Stanford



Bryam Astudillo

Ph.D. Student in Civil and Environmental Engineering, admitted Autumn 2022

Bio

HONORS AND AWARDS

- Shah Fellowship on Catastrophic Risk in Civil and Environmental Engineering, Stanford University (2023-2024)
- Fulbright Scholarship for Foreign Students, Fulbright (2020-2022)

EDUCATION AND CERTIFICATIONS

- MS in Civil Engineering, Oregon State University (2022)
- BS in Civil Engineering, Universidad de Cuenca (Ecuador) (2018)

LINKS

- www.bryamastudillo.com: https://www.bryamastudillo.com

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Bryam Astudillo has research interests in structural engineering, earthquake engineering, and seismic performance of structures, including performance-based design of innovative structural systems toward the development of more resilient structures. To date, Astudillo has been exposed to many projects involving numerical simulation and full-scale testing of structures subjected to seismic loading, including full-scale testing of a 4-story building at the E-defense shake table.

His current research focuses on the design of resilient structures using strongback frames and energy dissipators such as force-limiting connections.

Publications

PUBLICATIONS

- **Discussion of "Design of BRBs for and Collapse Performance of Strongback Braced Frames with Varying BRB Configurations"** *JOURNAL OF STRUCTURAL ENGINEERING*
  Simpson, B., Astudillo Carpio, B.
  2026; 152 (10)
- **Data Paper: E-Defense Shake-Table Tests on a Steel Moment-Resisting Frame Supplemented With Spines and Force-Limiting Connections** *JAPAN ARCHITECTURAL REVIEW*
  Qie, Y., Astudillo, B., Duncan, J., Tao, Z., Okazaki, T., Fahnestock, L., Sause, R., Ricles, J., Simpson, B., Kurata, M., Kawamata, Y., Hattori, K.
  2025; 8 (1)
- **Modeling uncertainty of specimens employing spines and force-limiting connections tested at E-defense shake table** *EARTHQUAKE ENGINEERING & STRUCTURAL DYNAMICS*

Astudillo, B., Rivera, D., Duke, J., Simpson, B., Fahnestock, L. A., Sause, R., Ricles, J., Kurata, M., Okazaki, T., Kawamata, Y., Tao, Z., Qie, Y.
2023; 52 (14): 4638-4659

- **Seismic performance of steel moment frames considering the effects of column-base hysteretic behavior and gravity framing system** *SOIL DYNAMICS AND EARTHQUAKE ENGINEERING*
  Torres-Rodas, P., Flores, F., Pozo, S., Astudillo, B. X.
  2021; 144

- **Effective Modeling of Special Steel Moment Frames for the Evaluation of Seismically Induced Floor Accelerations** *JOURNAL OF STRUCTURAL ENGINEERING*
  Flores, F. X., Astudillo, B. X., Pozo, S.
  2021; 147 (1)