

## Publications

### Patents

- Shekhar, S., Mathur, R., and **Kumar, M.** (2018). “A system for 3D printing of a concrete structure,” Application Number 201821026589, Indian Patent Office, Mumbai, application filed on July 17, 2018.

### Journals

- **Kumar, M.**, and Whittaker, A. S. (2017). “Effect of seismic hazard definition on isolation-system displacements in nuclear power plants,” *Engineering Structures*, Vol. 148, pp. 424-435.
- **Kumar, M.**, Whittaker, A. S., and Constantinou, M. C. (2017). “Extreme earthquake response of nuclear power plants isolated using sliding bearings,” *Nuclear Engineering and Design*, Vol. 316, pp. 9-25.
- **Kumar, M.**, Whittaker, A. S., Kennedy, R. P., Johnson, J. J., and Kammerer, A. M. (2017). “Seismic probabilistic risk assessment for seismically isolated safety-related nuclear facilities,” *Nuclear Engineering and Design*, Vol. 313, pp. 386-400.
- **Kumar, M.**, Whittaker, A. S., and Constantinou, M. C. (2015). “Characterizing friction in sliding isolation bearings,” *Earthquake Engineering & Structural Dynamics*, Vol. 44, No. 9, pp. 1409-1425.
- **Kumar, M.**, Rai, D. C., and Jain, S. K. (2015). “Ductility reduction factors for masonry-infilled reinforced concrete frames,” *Earthquake Spectra*, Vol. 31, No. 1, pp. 339-365.
- Whittaker, A. S., Kumar, M., and **Kumar, M.** (2014). “Seismic isolation of nuclear power plants,” *Nuclear Engineering and Technology*, Vol. 45, No. 5, pp. 569-580.
- Jain, S. K., Mitra, K., **Kumar, M.**, and Shah, M. (2010). “A proposed rapid visual screening procedure for seismic evaluation of RC frame buildings in India,” *Earthquake Spectra*, Vol. 26, No. 3, pp. 709-729.

### Conferences

- Parsi, S. S., Kumar, M., **Kumar, M.**, Bolisetti, C., Coleman, J., and Whittaker, A. S. (2019). “Implementation and benchmarking of seismic protective devices in MASTODON,” Proceedings of 25<sup>th</sup> Structural Mechanics in Reactor Technology (SMiRT) Conference, Charlotte, USA, August 4-9, 2019.
- Ghosh, R., and **Kumar, M.** (2019). “Evaluation of macro models for masonry-infilled reinforced concrete frames,” Proceedings of 13<sup>th</sup> North American Masonry Conference, Salt Lake City, USA, June 17–19, 2019. (*Honorable Mention Paper Award*)
- Sonpal, A., **Kumar, M.**, and Sarma, H. D. (2019). “Effect of gap between column and masonry infill on the response of masonry-infilled reinforced concrete frames,” Proceedings of 13<sup>th</sup> North American Masonry Conference, Salt Lake City, USA, June 17–19, 2019.
- **Kumar, M.**, and Whittaker, A. S. (2017). “Seismic risk assessment for nuclear power plants: implications of a stop,” Paper 273, Proceedings of 24<sup>th</sup> Structural Mechanics in Reactor Technology (SMiRT) Conference, Busan, Korea, August 21-25, 2017.

- **Kumar, M.**, Whittaker, A. S., and Constantinou, M. C. (2017). “Response of a nuclear power plant isolated using sliding bearings subjected to severe ground shaking,” Paper 4072, Proceedings of 16th World Conference on Earthquake Engineering, Santiago, Chile, January 9-13, 2017.
- **Kumar, M.**, and Whittaker, A. S. (2015). “On the calculation of the clearance to the hard stop in seismically isolated nuclear structures”, Proceedings of 23rd Structural Mechanics in Reactor Technology (SMiRT) Conference, Manchester, UK, August 10-14, 2015.
- **Kumar, M.**, Whittaker, A. S., and Constantinou, M. C. (2013). “Response predictions for Friction Pendulum bearings considering the dependence of friction on axial pressure, temperature and velocity”, Proceedings of 22nd Structural Mechanics in Reactor Technology (SMiRT) Conference, San Francisco, USA, August 17-23, 2013.
- Jain, S. K., Mitra, K., **Kumar, M.**, and Shah, M. (2010). “A rapid visual seismic assessment procedure for RC frame buildings in India”, Proceedings of the 9th U.S. National and 10th Canadian Conference on Earthquake Engineering, Toronto, Canada, July 25-29, 2010.
- Gupta, V. K., **Kumar, M.**, and Kumar, D. (2009). “Peak floor accelerations in multistoried buildings”, Proceedings of BE40CE International Conference on Earthquake Engineering, Banja Luka, Republic of Srpska, Bosnia and Herzegovina, October 26-28, 2009.

### Reports

- **Kumar, M.**, Whittaker, A. S., and Constantinou, M. C. (2019). “Seismic isolation of nuclear power plants using sliding bearings,” Report NUREG/CR-7254, United States Nuclear Regulatory Commission, Washington D.C., USA.
- **Kumar, M.**, Whittaker, A. S., and Constantinou, M. C. (2015). “Seismic isolation of nuclear power plants using sliding bearings,” Report MCEER-15-0006, Multidisciplinary Centre for Earthquake Engineering Research, Buffalo, New York, USA.

### Software

- **Kumar, M.** (2015). “FPBearingPTV,” Element Class, Open System for Earthquake Engineering Simulation (OpenSees), Pacific Earthquake Engineering Research (PEER) Centre, University of California, Berkeley.