

Vivaswat Shastry

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Education

University of Wyoming (Jan 2018 - present)

Laramie, Wyoming

M.S. in Botany

University of Wyoming (Aug 2014 - Dec 2017)

Laramie, Wyoming

B.S. in Electrical Engineering

Minor in Interdisciplinary Computational Science

Honors: *summa cum laude*

Academic Work Experience

Department of Botany

Graduate Research Assistant to Alex Buerkle

Jan 2018 - present

- Extended a genotype and ancestry estimation framework to polyploids
- Ported hierarchical Bayesian model for microbial count data to Stan

Department of Electrical and Computer Engineering

Assistant for Engineering Summer Program for Teachers (ESP4T)

May 2016 - Dec 2017

- Employed as a teaching assistant for summer workshops
- Implemented modules for Arduino and Raspberry Pi to be used in the classroom

Department of Mathematics

Undergraduate Research Assistant to Victor Ginting

Aug 2017 - Dec 2017

- Implemented and built a package for a second-order ODE solver in C++

Advanced Research Computing Center

Research Computing Assistant/Senior Intern

May 2016 - Aug 2017

- Investigated benchmarks on the compute cluster to detect bottlenecks

Department of Mathematics

Tutor at the Math Assistance Center

Aug 2015 - May 2016

- Assisted students with calculus, linear algebra and math applications in engineering

Honors & Awards

- Wilhelm G Solheim Scholarship (2019)
- University of Wyoming President's and Dean's Honor Roll
- National Tau Beta Pi Scholarship Award (2017 - 2018)
- Wyoming Engineering Undergraduate Research Award (2014 - 2017)
- Rocky Mountain International Scholarship (2014 - 2017)
- Best Poster at the RMACC HPC Symposium (Boulder, CO - Aug 2017)
- Tau Beta Pi Outstanding Freshman and Outstanding Junior (2015, 2016)
- EPSCoR Undergraduate Research Fellowship (2015 - 2016)
- Carl Oslund (Wyoming Engineering Society) Scholarship (2016)

Leadership & Activities

- Participant of ForBio: Polyploid Population Genetics workshop in Norway (2018)
- Recording Secretary for the Tau Beta Pi Wyoming Alpha chapter (2017 - 2018)
- Selected for Exploring HPC for Undergraduates at SC16, Utah (30 students worldwide)
- Secretary for the International Students' Association at UWyo (2016 - 2017)
- Vice-President/President of the Indian Students' Organization at UWyo (2015 - 2016)

Programming Skills

R	GSL, HDF5, OpenMP, MPI
Python	Stan, JAGS
C/C++	Unix/Linux, bash
MATLAB	CMake, git
Perl	LaTeX, MS Office

Publications

- Harrison, J., Calder, W., **Shastry, V.** and Buerkle, C. (2019). *Dirichlet-multinomial modelling outperforms alternatives for analysis of microbiome and other ecological count data*. [in review at Molecular Ecology Resources, doi.org/10.1101/711317]
- **Shastry, V.** and Buerkle, C. *Model-based genotype and ancestry estimation from sequence data for potentially admixed individuals*. [in progress]

Honor Society Memberships

- Tau Beta Pi - The Engineering Honor Society
- The Honor Society of Phi Kappa Phi
- Golden Key International Honor Society
- The Society for Collegiate Leadership and Achievement (SCLA)

Posters

1. "Parallel Optimization to Obtain a High-Quality Depth Map from an Uncalibrated Small Motion Clip (PDfUSMC)" (Aug 2017)
2. "GPGPU Computing for Numerical Integration Methods on the Jetson TK1" (May 2016)

Extra-curriculars

- Enthusiastic soccer and cricket player
- Casual hiker and camper
- Amateur stand-up comedian

References

C. ALEX BUERKLE (*Graduate Advisor*)

Professor in Botany, University of Wyoming

E-mail: buerkle@uwyo.edu

SURESH S. MUKNAHALLIPATNA (*Undergraduate Advisor*)

Professor in Electrical and Computer Engineering, University of Wyoming

E-mail: sureshm@uwyo.edu

ZACHARIAH GOMPERT (*Collaborator*)

Associate Professor in Evolutionary Biology, Utah State University

E-mail: zach.gompert@usu.edu

CATHERINE E. WAGNER

Assistant Professor in Botany, University of Wyoming

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PAVEL CHERNYAVSKIY

Assistant Professor in Statistics, University of Wyoming

E-mail: pchernya@uwyo.edu