

GRAHAM NORTHRUP

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EDUCATION

- **PhD** (in progress), Computational Biology, University of California, Berkeley 2018 – Present
- **BS**, Computational and Applied Mathematics, University of Chicago 2018

PUBLICATIONS

Submitted

- **Northrup GR**, Parratt SR, Rozins C, Laine AL, Boots M. The evolutionary dynamics of hyperparasites. Preprint on *BioRxiv* 2021. doi:10.1101/2021.12.01.470853
- Brook CE, Li Y, Yek C, **Northrup GR**, Lay S, Chea A, Ah Yong V, Parker DM, Man S, Pacheco AR, Mengheng O, Oliveria F, Fahsbender L, Leang R, Huy R, Huch C, Lon C, Tato CM, DeRisi JL, Boots M, Bohl JA, Manning JE. The perfect storm of 2019: An immunological and phylodynamic analysis of Cambodia's unprecedented dengue outbreak. Preprint on *MedRxiv* 2022. doi:10.1101/2022.06.08.22276171

Published

- Lewnard JA, Liu VX, Jackson ML, Schmidt MA, Jewell BL, Flores JP, Jentz C, **Northrup GR**, Mahmud A, Reingold AR, Petersen M, Jewell NP, Young S, Bellows J. Incidence, clinical outcomes, and transmission dynamics of severe coronavirus disease 2019 in California and Washington: prospective cohort study. *BMJ* 2020. doi:10.1136/bmj.m1923
- **Northrup GR**, Qian L, Bruxvoort K, Marx FM, Whittles LK, Lewnard JA. Inference of naturally-acquired immunity using a self-matched negative control design. *Epidemiology* 2020. doi:10.1097/EDE.0000000000001305
- Head JR, Andrejko K, Cheng Q, Collender PA, Phillips S, Boser A, Heaney AK, Hoover CM, Wu SL, **Northrup GR**, Click K, Bardach NS, Lewnard JA, Remais JV. The effect of school closures and reopening strategies on COVID-19 infection dynamics in the San Francisco Bay Area: a cross-sectional survey and modeling analysis. *J. R. Soc. Interface* 2021. doi: 10.1098/rsif.2020.0970
- Brook CE, **Northrup GR**, Ehrenberg AJ, The IGI Testing Consortium, Doudna JA, Boots M. Optimizing COVID-19 control with asymptomatic surveillance testing in a university environment. *Epidemics* 2021. doi:10.1016/j.epidem.2021.100527

TEACHING

Graduate Student Instructor: University of California, Berkeley

- Infectious Disease Dynamics Spring 2020, Spring 2021

Teaching Assistant: University of Chicago

- Introduction to Quantitative Modeling in Biology Spring 2018
 - Introduction to Quantitative Modeling in Biology (advanced) Spring 2017
 - Mathematical Methods for Biological Sciences I & II Fall 2017 & Winter 2018
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PRESENTATIONS

- Bay Area Ecology and Evolution of Infectious Disease, San Francisco, CA. 2023. *Poster presentation.*
- Center for Computational Biology Annual Retreat, Berkeley, CA. 2022. *Poster presentation.*
- Ecology and Evolution of Infectious Disease, Atlanta, GA. 2022. *Poster presentation*
- Computational Biology Core Skills Seminar, Berkeley, CA. 2021. *Oral presentation (hybrid format)*
- Ecology and Evolution of Infectious Diseases Research Seminar, Berkeley, CA. 2021. *Oral presentation*
- Center for Computational Biology Student Seminar, Berkeley, CA. 2021. *Oral presentation*
- Bay Area Ecology and Evolution of Infectious Disease, Davis, CA. 2021. *Oral presentation (delivered remotely)*
- Center for Computational Biology Annual Retreat, Berkeley, CA. 2021. *Poster presentation (delivered remotely)*
- Quantitative Biology Summer Fellows Program, Chicago, IL. 2020. *Oral presentation (delivered remotely)*
- Ecology and Evolution of Infectious Diseases Research Seminar, Berkeley, CA. 2020. *Oral presentation*
- Center for Computational Biology Annual Retreat, Berkeley, CA. 2019. *Oral presentation*
- Infectious Diseases and Immunology Research Seminar, Berkeley, CA. 2019. *Oral presentation*
- Center for Computational Biology Fall Research Symposium, Berkeley, CA. 2019. *Oral presentation*
- Center for Computational Biology Student Seminar, Berkeley, CA. 2019. *Oral presentation*

AWARDS

- Bay Area Ecology and Evolution of Infectious Disease, audience favorite talk
- Center for Computational Biology Annual Retreat Best Poster, runner-up
- National Human Genome Research Institute T32 Trainee
- SMACNA College of Fellows
- University of Chicago Scholar Award
- National Merit Scholar

UNIVERSITY SERVICE

- Center for Computational Biology, Student Lunch Seminar Coordinator (2021 – present)
- Center for Computational Biology, UC Berkeley Retreat Planning Committee (2019)
- Center for Computational Biology Representative, UC Berkeley Graduate Assembly (2018 – present)
- UC Berkeley Graduate Assembly Rules Committee (2019 – 2023)
- UC Berkeley Graduate Assembly Rules Officer (2023 – present)

TECHNICAL SKILLS

- Proficient with Python 2.7 & 3.0, MATLAB, R, LaTeX; Working knowledge of Microsoft Excel, Julia, Maple and Mathematica; Basic knowledge of HTML, SQL, C, C++, and Stan