

ANU TRIPATHI

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EDUCATION

Doctor of Philosophy- Civil Engineering Aug 2015 - Dec 2020
Department of Civil, Environmental, and Geo-Engineering
University of Minnesota-Twin Cities, Minnesota, USA

Master of Technology- Civil Engineering Jun 2014 - Jul 2015
Department of Civil Engineering
Indian Institute of Technology Kanpur, India

Bachelor of Technology- Civil Engineering Jul 2010 - May 2014
Department of Civil Engineering
Indian Institute of Technology Kanpur, India

FELLOWSHIPS AND AWARDS

- Sommerfeld Fellowship Aug 2015 - Aug 2016
University of Minnesota-Twin Cities, MN
- Working Internship in Science and Engineering (WISE) May -Aug 2013
Deutscher Akademischer Austauschdienst (DAAD), Germany

RESEARCH EXPERIENCE

Postdoctoral Associate May 2021 - present
Robert Morris University, Moon Township, PA
University of Wisconsin-Madison, Madison, WI
Finite element modeling of human head to study traumatic brain injury in youth soccer
Advisers: Prof. Rika Carlsen, Prof. Christian Franck

Graduate Research Assistant Aug 2015- Dec 2020
University of Minnesota Twin Cities, Minneapolis, MN
Chemo-mechanical modeling of stress corrosion cracking in semi-crystalline polymers
Advisers: Prof. Jia-Liang Le, Prof. Susan Mantell

Graduate Research Assistant May 2014 - Jul 2015
Department of Civil Engineering, Indian Institute of Technology Kanpur, India **Seismic Vulnerability Assessment of Stone Masonry Monasteries in Sikkim Himalayas**
Adviser: Prof. Durgesh C. Rai

Research Assistant May - Jul 2013
Department of Civil Engineering, TU Kaiserslautern, Germany **Fiber Reinforced Polymers as Reinforcement and Connectors in Sandwich Panel**
Adviser: Jun. Prof. Dipl. Ing. Matthias Pahn

JOURNAL PUBLICATIONS

1. **Tripathi, A.**, Mantell, S. and Le, J.L., 2021. Chemo-mechanical modeling of static fatigue of high density polyethylene in bleach solution. *International Journal of Solids and Structures*, 217, 90-105.
2. **Tripathi, A.**, Mantell, S. and Le, J.L., 2019. A Morphology Based Constitutive Model for High Density Polyethylene. *Mechanics of Materials*, p.103091.

3. **Tripathi, A.**, and Rai, D.C., 2019. Seismic vulnerability assessment and fragility analysis of stone masonry monastic temples in Sikkim Himalayas. *International Journal of Architectural Heritage*, 13(2), pp.257-272.
4. **Tripathi, A.**, Mantell, S. and Le, J.L., 2017. Modeling of cohesive fracture interacting with a stationary capillary fluid. *Engineering Fracture Mechanics*, 182, pp.19-31.
5. Rai, D. C., Singhal, V., Pradhan, T. and **Tripathi, A.**, 2016. Seismic vulnerability of monastery temples of stone masonry in Sikkim Himalaya. *Current Science*, 110(10), pp.1947-1957.

CONFERENCE PROCEEDINGS

1. **Tripathi, A.**, Le J. L., and Mantell S., 2020. Reduced order kinetics model for corrosion of polyethylene in bleach solution. In 77th Annual Technical Conference and Exhibition of the Society of Plastics Engineers, SPE ANTEC, Society of Plastics Engineers.
2. **Tripathi, A.** and Rai D. C., 2018. Seismic fragility analyses of stone masonry monastic temples in Sikkim. In *11th National Conference on Earthquake Engineering*, Los Angeles, California, USA.
3. Rai, D. C., Tomar, A. S., **Tripathi, A.**, 2015. Recreated Masonry Sub Assemblages for Characterization of the Existing Masonry. In *12th North American Masonry Conference*, Denver, Colorado, USA.

CONFERENCE PRESENTATIONS

1. **Tripathi, A.**, 2020. Reduced order kinetics model for corrosion of polyethylene in bleach solution. *77th Annual Technical Conference and Exhibition of the Society of Plastics Engineers, SPE ANTEC, Society of Plastics Engineers*, San Antonio, Texas, USA. (The Virtual Edition)
2. **Tripathi, A.**, 2018. Morphology dependent damage constitutive model for ductile and brittle failure of semi-crystalline polymers. *International Mechanical Engineering Congress and Exposition, ASME*, Pittsburgh, Pennsylvania, USA.
3. **Tripathi, A.**, 2018. Seismic fragility analyses of stone masonry monastic temples in Sikkim. In *11th National Conference on Earthquake Engineering*, Los Angeles, California, USA.
4. **Tripathi, A.**, 2017. Modeling of Cohesive Crack Interaction with Stationary Capillary Fluid. *Engineering Mechanics Institute Conference*, San Diego, California, USA.

OTHER PRESENTATIONS

1. **Tripathi, A.**, 2019. Morphology dependent damage constitutive model for ductile and brittle failure of semi-crystalline polymers. 3M Panel Session, University of Minnesota, Minneapolis, Minnesota, USA.
2. **Tripathi, A.**, 2019. Morphology based damage constitutive model for ductile and brittle failure of semi-crystalline polymers. Solids seminar, Department of Aerospace Engineering and Mechanics, University of Minnesota, Minneapolis, Minnesota, USA.

PROFESSIONAL ACTIVITIES

1. Earthquake Engineering Research Institute (EERI)
- President, EERI at the University of Minnesota 2018 - 2020
2. Korean Society of Civil Engineers
- Reviewer, Journal of Civil Engineering 2017 - 2019
3. Society of Women Engineers (SWE)
- Graduate Student Mentor 2017 - 2018