISM) Dhanbad, India
- Pawar, N., Maheshwari, R., and **Bhartiya, R.** (2025). "Innovative use of Steel-Concrete Composite Columns for Earthquake-Resistant Open-Ground Story RCC Buildings." *International Conference on Smart Resilient and Sustainable Infrastructure (SRISTI)*, IIT (ISM) Dhanbad, India
- Ranjan, A., **Bhartiya, R.** and Hassan, A. (2025). "Post-fire Behavior of Concrete-filled Steel Tubular Columns." *International Conference on Smart Resilient and Sustainable Infrastructure (SRISTI)*, IIT (ISM) Dhanbad, India
- Sahoo, D. R. and **Bhartiya, R.** (2023). "Cyclic stress-strain model for circular concrete-filled steel tubular columns." *Second International Conference on Advances in Civil Infrastructure and Construction Materials (CICM 2023)*, Dhaka, Bangladesh

- Abhilash, M., **Bhartiya, R.**, Oinam, R., and Sahoo, D. R. (2022). "Comparative study on mitigation of soft storey effects by FRP wrapping and addition of shear-walls." *Proc., Socio-Technological Aspects of Seismic Disaster and its Mitigation (STASDM),* IIT Guwahati, India
- **Bhartiya, R.**, Sahoo, D. R., and Oinam, R. (2020). "Influence of length-to-depth ratio on monotonic compression behaviour of concrete-filled tubular columns." *Proc., fib Symp. 2020: Concrete Structures for Resilient Society*, Shanghai, China, 392–398.