Kathryn Hollowood Jones

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Academic History

Roberts Wesleyan College **Rochester, NY**

Bachelor of Science, Physics *Graduated: May 2016*

- Minor: Mathematics
- GPA: 3.88, Magna Cum Laude
- Society of Physics Students (SPS) – President (August 2014 – May 2016)
- MUSE Creative Arts Ministry – Treasurer (August 2014 – May 2015)

Rensselaer Polytechnic Institute **Troy, NY**

Doctor of Philosophy, Biomedical Engineering *Expected Graduation: August 2020*

- GPA: 3.45
- Biomedical Engineering Graduate Council (BMEGC) - Outreach Co-Chair (August 2017 – May 2018)

Research/Teaching Experience

Graduate Research Assistant **Troy, NY**

Rensselaer Polytechnic Institute *August 2016 – December 2016, May 2017 - current*

- Analyze data sets to find differences between samples affected by ASD and control samples
- Univariate hypothesis testing, Fisher Discriminant Analysis (FDA), Logistic Regression, Clustering, and other methods
- Preparing reports, papers, and presentations
- Presenting work at conferences, department symposiums, and NIH training program retreat

Graduate Teaching Assistant **Troy, NY**

Rensselaer Polytechnic Institute *January 2017 – May 2017*

- Assist in answering questions during lecture
- Assist in understanding with classwork
- Grading assignments and exams
- Facilitating additional understanding during office hours

Undergraduate Teaching Assistant **Rochester, NY**

Roberts Wesleyan College *August 2014 – May 2016*

- Preparation of laboratory for lab time
- Answering student questions and advising on approaches for solving laboratory problems
- Lab take down
- Grading lab reports
- Facilitating additional understanding during workshop hours
- Assisting professor during lecture time

NSF-Sponsored REU Student **Melbourne, FL**

Florida Institute of Technology *May 2015 – July 2015*

- Machine learning research in visual computing
- Worked on a team of another REU student, graduate mentor, and faculty mentor

- Produced technical report, video highlights, poster, and 3 podium presentations
- Final symposium: won best presentation and poster out of 5 teams judged by advisory board
- Learned basics of machine learning and produced project on classifying frogs based on their frog call using signal processing and visual computing

Presentations

Metabolites from Blood Samples of Pregnant Mothers Predict the Probability of Autism Diagnosis of the Child (poster), AIChE Annual Meeting 2018, Pittsburgh, PA, USA *October 2018*

Differences in Metabolites Predict Increased Risk of Off-springs being Diagnosed with Autism Spectrum Disorder (poster), FOSBE 2018, Chicago, IL, USA *August 2018*

Analysis of Metabolites from Blood Samples of Pregnant Mothers and Probability of Autism Diagnosis of the Child (oral presentation), NEBEC 2018, Philadelphia, PA, USA *March 2018*

Classifying Frog Calls Using Gaussian Mixture Models and Locality Sensitive Hashing (poster), ERN Conference in STEM 2016, Washington D.C., USA *February 2016*

Publications

Journal Articles:

T. Vargason, G. Grivas, K.L. Hollowood-Jones, and J. Hahn. Towards a Multivariate Biomarker-based Diagnosis of Autism Spectrum Disorder: Review and Discussion of Recent Advancements. *Seminars in Pediatric Neurology,* In Press (2019).

K. Hollowood *et al.*, "Maternal metabolic profile predicts high or low risk of an autism pregnancy outcome," *Res. Autism Spectr. Disord.*, vol. 56, pp. 72–82, Dec. 2018.

Conference Paper: D. Kular, K. Hollowood, O. Ommojaro, K. Smart, M. Bush, and E. Ribeiro, "Classifying Frog Calls Using Gaussian Mixture Models," in *Advances in Visual Computing: 11th International Symposium, ISVC 2015, Las Vegas, NV, USA, December 14-16, 2015, Proceedings, Part II*, G. Bebis, R. Boyle, B. Parvin, D. Koracin, I. Pavlidis, R. Feris, T. McGraw, M. Elendt, R. Kopper, E. Ragan, Z. Ye, and G. Weber, Eds. Cham: Springer International Publishing, 2015, pp. 347–354.

Online Magazine: Hollowood-Jones, K. and Hahn, J. (2019). Researching Biomarkers to Identify Autism Spectrum Disorder in Utero. *Science Trends*. [online] Available at: http://sciencetrends.com/researching-biomarkers-to-identify-autism-spectrum-disorder-in-utero/

Fellowships & Grants

NIH Biomolecular Science and Engineering Training Grant Trainee (5T32GM067545-13) *August 2017 – August 2019*

Honors & Awards

Most Impact on Human Health Award: NEBEC 2018 *March 2018*
Roberts Wesleyan College Smith Science Scholar *May 2016*

Who's Who Among American Colleges and Universities	*May 2016*
Alpha Kappa Sigma Honor Society	*May 2016*
Ogden Family Physics Scholarship	*May 2014 & May 2015*
Sigma Pi Sigma Physics Honor Society	*April 2015*
Roberts Wesleyan College Deans List	*Fall 2012-Spring 2016*

Skills

Python, MATLAB, Java, LaTeX, Maple, Microsoft Office, Leadership, Public speaking, Research, Presentations, Machine Learning, Statistics, Data Science, Teaching, Community Outreach, Social Networking, Teamwork, Event Planning

Past Work Experience

Camp Counselor (Camp Cedarbrook in the Adirondacks; Corinth, NY; June 2016-August 2016), Tutor (Roberts Wesleyan College Learning Center; August 2014-May 2016), Student Telecounselor, Senior Shift Supervisor, Admissions Intern (Roberts Wesleyan College Admissions Office; Rochester, NY; September 2012-May 2016), Greeter and Fountain Worker (Friendly's Restaurants; Clifton Park, NY; June 2014-August 2014), Storefront (Lindsey's Country Store; Clifton Park, NY; September 2011-August 2012)