Elise Cutts

Curriculum Vitae

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**EDUCATION**

2020–Pres. Massachusetts Institute of Technology (MIT), Cambridge, Massachusetts, USA

Ph.D. Geobiology [anticipated 2025], adv. Tanja Bosak

2019–2020 California Institute of Technology (Caltech), Pasadena, California, USA

B.S. Geobiology

2018 University of Edinburgh, Edinburgh, UK

Study abroad (geology)

**PUBLICATIONS**

**Conference Abstracts**

2020 J. Miura, B. Ehlmann, R. Greenberger, E. Cutts “Microimaging Infrared Spectroscopy for Characterization of Martian Meteorite Compositional Diversity.” LPSC LI, Abstract # 2969

2018 E. Cutts, B. Ehlmann, R. Greenberger, J. Beckett, E. Stolper “Visible and Shortwave Infrared Spectroscopy of Martian Meteorites.” LPSC XLIV, Abstract # 2749

**FELLOWSHIPS AND HONORS**

**Fellowships and Grants**

2020–2025 Graduate Research Fellowship, National Science Foundation

MIT, Dept. of Earth, Atmospheric and Planetary Sciences

2020–2021 Ida M. Green Fellowship, MIT

MIT, Dept. of Earth, Atmospheric and Planetary Sciences

2019–2020 Fulbright Grant, Institute of International Education

University of Southern Denmark, Nordcee

2018 James J. Morgan Summer Undergraduate Research Fellowship, Caltech

Caltech, Dept. of Geological and Planetary Sciences

2017 Mary Vodopia Summer Undergraduate Research Fellowship, Caltech

Caltech, Dept. of Geological and Planetary Sciences

2016 Summer Undergraduate Research Fellowship, Caltech

NASA Jet Propulsion Laboratory

**Awards and Honors**

2018 Fritz B. Burns Prize in Geology, Caltech

2017 Howard Reynolds Memorial Prize in Geology, Caltech

2015 Bonnie Cashin Prize for Imaginative Thinking, Caltech

**EXPERIENCE**

**Research**

2020 University of Southern Denmark

Oxygen and Cyanobacterial Carbon Fixation, Adv. Don Canfield

Fulbright Grant

2018 Caltech

Microbial Deep-Sea Chitin Degradation, Adv. Victoria Orphan

U.G. research, James J. Morgan Summer Undergraduate Research Fellowship

2017 Caltech

Imaging Spectroscopy of Martian Meteorites Adv. Bethany Ehlmann

U.G. research, Mary Vodopia Summer Undergraduate Research Fellowship

2016 NASA Jet Propulsion Laboratory

Ocean Carbonate Chemistry of Europa, Adv. Steve Vance

**Teaching**

Teaching Assistant, Caltech Principles of Biology ( 2018, 2019)

Teaching Assistant, Caltech, Astrobiology (2018, 2019)

Teaching Assistant, Caltech, Frontiers in Geology and Planetary Sciences (2018, 2019)

Teaching Assistant, Caltech, Introduction to Planetary Sciences (2017)

**Communications and Publications**

2018-2019 Caltech Office of Strategic Communications

Science Writing Intern

2016–2019 *The Big T* (Caltech Yearbook)

Editor-In-Chief

2018–2019 *The Caltech Letters*

Graphics Editor

**PROFESSIONAL TRAINING**

2020 Introduction to Computer Science and Programming Using Python

MITx, edX course ([certificate](https://courses.edx.org/certificates/9f61cd8cb8174f6ab430a2224182edfe))

2020 Data Analysis for the Life Sciences

HarvardX, edX professional certificate (in progress)

* Statistics and R ([certificate](https://courses.edx.org/certificates/869a3f5cd41f46a9962956020bc3b5e8))
* Introduction to Linear Models and Matrix Algebra (certificate)

2020 Biophotonics

University of Southern Denmark, 5ETCS PhD course ([audited](https://courses.edx.org/certificates/524d5d4891574f3d9ee4306eefcfcb32))

**SCIENCE COMMUNICATION AND OUTREACH**

**Published Science Writing**

2019  [“Learning to Craft Handmade Scientific Tools in the Automated Age,”](https://caltechcampuspubs.library.caltech.edu/3323/1/TheCaliforniaTech_issue28.pdf) *The California Tech*

2019  [“Newly Discovered Giant Planet Slingshots Around Its Star,”](https://www.caltech.edu/about/news/newly-discovered-giant-planet-slingshots-around-its-star) *Caltech News*

2019  [“STEMonstrators Connect With Local Students,”](https://magazine.caltech.edu/post/stemonstrators) *Caltech Magazine*

2019  [“Famed Oceanographer Walter Munk Dead at 101,"](https://www.caltech.edu/about/news/famed-oceanographer-walter-munk-bs-39-ms-40-dead-101-85320) *Caltech News*

2019  [“Electron Tomography Database Changes the Game,"](https://www.caltech.edu/about/news/electron-tomography-database-changes-game-scientific-data-distribution) *Caltech News*

2019  [“Q&A: Creating a Virtual Seismologist,"](https://www.caltech.edu/about/news/qa-creating-virtual-seismologist-84789) *Caltech News*

2019  [“Frances Arnold Wins 2019 Bower Award for Achievement in Science,"](https://www.caltech.edu/about/news/frances-arnold-wins-2019-bower-award-achievement-science-85321) *Caltech News*

2018  [“Cracking Open a Cold One With the Flies,"](https://www.caltech.edu/about/news/cracking-open-cold-one-flies-84527) *Caltech News*

2018  [“Superfast Jet Observed Streaming Away from Stellar Collision,"](https://www.caltech.edu/about/news/superfast-jet-observed-streaming-away-stellar-collision-83414) *Caltech News*

2018  [“Think Outside the Classroom,”](https://caltechcampuspubs.library.caltech.edu/3291/1/2017book.pdf" \l "page=30) *The Big T* Volume 97 “Discovery”

2018  [“From Tycho’s Star to Shakespeare’s Page,”](https://www.caltech.edu/about/news/tycho-s-star-shakespeare-s-page-84196) *Caltech News*

2018. [“Vilcek Foundation Prize Awarded to Mikhail Shapiro,”](https://www.caltech.edu/about/news/vilcek-foundation-prize-awarded-mikhail-shapiro-85213) *Caltech News*

2018  [“Mikhail Shapiro Wins Roger Tsien Award”](https://www.caltech.edu/about/news/mikhail-shapiro-wins-roger-tsien-award-excellence-chemical-biology-83507) *Caltech News*

2017  [“Wonder Women,”](https://caltechcampuspubs.library.caltech.edu/3290/1/2016book.pdf" \l "page=32) *The Big T* Volume 96 “Beyond”

**Podcasting**

2018 Trek.fm Network Podcasts: Warp 5 Episode 136, Earl Gray Episode 237

Guest Scientist

2017–2018 *Strange New Worlds*: A Science and Star Trek Podcast

Co-Host

**Public Talks and Panels**

2018 Caltech Stargazing Lecture: The Science of Star Trek Q&A Panel

**OTHER**

**Additional Published Writing**

2019 *The Big T* Volume 98 “Make It So”” (Editor-in-Chief)

2019 “Letter from the Editor,” The Big T Volume 96 *Make It So*

2019 “Statistically Significant,” The Big T Volume 96 *Make It So*

2018 [“Caltech Scholars Charged to ‘Sculpt’ Their Own Experience”](https://www.caltech.edu/about/news/caltech-scholars-are-charged-sculpt-their-own-experience-learning-83752) *Caltech News*

2018 [“Fox Stanton Track Reopens on South Field,”](https://www.caltech.edu/about/news/fox-stanton-track-reopens-south-field-83285) *Caltech News*

2018 [“Caltech Awards Millikan Medal to Ben Rosen,”](https://www.caltech.edu/about/news/caltech-awards-millikan-medal-ben-rosen-bs-54-84219) *Caltech News*

2018 *The Big T* Volume 97 [“Discovery”](https://caltechcampuspubs.library.caltech.edu/3291/1/2017book.pdf) (Editor-in-Chief)

2018  [“Letter from the Editor,”](https://caltechcampuspubs.library.caltech.edu/3291/1/2017book.pdf" \l "page=142) *The Big T* Volume 97 “Discovery”

2018 [“Good Trouble,”](https://caltechcampuspubs.library.caltech.edu/3291/1/2017book.pdf" \l "page=82) *The Big T* Volume 97 “Discovery”

2018 [“Today Plus One,”](https://caltechcampuspubs.library.caltech.edu/3291/1/2017book.pdf" \l "page=80) *The Big T* Volume 97 “Discovery”

2018 [“Live Long and Prosper,”](https://caltechcampuspubs.library.caltech.edu/3291/1/2017book.pdf" \l "page=74) *The Big T* Volume 97 “Discovery”

2018 [“Lights Calculators Action,”](https://caltechcampuspubs.library.caltech.edu/3291/1/2017book.pdf" \l "page=62) *The Big T* Volume 97 “Discovery”

2018 [“Orders of Magnitude,”](https://caltechcampuspubs.library.caltech.edu/3291/1/2017book.pdf" \l "page=58) *The Big T* Volume 97 “Discovery”

2018 [“Sunfish,”](https://caltechcampuspubs.library.caltech.edu/3291/1/2017book.pdf" \l "page=44) *The Big T* Volume 97 “Discovery”

2018 [“Ce n’est pas en Page,”](https://caltechcampuspubs.library.caltech.edu/3291/1/2017book.pdf" \l "page=28) *The Big T* Volume 97 “Discovery”

2018 [“Spring Force,”](https://caltechcampuspubs.library.caltech.edu/3291/1/2017book.pdf" \l "page=24) *The Big T* Volume 97 “Discovery”

2017 *The Big T* Volume 96 [“Beyond”](https://caltechcampuspubs.library.caltech.edu/3290/1/2016book.pdf) (Editor-in-Chief)

2017 [“Letter from the Editor,”](https://caltechcampuspubs.library.caltech.edu/3290/1/2016book.pdf" \l "page=124) *The Big T* Volume 96 “Beyond”

2017 [“At Last!,”](https://caltechcampuspubs.library.caltech.edu/3290/1/2016book.pdf" \l "page=58) *The Big T* Volume 96 “Beyond”

2017 [“Yeah Beavers!,”](https://caltechcampuspubs.library.caltech.edu/3290/1/2016book.pdf" \l "page=54) *The Big T* Volume 96 “Beyond”

2017 [“If You Build It, They Will Come,”](https://caltechcampuspubs.library.caltech.edu/3290/1/2016book.pdf" \l "page=52) *The Big T* Volume 96 “Beyond”

2017 [“In Comes Company,”](https://caltechcampuspubs.library.caltech.edu/3290/1/2016book.pdf" \l "page=50) *The Big T* Volume 96 “Beyond”

2017 [“Fear or Fun,"](https://caltechcampuspubs.library.caltech.edu/3290/1/2016book.pdf" \l "page=38) *The Big T* Volume 96 “Beyond”

2017 [“Firewall,”](https://caltechcampuspubs.library.caltech.edu/3290/1/2016book.pdf" \l "page=22) *The Big T* Volume 96 “Beyond”

2017 [“Music Theory,”](https://caltechcampuspubs.library.caltech.edu/3290/1/2016book.pdf" \l "page=20) *The Big T* Volume 96 “Beyond”

2017 [“Science by Day, Music by Night,"](https://caltechcampuspubs.library.caltech.edu/3290/1/2016book.pdf" \l "page=40) *The Big T* Volume 96 “Beyond”

**Languages**

English Native

German B2 (intermediate/conversational)

Danish A1 (beginner/basic)