**Rebecca Shannon**

683 W. Cherry Street Holyoke, MA 01040 (413) 265-4783 reb.shannon@comcast.net

**Education** **Bachelor of Science in Mechanical Engineering** May 2021 **Master of Science in Mechanical Engineering** May 2022

Western New England University (WNE), Springfield, MA

**Undergraduate GPA: 4.0/4.0** Honors Program, President’s List

Tau Beta Pi Honor Society, Treasurer (2019)

Alpha Lambda Delta Honor Society (2018)

**Courses** Thermodynamics Mechatronics Advanced Fluid Mechanics (Grad)

Heat Transfer Mechanical Vibrations Multiphase Flow (Grad)

Material Science Design of Machine Elements Advanced Energy Systems (Grad)

**Internship** Holyoke Gas and Electric, Holyoke, MA2017-2021

**& Project Cadet Engineer**

* Created tagging system to identify and organize all valves in the system.
* Performed building condition assessment and various safety inspections.
* Evaluated efficiency of electrical generating units.

Western New England University, Springfield, MA

**Research Assistant** (Department of Mechanical Engineering)2020-2021

* Developed a heat transfer model and parameter identification algorithms.
* Analyzed data to determine the effects of microencapsulation on phase change materials.

**Project Solar Panel Snow Plow** 2020

* Worked with a team to develop a product to clear snow off solar panels.
* Placed second at the 2020 PDI Showcase and received Grinspoon Entrepreneurial Concept Award.
* Filed a provisional patent application with investors and professors.

**Publications** C. W. Arden, et al., "Evaluation of Drainage Phase Diagram for PEM Fuel Cell Porous Layer," 2021 20th IEEE Intersociety Conference on Thermal and Thermomechanical Phenomena in Electronic Systems (iTherm), 2021, pp. 1104-1113, doi: 10.1109/ITherm51669.2021.9503245.

M. Mortazavi, R. C. Shannon, and A. Abdollahpour, "Retrofitting a Two-Phase Flow Pressure Drop Model for PEM Fuel Cell Flow Channel Bends," 2021 20th IEEE Intersociety Conference on Thermal and Thermomechanical Phenomena in Electronic Systems (iTherm), 2021, pp. 1114-1122, doi: 10.1109/ITherm51669.2021.9503284.

J. Z. Benner et al., “The Encapsulation Effect on Thermal Performance of Micro-Encapsulated Phase Change Materials During Energy Absorption,” 2021 International Mechanical Engineering Conference and Exposition (IMECE), November 2021, [Rebecca Shannon presenting]

J. Z. Benner et al., “The Effect of Encapsulation on Thermal Characteristics of Micro-encapsulated Phase Change Materials,” *Applied Thermal Engineering*, manuscript submitted for publication.

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**Experience** Fleet Feet, Longmeadow, MA 2021

**Outfitter**

* Teach customers the basics of running shoes and apparel while making personalized recommendations.

Western New England University, Springfield, MA

**Teacher’s Assistant** 2019-2021

* Aided professor in first-year engineering courses.
* Helped undergraduate students complete coding and laboratory assignments.
* Graded homework assignments and lab reports.

**Freshmen Seminar Assistant** 2018

* Assisted first-year engineering students adjust to college life.
* Facilitated first-year student orientation to campus resources.

Holyoke Catholic High School, Chicopee, MA

**Peer Tutor** 2015-2017

* Volunteered to help peers learn challenging topics.
* Explained concepts from science and mathematics.

Holyoke Boys and Girls Club, Holyoke, MA

**Camp Counselor** 2016-2017

* Tutored students aged 5 to 9 after school and during summers.
* Supervised after-school activities and summer field trips.

**Volunteer** Western New England University, Springfield, MA

**Note Taker – Student Disability Services** 2017-2019

* Took notes in challenging courses including MATLAB,   
  Differential Equations, Calculus 3, and Engineering Analysis.

**Golden Bear Host** 2019

* Hosted prospective students for classes and lunch and answered   
  questions about the campus and academics.

Glickman Elementary School, Springfield, MA

**Student Leader** 2017

* Worked with students to design a balloon-powered car.
* Explained physics concepts, such as friction and balanced forces.

**Computer** SolidWorks MATLAB Visual Basic NX

**Skills** Arduino (C/C++) LabVIEW Microsoft Office OpenFOAM

**Activities** American Society of Mechanical Engineers 2017-Present

Intramural Sports Team Captain 2017-2020

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**Awards** **Marston Award** (WNE)2021

Co-Recipient: Awarded to the senior student judged to have the most mature

understanding of the principles of professional engineering practice.

**Dean’s Award for Engineering** (WNE) 2018 and 2021

Presented for earning the highest GPA in the School of Engineering.

**St. Joseph’s Award** (Holyoke Catholic High) 2017

Presented for academic achievement and leadership in school and

community activities.

**Certificate of Merit for Excellence in Science and Math** 2016

Presented by Society of Women Engineers.