EDUCATION

MICHIGAN STATE UNIVERSITY

- **PhD,** Biomedical Engineering, Expected 2021
- **BS,** Mechanical Engineering, 2013

UNIVERSITY OF MICHIGAN

- **MS,** Biomedical Engineering, 2015

LICENSE & CERTIFICATIONS

- Professional Engineer, State of Michigan, #6201068286
- Professional Engineer, State of Illinois, #062.071536

AFFILIATIONS

- Biomedical Engineering Society, 41366

EXPLICO ENGINEERING

PAUL SNYDER, MS, PE

Biomechanics

PROFESSIONAL PROFILE

Mr. Snyder's major area of practice involves the scientific investigation of accidents resulting in traumatic injury. He holds a B.S. in Mechanical Engineering from Michigan State University and a M.S. in Biomedical Engineering from the University of Michigan.

Mr. Snyder is currently working towards a Ph.D. in Biomedical Engineering from Michigan State University, focusing on the initiation and propagation of skull fractures from blunt trauma. His current doctoral research is on the relative contribution of intrinsic skull properties (thickness distribution, density distribution, etc.) versus extrinsic impact properties (implement shape, energy, etc.) that dictate resulting fracture pattern, and how finite element analysis of subject specific skull models might elucidate these relative contributions for better forensic evaluation of skull trauma. These published scientific findings have been presented at biomedical conferences.

AREAS OF EXPERTISE

- Biomechanical Engineering
- Injury Causation Analysis
- Head and Skull Injury
- Low-Speed Vehicle Collision Reconstruction
- Biomechanical Computational Simulation
- Power-Line Accident Reconstruction and Injury Analysis
- Workplace Accident Reconstruction and Injury Analysis
- Railroad Accident Reconstruction and Injury Analysis
- Full-Scale Model Creation, Testing, and Demonstrations

CONTACT INFORMATION

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EXPERIENCE

- **Explico Engineering Company**
  Senior Engineer — 2019-Present
  Engineer — 2018-2019
  Scientist — 2015-2018
- **Biomet, Inc.**
  Product Development Engineer Intern — 2014
- **University of Michigan Health System**
  Research Assistant, Radiation Oncology — 2013-2014
- **Flextronics**
  Manufacturing/Quality Engineering Intern — 2013
- **RWTH Aachen Universitätsklinikum**
  Research Assistant, Heart Valve Bioreactors — 2012
- **Michigan State University Center of Orthopedic Research**
  Research Assistant, Intervertebral Disc Properties — 2011-2012
- **Michigan State University Cardiovascular and Tissue Mechanics Laboratory**
  Research Assistant, Abdominal Aortic Aneurysms — 2011

AWARDS AND HONORS

- International Society of Biomechanics David Winter Young Investigator Award Semi-Finalist, 2019
- Jump Start Grant, University of Michigan Center for Entrepreneurship, 2014
- North American Rockwell Corp. Study Abroad Scholarship, 2012
- Michigan State University Tower Guard, 2010-2011

PRESENTATIONS AND PUBLISHED ABSTRACTS

Snyder P, Figueroa R, Weaver B. Vertical Hand, Stirrup, and Ground Reaction Force in Occupational Railcar Ascent. Summer Biomechanics, Bioengineering, and Biotransport Conference, Lightning Talk, 2020.

Snyder P, Watts D, Sproule D, Rossman S, Button K, Weaver B, Rundell S. Out-of-Position Analysis of Low Speed Rear-End Collision Using a Subject-Specific MADYMO Simulation. Biomedical Engineering Society Annual Meeting, Oral Presentation, 2019.

Snyder P, Rundell S, Fenton T, Haut R, Wei F. Importance of Skull Morphology and Blunt Impact Location in Remote Fracture Initiation. American Society of Biomechanics Annual Meeting, Poster Presentation, 2019.

Sproule D, Rossman S, Snyder P, Button K, Weaver B, Rundell S. Biomechanical Analysis of a Low-Speed Rear-End Collision Using a Subject-Specific MADYMO Simulation. American Society of Biomechanics Annual Meeting, Poster Presentation, 2019.

Snyder P, Rundell S, Fenton T, Haut R, Wei F. The Importance of Skull Morphology in Remote Blunt Impact Induced Fracture Initiation. Summer Biomechanics, Bioengineering, and Biotransport Conference, Poster Presentation, 2019.

Sproule D, Rossman S, Snyder P, Button K, Weaver B, Rundell S. Subject-Specific MADYMO Analysis of a Low Speed Rear-End Collision. Summer Biomechanics, Bioengineering, and Biotransport Conference, Poster Presentation, 2019.

Snyder P, Rundell S, Fenton T, Haut R, Wei F. Local Thickness of the Human Skull Affects Patterns of Cranial Fracture. American Society of Biomechanics Annual Meeting, Poster Presentation, 2018.

Snyder P, Wei F, Haut R, Fenton T, Rundell S. Effects of local thickness distributions on skull fracture due to focal and diffuse parietal impacts. World Congress of Biomechanics, Poster Presentation, 2018.

Dupay A, Snyder P, Lee W, Baek S. Surface Parameterization of an Abdominal Aortic Aneurysm to Characterize Geometrical Evolution During Longitudinal Study of Patients. American Society of Mechanical Engineers Summer Bioengineering Conference, Poster Presentation, 2012.

PROFESSIONAL DEVELOPMENT

- Applying Automotive EDR Data to Traffic Crash Reconstruction, 2019
- Qualified Aerial Work Platform Operator, 2018
- Introduction to RADIOSS for Impact, 2017
- Introduction to HyperMesh & HyperView, 2017
- Introduction to Materialise Mimics Innovation Suite, 2011