RAEGAN HOEFLER

3009 University Ave. Unit 503 Madison, WI 53705 | 563-599-3429 | rshoefler@wisc.edu

EDUCATION

University of Wisconsin – Madison, Madison, WI

PhD in Plant Breeding and Plant Genetics — **Expected Summer 2022**

- College of Agricultural and Life Sciences — 3.9 GPA
- Department of Agronomy
- Began Summer 2018

Iowa State University, Ames, IA

BS in Genetics — **2014 - 2018**

- College of Agriculture and Life Sciences — 4.0 GPA
- Minor: Agronomy

PUBLICATIONS & PRESENTATIONS

Peer-Reviewed Papers

- Hoefler, R., Gonzalez-Barrios, P., Bhatta, M., Berro, I., Storto Nalin, R., Borges, A., Covarrubias, E., Diaz-Garza, L., Nunes, J., Quincke, M. and Gutierrez, L. *Do spatial designs outperform classic experimental designs?* Journal of Biological, Environmental and Agricultural Statistics. In Review.

Poster Presentations

- Hoefler, R., Gonzalez-Barrios, P., Bhatta, M., Berro, I., Storto Nalin, R., Borges, A., Covarrubias, E., Diaz-Garza, L., Nunes, J., Quincke, M. and Gutierrez, L. *Do spatial designs outperform classic experimental designs?* Poster presented at: Plant and Animal Genome Conference. 2020 Jan 11-15. San Diego, CA.

Invited Oral Presentations

- Hoefler, R. *OSG resources enable research to optimize field experimental designs for agriculture*. Presented at: All Hands Conference. 2020 March. Oklahoma City, OK.
- Hoefler, R. Growing *Maize on Mars: Effects of Irradiation Induced Transposable Element Activity on Plant Survival and Development.* Presented at: Symposium on Undergraduate Research & Creative Expression. 2017 April 11. Ames, IA.
- Hoefler, R. Growing *Maize on Mars: Effects of Irradiation Induced Transposable Element Activity on Plant Survival and Development.* Presented at: Iowa Space Grant Consortium Student Celebration. 2017 March 27. Ames, IA.

LEADERSHIP EXPERIENCE

Treasurer- Plant Sciences Graduate Student Council (UW-Madison) — **Spring 2019-Fall 2020**

- Monitored funds and budgets for monthly social, professional development, and outreach events for all graduate students involved in the plant sciences. Compiled grants to fund the annual Plant Sciences Symposium.

Treasurer- Genetics Club (Iowa State University) — **2016-2017**

- Maintained detailed financial accounts of the club's collection and disbursement of funds.

Peer Mentor- Genetics Learning Community (Iowa State University) — **2016-2018**

- Encouraged first year and transfer student success by facilitating an introductory genetics class, leading a weekly group study session, and assisting in supplementary learning community activities.

Scholar- Cargill Global Scholar Leadership Program **2016-2018**

- Developed leadership skills while networking with students and Cargill employees around the globe.
- Participated in leadership training seminars and one-on-one mentoring domestically and internationally.
- Chosen as one of ten students from across the country.

SERVICE AND VOLUNTEERING

Member- Curriculum Committee (UW-Madison) **Spring 2019-Fall 2019**

- Provided graduate student perspective on committee tasked to develop new system of preliminary and qualifying exams for the Plant Breeding and Plant Genetics Program.

Volunteer- Educational Outreach (UW-Madison) **Fall 2018 & Spring 2019**

- Facilitated educational activities in the subjects of quantitative genetics, agronomy, and plant breeding for groups of middle school students as part of a naked barley outreach project.

Member- Differential Tuition Committee (Iowa State University) **Spring 2017-Fall 2017**

- Nominated by faculty and staff to serve on Differential Tuition Committee as student representation from the genetics department.

Representative- CASE Workshop (Iowa State University) **Spring 2017**

- Chosen as one of two representatives from Iowa State University to attend the Catalyzing Advocacy in Science and Engineering (CASE) Workshop in Washington DC to learn about science policy.

RESEARCH & WORK EXPERIENCE

Dr. Lucia Gutierrez, UW-Madison, Madison, WI

Graduate Research Assistant **July 2018-Present**

- Develop and compare strategies to optimize resource allocation in agricultural field experiments to control within field variation and genotype by environment interaction.
- Develop and compare strategies for phenotyping and envirotyping large multi-environment trials and determine how to incorporate them into a genomic selection model.
- Design, manage, phenotype, and analyze large field experiments.

Dr. Thomas Peterson Lab, Iowa State University, Ames, IA

Undergraduate Lab Assistant **Fall 2016 – Spring 2018**

- Designed individual project, “Growing maize on Mars: Effects of Irradiation Induced Transposable Element Activity on Plant Survival and Development”.
- Proposed project, wrote grant, and received funding through the Iowa Space Grant Consortium.
- Managed several generations of planting, controlled crosses, harvest, and basic care of corn in greenhouses and fields.
- Implemented lab and bioinformatics skills while preparing DNA samples and analyzing whole-genome sequencing data.

Dr. Indira Kudva Lab, USDA, ARS, National Animal Health Center, Ames, IA
USDA Wallace-Carver Fellow **May 2016- August 2017**

- Applied basic genetic analysis to quantify and characterize *Escherichia coli* outbreaks in the food system stemming from cattle populations.
- Examined data for commonalities relating to the severity of infection to derive evolutionary relationships between strains.
- Presented findings to the lab at the end of the fellowship.
- Hired full-time after fellowship ended summer of 2016.
- Helped prepare the first draft of manuscript covering work done over a period of ten months.

Study abroad course to Panama **Fall 2016**

- Focus on agriculture and economics

Dr. Patrick Schnable Lab, Iowa State University, Ames, IA
Undergraduate Research Assistant, First Year Honors Research Program **Spring 2015**

- Analyzed lignin biosynthesis levels in corn and sorghum samples.
- Handled substantial amounts of data and put information into a genome wide association study.

Innovative Ag Services, Winthrop, IA
Crop Scout Intern **Summer 2015**

- Managed the progress and maintenance of over 600 acres of corn and soybean fields.
- Provided written reports to agronomist and growers to express field conditions.

HONORS & AWARDS

- Elwood and Lydia Brickbauer Research Scholarship: 2020-2021
- Bayer Travel Award to attend the Plant and Animal Genome Conference: Spring 2020
- Iowa Space Grant Consortium Research Scholarship and Grant: 2016-2017, 2017-2018
- Iowa State University Women's Club Award: 2017-2018
- Cargill Global Scholars Leadership Award: 2016-2018
- USDA Wallace-Carver Fellowship: 2016-2017
- Sui Tong Chan Fung Highest GPA Award: 2014-2017
- Highest 2% College of Ag and Life Sciences Junior and Senior: 2016-2017
- Gamma Sigma Delta Honor Society of Agriculture: 2016-2017
- Jere Wise Scholarships for Agriculture: 2015-2017
- C.R. Musser/ISU Ag Endowment Scholarships: 2014-2015