

Laura Stoy

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SUMMARY

Innovative researcher and educator passionate about science communication, STEM outreach, pedagogy, and entrepreneurship. Patent-pending inventor and co-founder/COO of RocketJudge.com. Warm and energetic with excellent communication skills.

EDUCATION

2021 (anticipated)

Georgia Institute of Technology, Atlanta, Georgia
PhD. Environmental Engineering

2014

Vanderbilt University, Nashville, Tennessee
BA Chemistry

RESEARCH EXPERIENCE

August 2014 – July 2021

NSF-GRFP Fellow, School of Civil and Environmental Engineering, Georgia Tech

- Planned and completed experiments culminating in an academic journal paper (more forthcoming), conference presentations, and a utility patent.
- Wrote and won grants to secure funding for proposed research (\$150k).

January 2013 – July 2014

Beckman Scholar, Department of Chemistry, Vanderbilt University

- Conducted experiments studying nanoparticle solubility for applications in solar cells.
- Presented research at conferences as both oral presentations and poster presentations, and work led to one peer-reviewed manuscript.

TEACHING & MENTORSHIP EXPERIENCE

May 2020

CIRTL Certificate, Center for Teaching and Learning, Georgia Tech

- Completed a multi-semester preparing future faculty program including pedagogy training and in-classroom practice.

August 2019 – December 2019

Teaching Assistant, School of Civil and Environmental Engineering, Georgia Tech

- Designed and taught lectures and assessments, graded assignments and exams, held review sessions and weekly office hours for graduate level environmental chemistry course (~40 students).

May 2019 – August 2019

Mentor, SURE Program, Georgia Tech

- Trained one undergraduate student in bench chemistry techniques and analysis as well as provided guidance in planning and preparing for graduate school, focusing on problem-solving and resilience.

May 2016 – May 2018

Teaching Fellow, Center for Teaching and Learning, Georgia Tech

- Prepared, and delivered workshops on TA roles and responsibilities, policies and procedures, and sound teaching techniques at TA Orientation each fall and spring to over 500 graduate students total.
- Promoted and demonstrated active learning techniques throughout presentations.

August 2015 – May 2016

Teaching Assistant, School of Civil and Environmental Engineering, Georgia Tech

- Prepared weekly lectures, organized and ran weekly laboratory exercises, giving the students opportunities to build and demonstrate the capability to study environmental samples, conduct laboratory experiments, critically analyze experimental data, and coherently present the results.

April 2014 – August 2016

Instructor, Center for Education Integrating Science, Mathematics, and Computing, Georgia Tech

- Taught 60 elementary school teachers advanced math and science concepts courses, focused on active learning and hands-on activities as part of a Math and Science Partnership grant (NSF).

May 2016 – August 2018

Instructor, Water Treatment Education Project, Georgia Tech

- Awarded \$1000 for a proposal on water treatment education for demos with school-age children.
- Used desktop-sized model to visualize groundwater flow and a hands-on drinking water treatment activity to discuss impacts of pollution and sound water management with students of varying ages.
- Hosted events at Georgia Tech and traveled to local schools to perform demonstration (~200 kids).

August 2014 – August 2016

Volunteer, Women In Engineering, Georgia Tech

- Visited several schools and conducted demos on engineering concepts such as building integrity (building structures from uncooked spaghetti and gummies) and locomotion (balloon-powered cars).
- Discussed careers in science and engineering with children of different age groups (~100 kids).

SCIENCE COMMUNICATION EXPERIENCE

June 2017 – present

Founder & Advisory Chair, ComSciCon-Atlanta

- Coordinated the first-ever ComSciCon-Atlanta in 2018, a two-day workshop for graduate students to explore science communication. Covered topics including interdisciplinary collaboration, creative outlets, and public engagement in academia, and developed skills in science writing, data visualization, mock interviews, storytelling, and more.
- Raised ~\$20,000 in funding from local universities and companies, invited and coordinated 30+ speakers and panelists, accepted 50 attendees (reviewed from >125 applicants).
- Served as advisor for subsequent workshops (2019, 2020, and 2021).

August 2018 – August 2019

Science Communication Fellow, Atlanta Science Festival

- Designed and executed an informal educational event for 50 adult attendees focused on climate change as part of the March 2019 Atlanta Science Festival.
- Event included a 'choose-your-own-adventure' style stakeholder-mapping activity utilizing both active learning and gamification techniques followed by a panel discussion with local climate change experts.

March 2019

Attendee, Catalyzing Advocacy in Science and Engineering Workshop, AAAS

- Selected to represent Georgia Tech at a three-day science policy workshop for graduate students hosted by the American Association for the Advancement of Science.
- Visited offices of Georgia representatives and communicated with staff about science policy priorities.

November 2018 – January 2020

Executive Board member, 500 Women Scientists, Atlanta POD / Union of Concerned Scientists

- Elected to coordinate events within the pod, including monthly networking mixers, and with the greater community, i.e. in conjunction with the Atlanta Science Festival.
 - Designed and led a circuit-building workshop for young girls with the Atlanta Science Festival.
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GRADUATE SCHOOL SERVICE

June 2017 – August 2020

Member, Graduate Student Advisory Council, School of Civil & Environmental Engineering, Georgia Tech

- Provide feedback on the overall graduate program, including reviewing assessment data and suggesting ways to improve the School and its programs.
- Serve as ambassador to the External Advisory Board, alumni, supporters, and prospective students.
- Coordinate and run social and professional programs for current graduate students.

June 2018 – June 2019

Founder, Shut Up and Write! Initiative, Georgia Tech

- Coordinated and ran weekly writing meeting for graduate students (~10) provide professional resources and guides for improved writing practice to attendees, manage program budget (\$1k/year).

May 2017 – December 2017

Group Leader, Grad Groups, Georgia Tech

- Led a group of 15 first-year graduate students through biweekly discussions on the nuances and challenges of graduate school, covering topics including career development and planning, maximizing the advisor/advisee relationship, stress and time management, and maintaining work/life balance.

FELLOWSHIPS & AWARDS

December 2018

John Scarano Memorial Fellowship, Alliance of Hazardous Waste Professionals

- Awarded to support deserving students in environmental health and safety.

August 2018

Science ATL Communication Fellowship, Atlanta Science Festival

- Selected to be one of nine Fellows for a new program from the Atlanta Science Festival to train graduate students and postdocs in science communication.

April 2017

Future Faculty Fellowship, Civil and Environmental Engineering, Georgia Tech

- Awarded by the Civil and Environmental Engineering department to support excellent graduate students through teaching skill development and exploration of academic career opportunities.

April 2017

5th Annual ComSciCon Workshop, Harvard University

- Highly competitive workshop series for graduate students interested in communicating complex and technical science outside of practitioners in the field.

April 2016

Graduate Research Fellowship, National Science Foundation

- Awarded by the NSF to recognize and support outstanding graduate students in NSF-supported STEM disciplines who are pursuing doctoral degrees at accredited United States institutions.

September 2015

Scholarship Award, Environmental Research and Education Foundation

- Awarded by the EREF to recognize excellence in doctoral waste management research and education. Awardees are chosen based on academic performance, professional experience, relevance of project to the advancement of solid waste management science, and potential for success.

September 2014

President's Fellowship, Georgia Institute of Technology

- Competitive fellowship of \$5500/y awarded to promising doctoral students to assist them in preparing themselves for outstanding careers in the discipline of their choice.

January 2013

Beckman Scholar's Fellowship, Vanderbilt University

- Competitive fellowship covering 15 months of honors research as well as lab and travel funding.

PEER-REVIEWED PUBLICATIONS

Stoy, Laura, Diaz, Victoria, & Ching-Hua Huang. Preferential recovery of rare earth elements from coal fly ash using a recyclable ionic liquid. *Currently under review at Environmental Science and Technology*.

Leach, A. D. P., **Mast, L. G.**, Hernández-Pagán, E. A., & Macdonald, J. E. (2015). Phase dependent visible to near-infrared photoluminescence of CuInS₂ nanocrystals. *Journal of Materials Chemistry C*, 3(14), 3258-3265.

SCIENCE WRITING EXPERIENCE

August 2018 – present

Certified Storyteller, Massive Science Consortium

- Pitch, interview, and write articles on science for the public. Paid per article.

November 2018 – June 2020

Lead publication editor & writer, *envirobites*

- Coordinated six publication editors to maintain copy quality for daily publications for *envirobites*, a site dedicated to translating environmental research for the public.
- Performed statistical analysis (using R Studio) on readership, write bios on featured writers, collect news, and more for the monthly newsletter. Distribute to listserv via Mailchimp (readership: 10,000.)

January 2015 – June 2020

Writer, School of Civil and Environmental Engineering, Georgia Tech

- Enhance nontechnical writing skills through conducting interviews and writing news articles bimonthly for the Civil and Environmental Engineering Department website.

ENTREPRENEURSHIP

August 2020 – December 2020

Participant, NSF-ICorps Sites Program

- Investigated commercial viability of technology developed during PhD research. Performed economic analyses and conducted ~50 interviews with various stakeholders, including utility company executives, chemical processing R&D firms, and local environmental officials.

April 2016 – present

COO, Populy Voting Systems LLC

- Work with clients to customize electronic voting platform to their unique event as account manager, guiding them from the basics of event set up through the successful completion of their event.
- Develop and enact different marketing strategies to attract and retain new clients.
- Collect customer feedback and share with programming team to prioritize new software features.
- Expand and capture new market channels beyond senior design expos and undergraduate poster sessions to professional conferences, high school science fairs, and more.

PROFESSIONAL AFFILIATIONS

American Association for the Advancement of Science

American Chemical Society

National Association of Science Writers

Union of Concerned Scientists

Association of Environmental Engineers and Scientists

REFERENCES

Available upon request.