

Kian Faizi

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Education

California Institute of Technology

PhD in Systems Biology

Pasadena, CA

Sep. 2021 – present

University of California, San Diego

BS in Molecular Biology, Minor in Mathematics

La Jolla, CA

Aug. 2017 – June 2021

Experience

California Institute of Technology

PhD Student, Dr. Rob Phillips

Pasadena, CA

Sep. 2021 – present

Harvard Medical School

Visiting Postgraduate Fellow, Dr. Pam Silver

Boston, MA

June 2022 – Aug. 2022

Salk Institute for Biological Studies

Lab Technician, Dr. Wolfgang Busch

La Jolla, CA

Nov. 2019 – Sep. 2021

Volunteer Research Assistant, Dr. Patrick Hsu

Nov. 2018 – Nov. 2019

Publications

7. **Kian Faizi**, Niko McCarty, and Sasha Targ. "Free-living chloroplasts: a preliminary investigation." **New Science** (2024). [newscience.org](https://www.newscience.org)
6. Rosalind Wenshan Pan, Tom Röschinger, **Kian Faizi**, Hernan G. Garcia, and Rob Phillips. "Deciphering regulatory architectures of bacterial promoters from synthetic expression patterns." **PLoS Computational Biology** (2024). [0.1371/journal.pcbi.1012697](https://doi.org/10.1371/journal.pcbi.1012697)
5. Jingyi Wei, Peter Lotfy, **Kian Faizi**, Sara Baungaard, Emily Gibson, Eleanor Wang, Hannah Slabodkin, Emily Kinnaman, Sita Chandrasekaran, Hugo Kitano, Matthew G. Durrant, Connor V. Duffy, April Pawluk, Patrick D. Hsu, and Silvana Konermann. "Deep learning and CRISPR-Cas13d ortholog discovery for optimized RNA targeting." **Cell Systems** (2023). [10.1016/j.cels.2023.11.006](https://doi.org/10.1016/j.cels.2023.11.006)
4. Matthieu Pierre Platre, Preyanka Mehta, Zachary Halvorson, Ling Zhang, Lukas Brent, Matias Gleason F., **Kian Faizi**, Callum Goulding, and Wolfgang Busch. "Root Walker: an automated pipeline for large scale quantification of early root growth responses at high spatial and temporal resolution." **The Plant Journal** (2023). [10.1111/tpj.16493](https://doi.org/10.1111/tpj.16493)
3. **Kian Faizi**. "In Defense of Basic Science." **Caltech Letters** (2022). caltechletters.org
2. **Kian Faizi**. "Reversing 1.5 Billion Years of Evolution." **New Science** (2022). [10.56416/720qud](https://www.newscience.com/story/10.56416/720qud)
1. Illia Ziamtsov, **Kian Faizi**, and Saket Navlakha. "Branch-Pipe: Improving graph skeletonization around branch points in 3D point clouds." **Remote Sensing** (2021). [10.3390/rs13193802](https://doi.org/10.3390/rs13193802)

Honors and Awards

Center for Evolutionary Science project grant (\$10k) | Caltech

Feb. 2024

New Science summer fellowship (\$33k) | New Science Research, Inc.

Mar. 2022

Halıcıoğlu Data Science Institute scholarship project award | UCSD

May 2021

Halıcıoğlu Data Science Institute scholarship (\$2.5k) | UCSD

Dec. 2019

Eureka! scholarship (\$5k) | UCSD

June 2019

Teaching

The Whale Caltech	2025
Physical Biology of the Cell Max Planck Institute-CBG, Dresden, Germany	2024
Galápagos Expedition and DNA Bootcamp Caltech	2024
Evolution Caltech	2024
Current Research in Biology and Biological Engineering Caltech	2023, 2024
Physical Biology Bootcamp Caltech	2023, 2024
The Great Ideas of Biology Caltech	2023, 2024, 2025
Principles of Biology Caltech	2022
Genetic Inquiry UCSD	2020

Invited Talks

Institut des Sciences des Plantes de Montpellier Montpellier, France	Oct. 2024
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Mentorship, Leadership, and Service

Caltech GO-Outdoors field-based education and curriculum development for local K-12 classrooms	2024 – present
Technical advisor for various climate-focused funding programs: <ul style="list-style-type: none">• Homeworld Collective Garden Grants: reviewed proposals on protein engineering for sustainability (\$1m awarded)• 50Y Manifest Climate Grants: evaluated “fast grants” for high-risk, high-reward climate biotech projects (\$1m awarded)• Caltech Rocket Fund: prepared and presented due diligence reports on cleantech startups competing for non-dilutive funding (\$800k awarded)	2023 – present
Research mentor for visiting high school students: <ul style="list-style-type: none">• G. Milo: modeling freshwater eutrophication and algal blooms• S. Bhattacharya, A. Bhate: mapping human impacts on global phosphorus cycling	2023 – present
Caltech Rocket Fund editorial staff for monthly cleantech newsletter	2023 – present
Pasadena Unified Innovation Expo volunteer judge for local K-8 science fair	2023, 2024
Gordon Research Conference on Mechanisms of Microbial Transcription (poster)	June 2023
Caltech Biology lead organizer for graduate recruitment weekend	Jan. 2023
Caltech Annual Teaching Conference workshop facilitator for new graduate TAs	Sep. 2022
Caltech Accountability Partners Program peer mentor for prospective graduate students	Aug. 2022
Caltech Mycology Club member; helped establish indoor co-op mushroom farm	Dec. 2021 – present
UCSD Tritons Connect peer mentor for alumni	May 2021 – May 2022
UCSD Undergraduate Bioinformatics Club member	Nov. 2017 – June 2021