

## Sindhu Ravuri, B.S., B.A.

### Education

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- B.S. in Bioengineering, University of California, Berkeley** 2020  
Emphasis in Cell & Tissue Engineering
- B.A. in Molecular/Cellular Biology, University of California, Berkeley** 2020  
Emphasis in Biochemistry & Molecular Biology, Honors

### Skills & Qualifications

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**Data-analysis and Scripting languages:** R (data cleaning, data visualization, descriptive statistics, version control, machine learning analysis, statistical and compartmental modeling, nowcasting, and forecasting)

**Statistical Computing Environments:** RStudio

**Other Software/Software Operating Systems:** Microsoft Office Suite, GitHub, GSuite

**Languages:** English – native; Spanish – written and conversational (courses taken: AP Spanish Language and Culture & AP Spanish Literature)

### Research & Academic Positions

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- Data Analyst**, California Department of Public Health Modeling and Advanced Analytics Group 2021–2024
- Parameterized and calibrated statistical and mechanistic models under the guidance of senior statisticians and modelers for advancement of public health policy
  - Led multi-stage mathematical modeling projects focused on (1) wastewater-based nowcasting, (2) behavioral modeling, and (3) health equity
  - Developed forecasting models using wastewater and hospitalization surveillance to be deployed on the public facing website, CalCAT (<https://calcat.covid19.ca.gov/>)
  - Supported completion of research output such as text, figures, presentations and published manuscripts for public health as demonstrated by two peer reviewed scientific publications and 4 manuscripts in preparation
  - Conducted health equity-focused analyses on risk factors and interventions for poorer COVID-19 outcomes
  - Maintained the state health equity dashboard (<https://covid19.ca.gov/equity/>)
  - Presented modeling studies to diverse audience (peers, state leadership, academic, and non-modeling audiences)
  - Collaborated on modeling projects with modeling and non-modeling teams
- Volunteer**, California Department of Public Health Modeling and Advanced Analytics Group 2020–2021  
(COVID Response): Entry level duties related to support and coordination of all Modeling Team functions (e.g., literature reviews, data cleaning/synthesis, memo-writing, project coordination, meeting scheduling/minutes, basic descriptive analysis, etc.)
- ### Community Outreach, Mentorship & Peer Education
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- Senior Adviser & Competition Administrator**, Bioengineering High School Competition (BioEHSC) (UC Berkeley Bioengineering Honor Society) 2020  
Helped to establish a need-based scholarship providing laboratory equipment to low-resource schools, co-led BioEHSC (nation's largest bioengineering high school competition), mentored student teams, and wrote grant applications to secure competition funding
- Internal Vice President**, UC Berkeley Bioengineering Honor Society 2019  
Oversaw ethos & all internal operations for the largest incoming honor society candidate class in history (eg, recruitment, mentorship of new members, organization-wide events and projects, honor society infrastructure, semester schedule, etc.)
- Outreach Committee Chair**, UC Berkeley Bioengineering Honor Society 2018  
Conducted targeted presentations, mentorship programs, events and school visits to connect Berkeley

Bioengineering with high school scholars of underrepresented communities, led workshops on effective scientific presentations/communication for committee members

## Teaching

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### University of California, Berkeley

Breaking Down Bioengineering (BioE 198) – course founder, instructor of record and lecturer (2020) 2020  
General Chemistry (Lecture & Lab) – TA, Lead TA (2017)

### India Community Center

*Kuchipudi* – course founder, instructor of record (first *Kuchipudi* course at ICC) 2026  
Developed app for the course with lesson plan, homework, practice video/audio, student-specific rubric system, vocabulary, and class rules

## Other Experiences

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**Volunteer**, Apne Aap Women Worldwide 2015–2018  
Interviewed, translated and published on child sex trafficking victims for San Jose Mercury News  
Presented advocacy approach for victims of sex trafficking at annual World's Women Congress as *Apne Aap* representative  
Instructor of dance to children housed in New Delhi-based grassroots center

**Kuchipudi Dancer**, Natya Tarangini International School of Dance 2014–present  
Selected to perform internationally for Parliament of India, German Federal Parliament

## Publications

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**Sindhu Ravuri**, Elisabeth Burnor, Isobel Routledge, Natalie Linton, Lauren White & Tomás León. Real-time county-aggregated wastewater-based estimates for the SARS-CoV-2 effective reproduction number. <https://doi.org/10.1016/j.epidem.2024.100803>

Angela M. Rabe & **Sindhu Ravuri**, Rose S. Kantor, Samuel Choi, Joshua A. Steele, Stanislav Forman, Ryan Batjiaka, Seema Jain, Tomás M. León, Duc J. Vugia, Alexander T. Yu. Correlation between wastewater and COVID-19 case incidence rates in major California sewersheds across three variant periods. <https://doi.org/10.2166/wh.2023.173>

Alexander T. Yu, Elisabeth Burnor, Marlene Wolfe, Rose Kantor, Tomas Leon, **Sindhu Ravuri**, Madhura Rane, Mayuri Panditrao, Colleen Naughton, Angela Rabe, Sasha Harris-Lovett, Andrew Abram, Brad White, Joaquin Bradley Silva, Christina Lang, Will Probert, Deb Wadford, Heather Bischel, Seema Jain, Kara Nelson, Alexandria Boehm, Duc J. Vugia. Wastewater for Public Health: Timely, sensitive, and reliable SARS-CoV-2 Omicron variant monitoring in California. <https://doi.org/10.1039/D4EW00845F>

Alexander T. Yu, Bridgette Hughes, Marlene K. Wolfe, Tomas Leon, Dorothea Duong, Angela Rabe, Lauren C. Kennedy, **Sindhu Ravuri**, Bradley J. White, Krista R. Wigginton, Alexandria B. Boehm, Duc J. Vugia (2022, *Emerging Infectious Diseases*). Estimating Relative Abundance of 2 SARS-CoV-2 Variants through Wastewater Surveillance at 2 Large Metropolitan Sites, United States. <https://doi.org/10.3201/eid2805.212488>

Mugdha Thakur, Lauren A White, John Pugliese, David Crow, Phoebe Lu, Natalie Linton, Ryan McCorvie, **Sindhu Ravuri**, Hector M Sánchez C, Brent Siegel, Jason Vargo, Tomás M León (2025, *Frontiers in Public Health*). Keeping a modeling-driven public health dashboard relevant—lessons learned from the California Communicable diseases Assessment Tool. <https://doi.org/10.3389/fpubh.2025.1658645>

## Publications in Progress

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Cassandra O. Sember, Isobel Routledge, Elisabeth Burnor, Andrew Abram, Madhura Rane, **Sindhu Ravuri**, Kelvin Wong, Tomas León, Duc Vugia, Seema Jain, Alexander T. Yu. Using Modeled Fecal Shedding Distributions to Understand Variations in 90-Day Rolling Correlations Between Wastewater Concentrations of SARS-CoV-2 and COVID-19 Cases — California, February 2022–February 2023.

## Recent Presentations

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Angela Rabe, **Sindhu Ravuri**, Seema Jain, Tomas Leon, Duc Vugia, Alexander Yu. Correlation between SARS-CoV-2 Concentration in Wastewater and COVID-19 Case Incidences in Six California National Wastewater Surveillance System (NWSS) Sewersheds. Public Health and Water Conference & Wastewater Disease Surveillance Summit 2022 (Duke Energy Convention Center, Cincinnati, Ohio, USA)

## Awards

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The Anselmo J. Macchi Engineering and Science Scholarship   UC Berkeley	2019
The Hsu Engineering Scholarship   UC Berkeley	2018
Bioengineering Honor Society Inductee   UC Berkeley	2018
The Leadership Award   UC Berkeley	2016
Alpha Delta Phi Literary Scholarship, 1st Place   UC Berkeley	2016
Presidential Volunteer Service Award, Gold   United States Government	2015