Marina E. Gemma

CONTACT INFORMATION	Department of Earth and Planetary Sciences American Museum of Natural History Central Park West at 79th Street, New York, NY, 10024	email: mgemma@amnh.org website: marinagemma.com phone: +1 212-769-5081

EDUCATION

Columbia University, New York, NY September 2016 – Present
PhD, Earth and Environmental Sciences Expected May 2022
M.Phil. Earth and Environmental Sciences May 2020
M.A. Earth and Environmental Sciences May 2018

Columbia University, Columbia College, New York, NY September 2011 – May 2015
B.A. Astrophysics with a Concentration in Earth Science

PUBLICATIONS

Breitenfeld, L. B., Rogers, A. D., Glotch, T. D., Hamilton, V. E., Christensen, P. R., Lauretta, D. S., **Gemma, M. E.**, Howard, K. T., Ebel, D. S., Kim, G., Kling, A. M., Nekvasil, H., Lindsley, D. H., and DiFrancesco, N. J. (2021). *Machine Learning Mid-Infrared Spectral Models for Modal Mineralogy Predictions of CI/CM Chondritic Asteroids and Bennu.* (submitted to JGR Planets).

Ustunisik, G., Ebel, D. S., Walker, D., Nielsen, R. L., and **Gemma, M.** (2019). *Trace Element Partitioning Between CAI-Type Melts and Grossite, Melilite, Hibonite, and Olivine.* Geochimica Et Cosmochimica Acta, 267, 124146. doi: 10.1016/j.gca.2019.08.038

Mukadam, A., Pyrzas, S., Townsley, D., Gansicke, B., Hermes, J., Szkody, P., Kemp, J., Patterson, J., Ding, C., Wolf, K., **Gemma, M.**, Karamehmetoglu, E., Rock, J. (2016). *Constraining the Angular Momentum Evolution of V455 Andromedae.* The Astrophysical Journal, 821(1), 14. doi: 10.3847/0004-637X/821/1/14

SELECTED CONFERENCE TALKS

Effects of Temperature, Particle Size, and Petrologic Type on VNIR Spectra of Ordinary Chondrite Meteorites (2021)
53rd Annual Meeting of the AAS Division for Planetary Sciences (virtual)

Trace Element Diversity of Chondrule Mesostasis in CV and CR Chondrites (2021)
84th Annual Meeting of the Meteoritical Society

Planetary Data Visualization Using OpenSpace (2020)
Lunar and Small Bodies Graduate Conference

Mapping Mineral Diversity in Ordinary Chondrite Meteorites (2019)
Lunar and Small Bodies Graduate Conference

RESEARCH EXPERIENCE

American Museum of Natural History, New York, NY September 2016 - Present
Graduate Student Researcher, Department of Earth and Planetary Sciences

Research Assistant, Department of Earth and Planetary Sciences June 2015 – June 2016

Stony Brook University, New York, NY Summer 2016 - Present
Visiting PhD Student, Department of Geosciences

American Museum of Natural History, New York, NY January 2014 – May 2015
Research Assistant, Department of Astrophysics

SETI Institute REU Program, Mountain View, CA June 2014 – August 2014
Research Intern

Lamont-Doherty Earth Observatory, Palisades, NY May 2013 – August 2013
Research Intern

MDM 2.4m Telescope, Kitt Peak, AZ January 2014, January 2015
Observing Assistant

AWARDS & HONORS

NASA Travel Award, New York, NY August 2021
LDEO Chevron Student Initiative Grant, New York, NY May 2021
Columbia Outstanding Teaching Assistant Award, New York, NY May 2020
AMNH Kade Fellowship (Delayed due to COVID-19), Paris, France Summer 2020
NASA ESF Student Poster Winner, Mountain View, CA June 2018, 2020
Intel Independent Research Grant, San Clemente, CA July 2009 – June 2010

RESEARCH ADVISING & MENTORING	**Physical Sciences REU Program**	**2018 – Present**

American Museum of Natural History
Research Mentor

- **Mentees:** Rheanna Fleming (2021; **Primary Mentor**); Darby McDaniel (2020; **Co–Mentor**); Julia Gonzales (2019); **Primary Mentor**); Alexander Kling (2018; **Co–Mentor**)

Women in Science at Columbia Undergraduate Mentoring Program   **2020 – Present**
Graduate School/Career Mentor, Columbia University

REU Mentoring Program   **2020**
Graduate School/Career Mentor, Lamont-Doherty Earth Observatory

TEACHING EXPERIENCE

AMNH Department of Education, New York, NY   **2018–2020**
Astrophysics Research Educator
- Instructor for the *Secrets of the Solar System* course for high schoolers.

Columbia Department of Earth and Environmental Sciences, New York, NY   **Present**
Teaching Assistant
- Instructor for undergraduate courses UN1411 *Earth: Origin, Evolution, Processes, Future* and UN2100 *Climate System*, and graduate course GU4113 *Introduction to Mineralogy.*

Columbia Department of Astronomy, New York, NY   **January 2014 – May 2015**
Grading Assistant
- Grader for the courses ASTR C1453 *Another Earth*, and ASTR C1610 *Theories of the Universe.*

PROFESSIONAL EXPERIENCE

Lunar Graduate Conference (LunGradCon), Mountain View, CA   **2019 – Present**
Conference Organizer

UCLA Ion Microprobe Student Workshop, Los Angeles, CA   **February 2020**
Participant

#HacktheSolarSystem @ AMNH, New York, NY   **February 2019**
Project Stakeholder/Scientific Advisor

International Summer School for Astrobiology, Santander, Spain   **June 2017**
NASA Summer School Scholar

COMMUNITY INVOLVEMENT

OpenSpace Project, *Science Ambassador,* New York, NY	**2017 – Present**
Girls Who Code @ Columbia, *President,* New York, NY	**2018 – Present**
Meet the Scientist @ the Intrepid Museum, New York, NY	**2017 – Present**
LDEO Open House, *Volunteer Scientist*, Palisades, NY	**2017 – Present**
Girls Science Day @ Columbia, *Group Leader*, New York, NY	**2016 – Present**
AMNH Identification Day, *Meteorite Identifier*, New York, NY	**May 2017**
Columbia Department of Astronomy, *Outreach Volunteer*, New York, NY	**2013 – 2015**

SELECTED MEDIA & OUTREACH

Astronomy Online Public Programs, New York, NY   **March 2020 - Present**
American Museum of Natural History
- **Presenter:** 6 programs
- **Chat Scientist:** 9 programs

Cosmic Conversations Series, San Francisco, CA   **December 2020**
Morrison Planetarium, California Academy of Sciences

Girls Science & Engineering Day, New York, NY   **March 2021**
Intrepid Sea, Air, and Space Museum

TECHNICAL SKILLS

Electron Microprobe (**EMP**); Scanning Electron Microscope (**SEM**); X-Ray Computed Tomography scanner (**CT**);X-Ray Diffractometer (**XRD**); Laser Ablation Inductively Coupled Plasma Mass Spectrometry (**LA-ICP-MS**); Visible Near-Infrared (**VNIR**) Spectrometry; Sample preparation of extraterrestrial materials

SOFTWARE

Python, C, MATLAB, Adobe Illustrator, LaTeX