

Pranaya Pokharel  
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1. Education

- Ph.D. Mechanical Engineering, Louisiana State University. 2018
- M.S., Mechanical Engineering, McNeese State University, 2011
- B.S., Mechanical Engineering, Tribhuvan University, 2007

2. Academic work experience

- Midwestern State University, Wichita Falls, Texas
  - 2020- Present, Assistant Professor, McCoy School of Engineering
  - 2019-2020, Visiting Assistant Professor, McCoy School of Engineering
- Louisiana State University, Baton Rouge, Louisiana
  - 2011-2018, Teaching Assistant and Research Assistant
- McNeese State University, Lake Charles, Louisiana
  - 2010-2011 Graduate Assistant

3. Non-academic work experience

- UDECO Pvt. Ltd., Nepal
  - 1999-2002, Mechanical Design Engineer, Designed hydro-mechanical parts of a 4 MW hydropower plant

4. Current membership in professional organizations

- American Society of Mechanical Engineers (ASME)
- Society of Automotive Engineers (SAE)

5. Honors and awards

- Topic chair for “Aeronautics and Space Applications in Engineering Education” in the Engineering Education track for International Mechanical Engineering Congress and Exposition (IMECE) 2022
- Topic co-chair for “Fluid Mechanics, Heat Transfer, and Energy Systems” in the Engineering Education track for IMECE 2022
- Global Education Community Outreach award November 2021.
- Midwestern State University Intramural Grant (November 2020 to August 2021, January 2021 to August 2022)
- 1<sup>st</sup> Place Creative Activity: Burton Sharome, Prather Kory, Corbin Jaden, Massey Josiah. Design and Manufacturing of Formula SAE Race Car Chassis. UGRCAF Spring 2023, Midwestern State University
- 2<sup>nd</sup> Place Best Oral Presentation: Criblez Ethan, Shanley Paul, Turner Kennedy, Azzouz Salim, and Pokharel Pranaya. Improved 3D-Printed HX Design and Build Functional Prototype. UGRCAF Spring 2021, Midwestern State University
- BP 1st Block Grant’s Research Assistantship 2011-2013
- Phi Kappa Phi membership, 2011

## 6. Service activities

### a. Within institution

- Worked as a faculty advisor of Formula SAE chapter at Northwestern State University from Spring 2021 to present.
- Worked as a faculty advisor of Nepalese Students Association (NSA) at Northwestern State University from Fall 2021 to present.
- Worked as a member in Master's thesis advisory committee for Mr. Till Gebel, Chalmers University, Sweden.
- Committee member for Teaching and Learning Resource Center (TLRC) from Fall 2020 to 2022
- Worked as a faculty advisor of National Society of Black Engineers (NSBE) from Fall 2019 to present.
- Worked as evaluator of engineering presentations at the Undergraduate Research and Creative Activities Forum (UGRCAF) in Fall 2019, Spring 2020, Fall 2020, Spring 2021, and Fall 2021
- Worked as evaluator of EURECA Proposals in Summer 2020, Fall 2021, Summer 2021, Summer 2022, and Fall 2022

### b. Outside of institution

- Organizing committee member of Mechanical Engineering Graduate Students Association (MEGSA) at Louisiana State University
- Member of Nepalese Students Association (NSA), Louisiana State University
- Organizing committee member for Nepalese Students Association (NSA), McNeese State University

## 7. Publications and presentations

### a. Peer-Reviewed Publications

#### Journal Publications:

- i. Pokharel, P., & Acharya, S. (2021). Dynamics of circular and rectangular jets in crossflow. *Computers & Fluids*, 230, 105111.
- ii. Pokharel, P., Acharya S., "Effect of Turbulence on Cylindrical and Rectangular Transverse Jets". *Computers and Fluids* (In Preparation)

#### Conference Publications:

- iii. Pranaya Pokharel, Jacob Rowland, Trevor Snyder, Luis Gonzalez. Innovations for Clutching and Shifting in Formula-Style Drivetrains. Proceedings of the ASME 2021 International Mechanical Engineering Congress and Exposition. IMECE2022-90587, October 30-November 3, 2022, Columbus, Ohio.
- iv. Mahmoud Elsharafi, Ali Elmozughi, Pranaya Pokharel, Madison Krahl, Musaad Aldawsari, Clayton Holmes, Theo Rolle. Experimental Analysis for a New Design of Thermal Energy Storage System. Proceedings of the ASME 2021 International Mechanical Engineering Congress and Exposition. IMECE2021-67656, November 1-4, 2021, Virtual Conference.

- v. Mahmoud Elsharafi, Ali Elmozughi, Pranaya Pokharel, Madison Krahl, Musaad Aldawsari, Clayton Holmes, Theo Rolle. Simulated Model for a New Design of Thermal Energy Storage System. Proceedings of the ASME 2021 International Mechanical Engineering Congress and Exposition. IMECE2021-68202, November 1-4, 2021, Virtual Conference.
- b. Presentations
- i. Pokharel, P., Azzouz S., “Study and Control of Localized Vortices to Enhance Wind Turbine Power Generation”. Presented at Celebration of Scholarship, Spring 2023, MSU Texas, Wichita Falls, TX.
  - ii. Antoine, T., Joseph G., Warner N., Pokharel P., “Engine Dynamometer for FSAE Cars”. Presented at UGRCAF, Fall 2022, MSU Texas, Wichita Falls TX.
  - iii. Pokharel, P., Azzouz S., “Investigation of the Power Generated by a 3-D Printed Wind Turbine Using a Wind Tunnel”. Presented at Celebration of Scholarship, Spring 2022, MSU Texas, Wichita Falls, TX.
  - iv. Pranaya Pokharel, Jacob Rowland, Trevor Snyder, Luis Gonzalez. Innovations for Clutching and Shifting in Formula-Style Drivetrains. Presentation at International Mechanical Engineering Congress and Exposition. IMECE2022-90587, October 30-November 3, 2022, Columbus, Ohio.
  - v. Pokharel, P., Azzouz S., Gebel T., “Investigation of the Power Generated by a 3-D Printed Wind Turbine Using a Wind Tunnel”. Presented at IMECE, November 5, 2021.
  - vi. Luiz Gonzalez, Jacob Rowland, Trevor Snyder, and Pranaya Pokharel. Shifter Mechanism with Integral Hand Clutch for Formula SAE. UGRCA Fall 2021, MSU Texas, Wichita Falls, TX.
  - vii. Edvin Benjamin, Tina Johnson, and Pranaya Pokharel. Design of an Exoskeleton using Servo Motors, UGRCA Fall 2021, MSU Texas, Wichita Falls, TX
  - viii. Aldawsari Musaad, Holmes Clayton, Krahl Madison, Rolle Theo, Mahmoud Elsharafi, Pokharel, Pranaya, and Ali Elmozughi. Experimental and Simulation Model for a New Design of Thermal Energy Storage System. UGRCA Fall 2020 and Spring 2021, MSU Texas, Wichita Falls, TX. Virtual Presentation.
  - ix. Aldawsari Musaad, Holmes Clayton, Krahl Madison, Rolle Theo, Mahmoud Elsharafi, Pokharel, Pranaya, and Ali Elmozughi. Experimental and Simulation Model for a New Design of Thermal Energy Storage System. North Texas Area Student Conference, NTASC - SPRING 2021.
  - x. Criblez Ethan, Shanley Paul, Turner Kennedy, Azzouz Salim, and Pokharel Pranaya. Improve 3D, “Printed HX Design and Build Functional Prototype. UGRCA Fall 2020 and Spring 2021
  - xi. Criblez Ethan, Shanley Paul, Turner Kennedy, Azzouz Salim, and Pokharel Pranaya. Improve 3D, “Printed HX Design and Build Functional Prototype. North Texas Area Student Conference, NTASC - SPRING 2021.
  - xii. Hargis Clayton, Kidwell Kyle, Kambabi Pamela Yvonne, Zenkins Jackary, Azzouz Salim, and Pokharel Pranaya. Universal Sprue Fixture with Powered Multi-Axis Rotating Synchronous Parallel Gripper for the AW Bell Cutoff Saw. UGRCA Fall 2019 and Spring 2020, MSU Texas, Wichita Falls, TX

- xiii. Major Tavis, Telemacque Kimberley, Hendrix William, Glenn Hunter, Azzouz Salim, and Pokharel Pranaya. A Tranter Heat MaxChanger Fabricated Using Additive Manufacturing. UGRCA Fall 2019 and Spring 2020, MSU Texas, Wichita Falls, TX
- xiv. Charles Whitling, Jonathan Granger, Arnold James, Sofia Rendon, Jan Brink, and Pokharel Pranaya. Non-Servo Pick and Place Robot used in Clamp and Drill Station with Hopper Feeder. UGRCA Spring 2020, MSU Texas, Wichita Falls, TX
- xv. Pokharel, P., Acharya S., “Turbulence Generation Methods for LES”. Presented at 16th Annual MIE Graduate Student Conference, Louisiana State University, April 22, 2017
- xvi. Pokharel, P., Roy, S., Acharya, S., “Simulations of Oil Plume Trajectory in a Cross-Flow”, Presented at 3rd Annual Deepwater Horizon (DWH) Conference, April 22, Baton Rouge, LA, USA, 2013

8. Professional development activities

- UGRCAF Evaluator 2019, 2020, 2021, 2022, 2023
- EURECA Proposal Evaluator 2019, 2020, 2021, 2022, 2023
- Basic and Applied CFD Training 2021
- ABET Symposium 2021, 2022
- Magic Aire Tour 2023
- Production Machine and Tool, LP factory tour 2020
- Transland factory tour 2020
- Tranter factory tour 2020