Honor Hare

PERSONAL DETAILS

Email	hsha226@uky.edu
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Mobile	(606) 207-4329

EDUCATION

B.S. Physics Expected May 2021
University of Kentucky, Lexington, KY
Minor: Mathematics

B.S Computer Science Expected May 2021
University of Kentucky, Lexington, KY

High School Diploma, with Honors and with Distinction 2017
Gatton Academy of Mathematics and Science
Residential High School at Western Kentucky University, Bowling Green, KY

PROFESSIONAL EXPERIENCE

Undergraduate Researcher Spring 2019 to current
At University of Kentucky with Dr. Bradley Plaster
Modeling SQUID signals with Gaussian, pink, and white noise using ROOT

REU Intern Summer 2019
At Columbia University and Nevis Laboratories with Dr. Georgia Karagiorgi & Dr. Mark Ross-Lonergan
Created filter to improve Fermilab's MicroBooNE identification and selection of delta radiative decay events

Unmanned Aerial Vehicle Assistant Summer 2018
At Telchaquillo, Mexico with Morehead State University Aerial Mapping Project
Assisted pilot in the field.
Assisted in engineering modifications to 3DR Solo drones and prototype KittyHawk drone

Citizen CATE Experiment Researcher Summer 2017
At the National Solar Observatory with Dr. Matthew Penn
Tested Multi-Object Multi-frame Blind Deconvolution on solar coronal images

Citizen CATE Experiment Intern Summer 2016
At the National Solar Observatory with Dr. Matthew Penn
Worked as part of team on post-processing of test run coronal images

Citizen CATE Experiment Master Trainer Jan. 2016 to Aug. 2017
Citizen CATE Experiment with Dr. Matthew Penn
Citizen Continental America Telescopic Eclipse Experiment (Citizen CATE) Experiment
Tested prototype equipment at March 9th, 2016 Indonesian total solar eclipse
Trained and managed 19 CATE observation sites

PUBLICATIONS

Penn M., Baer R., Walter D., Pierce M., Gelderman R., Ursache A., Elmore D., Mitchell A., Kovac S., **Hare H.**, McKay M., Jensen L., et al. "Acceleration of Coronal Mass Ejection Plasma in the Low Corona as Measured by the Citizen CATE Experiment". In: *Publications of the Astronomical Society of the Pacific* 132.1007 (Dec. 2019), p. 014201. DOI: 10.1088/1538-3873/ab558c.

Penn M., Baer R., Bosh R., Garrison D., Gelderman R., **Hare H.**, Isberner F., Jensen L., Kovac S., McKay M., Mitchell A., Pierce M., et al. "Instrumentation for the Citizen CATE Experiment: Faroe Islands and Indonesia". In: *Publications of the Astronomical Society of the Pacific* 129.971 (Dec. 2016), p. 015005. DOI: 10.1088/1538-3873/129/971/015005.

PRESENTATIONS

Hare, H. *Refining Reconstruction of the Single Photon Search.* Batvia, IL: Fermilab MicroBooNE Collaboration Meeting, July 2019.

Hare, H., Syamil R., and Vaught J. *leadChange(now); Students Impacting Community Through Technical Projects.* Cincinnati, OH: Tri-State Women in Computing, Feb. 2018.

R. Bosh, M. Penn, M. McKay, R. Baer, D. Garrison, R. Gelderman, **H. Hare**, F. Isberner, L. Jensen, S. Kovac, A. Mitchell, M. Pierce, et al. *Multi-site Observations of the March 2016 Total Solar Eclipse: Calibration of Images to Simulate Continuous Monitoring.* Grapevine, TX: American Astronomical Society Meeting #229, Jan. 2017.

M. McKay, M. Penn, R. Baer, R. Bosh, D. Garrison, R. Gelderman, **H. Hare**, F. Isberner, L. Jensen, S. Kovac, A. Mitchell, M. Pierce, et al. *Update on the Citizen CATE Experiment: Indonesia to 2017.* Grapevine, TX: American Astronomical Society Meeting #229, Jan. 2017.

A. Mitchell, M. Penn, R. Baer, R. Bosh, D. Garrison, R. Gelderman, **H. Hare**, F. Isberner, L. Jensen, S. Kovac, M. McKay, M. Pierce, et al. *Citizen CATE Experiment and Polar Plume Dynamics.* Grapevine, TX: American Astronomical Society Meeting #229, Jan. 2017.

M. McKay, L. Jensen, S. Kovac, R. Bosh, A. Mitchell, **H. Hare**, Z. Watson, and M. Penn. *CATE 2016 Indonesia: Optics and Focus Strategy.* San Francisco, CA: American Geophysical Union Meeting, Dec. 2016.

M. Penn, M. McKay, S. Kovac, L. Jensen, **H. Hare**, A. Mitchell, R. Bosh, Z. Watson, R. Baer, M. Pierce, R. Gelderman, and D. Walter. *CATE 2016 Indonesia: Science goals and student training for 2017.* San Francisco, CA: American Geophysical Union Meeting, Dec. 2016.

H. Hare, S. Kovac, L. Jensen, M. McKay, R. Bosh, Z. Watson, A. Mitchell, and M. Penn. *CATE 2016 Indonesia: Image Calibration, Intensity Calibration, and Drift Scan.* San Francisco, CA: American Geophysical Union Meeting, Dec. 2016.

Hare H., Bosh R., Gelderman R., and Thompson P. *CATE 2016 Indonesia: Optics and Focus Strategy.* Louisville, KY: Kentucky Academy of Science Meeting #102, Nov. 2016.

L. Jensen, S. Kovac, **H. Hare**, A. Mitchell, M. McKay, R. Bosh, Z. Watson, and M. Penn. *CATE 2016 Indonesia: normalized radial graded filtering, site-to-site image registration, and preliminary results.* San Francisco, CA: American Geophysical Union Meeting, Dec. 2016.

S. Kovac, L. Jensen, **H. Hare**, A. Mitchell, M. McKay, R. Bosh, Z. Watson, and M. Penn. *CATE*

2016 Indonesia: Camera, Software, and User Interface. San Francisco, CA: American Geophysical Union Meeting, Dec. 2016.

AWARDS

Dean's List (GPA >3.6) University of Kentucky
Fall 2017, Spring 2018, Fall 2018, Spring 2019, Fall 2019

Lewis Honors College Scholar University of Kentucky

Presidential Scholarship University of Kentucky
Awarded based on academics. Provides full tuition for 4 years.

LEADERSHIP EXPERIENCE

Career Fair Chair April 2019 to current
University of Kentucky's Association for Computing Machinery Women Chapter

Treasurer Oct. 2018 to April 2019
University of Kentucky's Association for Computing Machinery Women Chapter

Peer Mentor April 2018 to May 2019
University of Kentucky Lewis Honors College

Computer Science Workshop Leader Spring 2018
University of Kentucky: Expanding Your Horizons Conference for Middle School Girls
Designed and co-led circuit and computer programming workshop
Conference on April 20, 2018

Citizen CATE Experiment Workshop Leader April 2017, May 2017
At Tennessee Technological University
At Montana State University

PROGRAMMING LANGUAGES

ROOT	Advanced
C++	Advanced
Mathematica	Advanced
C	Proficient
Python	Proficient
MATLAB	Proficient
Java	Proficient

EXTRACURRICULARS

Hour of Code Volunteer and Workshop Leader
Society of Physics Students Member
Association for Computing Machinery Member
University of Kentucky Chellgren Enrichment Groups Member