

## PROFILE SUMMARY

Siddhartha Roy is an environmental engineer and research associate, who works in the areas of drinking water, public health, citizen science, international development, and environmental justice. He and his team's scientific and humanitarian relief work, with residents of Flint Michigan, helped uncover the Flint Water Crisis.

Nationalities: India (Citizen by birth); United States (Permanent resident: EB1-A "Extraordinary Ability").

## ACADEMIC HISTORY AND LICENSES

### Virginia Tech, Blacksburg, VA

2018 *Ph.D. in Civil Engineering (emphasis: Environmental Engineering)*

2015 *M.S. in Environmental Engineering*

2014 *Interdisciplinary Water and Health Sciences Graduate Certificate*

### Nirma University, Ahmedabad, India

2010 *B.Tech. in Chemical Engineering*

### State of Virginia, Engineer in Training (EIT)

2020 *Environmental Engineering License #0420072931*

## EXPERIENCE

### 2022+ University of North Carolina, The Water Institute – Chapel Hill, NC

*Research Associate (10/22 – present)*

- Testing, monitoring, and sustainable remediation of lead and toxic metals in rural drinking water systems in low- and middle-income countries (current focus: Ghana)
- Coordinating with WHO, UNICEF, and 3 countries on a global pledge and possible UN resolution towards permanently banning lead components in water systems.

### 2012-22 Virginia Tech, Dept. of Civil and Environmental Engineering – Blacksburg, VA

*Research Scientist (10/20 – 10/22)*

*Postdoctoral Research Associate (04/18 – 09/20)*

*Graduate Research and Teaching Assistant (11/12 – 02/18)*

- Student Leader and Communications Director, Flint Water Study Team: We used citizen science, open data sharing, field sampling, investigative journalism and social media to expose the Flint Water Crisis. Our efforts led to declaration of a "Public Health Emergency" by President Obama, garnered over \$1.2 billion in relief, and informed the 2018 MI Lead and Copper Rule and the 2021 \$1 Trillion federal Infrastructure Bill (H.R. 3684).
- Exemplar water, health disparities and environmental justice projects completed:
  - a. water sampling in 300+ homes in Chicago (South Side) and 3 suburbs revealing harmful and persistent lead in drinking water ([Chicago Tribune front page](#));
  - b. timing and magnitude of [childhood water lead exposure](#) during the Flint Crisis;
  - c. [miscarriages and stillbirths from lead exposure](#) in pregnant women in Flint;
  - d. special education outcomes and psychological health harm in Flint children;
  - e. water lead sampling in public schools in 4 states (<https://youtu.be/dcmgP4VEx50>);
  - f. [citywide surveillance of chlorine in Flint's water](#) and decision tree to help homeowners protect themselves and their families from harmful bacteria.
- Mentored 16 students in research, publishing, and winning national awards.
- Executive producer of the US Water Study podcast ([iTunes](#)) and documentary series ([YouTube](#)) to inspire high school and college students to pursue STEM education.

## AWARDS

- 2021 STAT Wunderkind 2021, STAT News/The Boston Globe  
*(early career heroes of science and medicine across North America)*
- 2020 Young Leadership Award 2020-22, International Water Association  
*(global prize; first Indian and first US nominee)*
- 2017 Graduate Student of the Year (*university-wide*), Virginia Tech
- 2015 Water Is Life Award, American Civil Liberties Union Michigan  
*(For “your courage to shine a light on the Flint water crisis protecting the health of countless residents”)*

## TED TALK

- Science in service to the public good (<https://go.ted.com/Cyoi>), 1.4 million views

## SCIENTIFIC AND POPULAR SCHOLARSHIP

- Documentaries (3)*: PBS NOVA ‘Poisoned Water’ (on Netflix), Discovery
- Media coverage (60+)*: BBC, Chicago Tribune, NPR, Guardian, New York Times, WIRED
- Public talks (100+)*: World Health Organization, MIT, Northwestern, Princeton, Stanford, Georgetown, Middlebury, Tufts, Wesleyan, Notre Dame, Rutgers, UVA, UCLA, EU
- Guest essays (10)*: CNN, American Scientist, Aeon, Undark, Scientific American
- Science workshops and events for middle/high schoolchildren (1,500+ US children)*: Kids’ Tech University (250+ middle school students), Governor’s School of Virginia, Salem City School, Phillips Exeter Academy, George Walton Academy, Episcopal High School, Alexandria City Public Schools, The Collegiate School, Academies of Loudoun
- Total 17 [peer-reviewed scientific articles](#) (986 citations), including in *Water Research*, *Journal of Exposure Science & Environmental Epidemiology*, and *Journal of Water & Health*.
- Research and data websites launched and curated*: [www.uswaterstudy.org](http://www.uswaterstudy.org), [www.flintwaterstudy.org](http://www.flintwaterstudy.org) (over 1 million visits)

## SERVICE

- U.S. Environmental Protection Agency “Social and Community Science” *Federal Committee Expert Member* (2022-present).
- Co-organizer: US-Jordan forced displacement/Syrian refugee crisis conference (2019).
- Instructor*: Six courses for water plant operators sponsored by VA Dept. of Health (2018-21).
- Tutor*: Math/Science (4th Grade), Kipps Elementary, Blacksburg Refugee Partnership, 2018.
- Reviewer*: Graduate Women in Science National Fellowship 2019 Program, American Association for the Advancement of Science’s IF/THEN 2019 program (to select 100 women in science ambassadors for middle school girls), US Stockholm Junior Water Prize, National Science Foundation research grants.
- Referee for scientific journals (2016+)*: American Journal of Public Health, Environmental Science and Technology, Journal of Water and Health, Proceedings of the National Academy of Sciences of USA, Water Research.

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