

ALEXANDRA NOVAK

New York, NY

www.linkedin.com/in/alexandra-novak-7a5589127/

atn2122@columbia.edu

EDUCATION

Columbia University New York, NY
MS/PhD in Environmental Engineering Expected May 2026

Union College Schenectady, NY
BS in Chemistry Jun 2017

RESEARCH & PROFESSIONAL EXPERIENCE

NSF Graduate Research Fellow, Columbia University Water Center, New York, NY Sept 2021 – Present

- Assembles database of physical financial parameters for private and public water utilities in the US
- Performs statistical analysis to determine causal variables of high service performance and financial performance
- Surveys utilities on financial and governance strategies to address aging infrastructure and affordability challenges

Woodrow Wilson International Center for Scholars, Washington, DC

Foreign Policy Think Tank, Science Technology and Innovation Program (STIP)

Research Analyst Jan 2023 – May 2023

- Conducted research, organized events, and facilitated workshops on open hardware and open science
- Co-authored, edited, and reviewed white papers, blog posts, and policy briefs

Contractor Mar 2022 – Aug 2022

- Assisted in planning and scoping of roundtables and events related to open science
- Co-authored and revised grants, blog posts, and white papers

Research Intern May 2020 – Jul 2021

- Collaboratively developed and conducted research on low-cost and/or open-source tools for science research
- Convened events, workshops, and interviews with federal and grassroots communities to create policy recommendations for open hardware
- Contributed to grant writing, blog posts, infographics, and white papers for a general public and policy audience

Enumerator, U.S. Census Bureau, Rochester, NY Aug 2020 – Sept 2020

- Surveyed residents in Spanish and English to compile demographic and economic data

Fulbright Research Fellow, Universidad Nacional de Asunción, San Lorenzo, Paraguay Feb 2019 – Dec 2019

No. 1 Research Institute in Paraguay, Department of Physical Chemistry

- As lead scientist, independently designed a study on the adsorption of lead from water by Paraguayan coconut pulp
- Characterized chemical composition of pulp and realized adsorption experiments, quantifying results with spectrometry
- Conducted first analysis on the relationship between lead contamination and Paraguayan water and waste management policy

Applications Engineer (SEM), Thermo Fisher Scientific, Hillsboro, OR Feb 2018 – Jan 2019

Nano Port Department

- Designed and led global research project, resulting in the development of a new SEM method to analyze the recyclability of additive manufacturing powders
- Performed over 10 customer trainings, sales demos, and technical presentations within first year of employment

PEER-REVIEWED PUBLICATIONS

Bellanthudawa, B.K., Nawalage, N.M., Suvendran, S., **Novak, A.**, Handapandgodra, H.M., ... and Dissanayake, M. "[Integration of social, economic, and environmental dimensions in designing rural water supply systems, A study in Sri Lanka](#)," *Current Research in Environmental Sustainability*, 4, 100116, Jan 2022.

Novak, A., Yubero, F., Fertoni, F., Diez Perez, D., Da Silva, B., and Gonzalez, Y. "[Bioadsorption of lead\(II\) over the pulp of *Acrocomia aculeata*](#)," *Eclética Química Journal*, 46(4), 38-46, Oct 2021.

Novak, A. "[Potential sources and impacts of heavy metal contamination in Rio's Carnival](#)," *Fulbright U.S. Student Regional Enhancement Seminar Conference Proceedings*, Nov 2020.

SELECTED WHITE PAPERS, POLICY BRIEFS, TECHNICAL NOTES & ARTICLES

Parker, A. and **Novak, A.** "[A Year of Open Science](#)," *Ctrl Forward*, Feb 2023.

Novak, A. and Dosemagen, S. "[Environmental Impact Assessment of Open Technology](#)," *Branch: Magazine for a Sustainable and Just Internet for All*, Sept 2022.

Chandler, M., **Novak, A.**, Parker, A., Schuett, A., Long, A., and Bowser, A. "[Rethinking Data Quality: Considerations for Low-Cost \(and Open Source\) Science Tools](#)," *The Wilson Center*, Mar 2022.

Novak, A., Schuett, A., Parker, A., Bowser, A., Newbury, E.M.H., and Goguichvili, S. "[The Rise of Cubesats: Shifting Standards to Expand Use](#)," *Ctrl Forward*, Feb 2022.

Novak, A., Schuett, A., Parker, A., Bowser, A., Newbury, E.M.H., and Goguichvili, S. "[The Rise of Cubesats: Opportunities and Challenges](#)," *Ctrl Forward*, Feb 2022.

Bowser, A., Dosemagen, S., and **Novak, A.** "[Intersections between Open Science Hardware \(OSH\) and Citizen Science: Reflections Following CitSciVirtual 2021](#)," *The Wilson Center*, Sept 2021.

Parker, A., Dosemagen, S., Molloy, J., Bowser, A., and **Novak, A.** "[Open Hardware: An Opportunity to Build Better Science](#)," *The Wilson Center*, Apr 2021.

Bowser, A., Long, A., **Novak, A.**, Parker, A., and Weinberg, M. "[Stitching Together a Solution: Lessons from the Open Source Hardware Response to COVID-19](#)," *The Wilson Center*, Feb 2021.

Novak, A. "[The Lack of Environmental Data Is an Obstacle for Progress in Paraguay/La Falta de Información Ambiental: un Obstáculo para Progreso en Paraguay](#)," *Engineering for Change*, Jan 2020.

HONORS & AWARDS

Graduate Research Fellowship Program, National Science Foundation Sept 2021 – Aug 2026

AMS Policy Colloquium Fellow, American Meteorological Society Jun 2022

Fulbright Student Research Grant, The Fulbright Program Feb 2019 – Dec 2019

Sigma Xi Research Honors Society, Union College May 2017

SKILLS

Language English, Spanish, Portuguese

Technical Microsoft Office (Word, Excel, PowerPoint), ArcGIS, R, Python, SWMM, SolidWorks, MATLAB

LEADERSHIP & COMMUNITY INVOLVEMENT

Community Science Fellow, Virtual Jun 2023 – Present
AGU Thriving Earth Exchange

- Manages and collaborates on Tijuana's Secondary Cities community science project from idea to impact
- Identifies project scope, finds and recruits scientific partners, and communicates project results with the general public

Volunteer, Paraguay and Virtual Apr 2019 – Present
Red de Jóvenes de Agua en Paraguay

- Collaborates in the organization of events, projects, and campaigns related to water
- Staff member for third Foro Nacional de Agua y Juventud 2020: managed attendees, created social media content, and tracked organization's presence in social media and press
- Staff member for fourth Foro Nacional de Agua y Juventud 2021: selected and coordinated speakers, moderated sessions, ran workshop on community science

Space Diplomacy Hackathon Volunteer, Virtual Jan 2022 – May 2022
National Science Policy Network and Duke University

- Designed hackathon agenda and timeline
 - Recruited keynote speakers, panelists, and mentors
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