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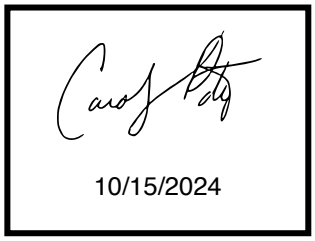

Educational Background:

B.A.	Physics & Astronomy	2001 Bryn Mawr College
Ph.D.	Earth & Space Sciences	2006 University of Washington (Advisor: R. Winglee)

Employment History:

Undergraduate Teaching Assistant, Bryn Mawr College, Physics	1998-2001
Graduate Teaching Assistant, University of Washington, Earth & Space Sciences	2002-2005
Graduate Research Assistant, University of Washington, Earth & Space Sciences	2001-2006
Instructor, Chautauqua Course on Space Weather & Planetary Magnetospheres	2006 (Summer)
Postdoctoral Researcher, Southwest Research Institute, Space Science & Engineering	2006-2008
Assistant Professor, Georgia Institute of Technology, Earth & Atmospheric Science	2008-2014
Associate Professor, Georgia Institute of Technology, Earth & Atmospheric Science	2014-2018
Associate Professor, University of Oregon, Department of Earth Sciences	2018-2021
Faculty in Residence, University of Oregon, Clark Honors College	2018-2024
Associate Dean for Faculty, University of Oregon, Clark Honors College	2021-2024
Professor, University of Oregon, Department of Earth Sciences	2021-present

Current Research Interests:

Space Plasma Physics, Planetary Magnetospheres, Planetary Upper Atmospheres/Ionospheres, Icy Satellites, Dusty Plasmas, Mars Atmospheric Evolution, Astrobiology, Mission Planning Activities (Cassini, Jupiter Icy Moon Explorer: JUICE, Europa Clipper Mission, Trident, Odyssey PMCS)

Synergistic Activities (shortlist):

National Academy of Sciences – Ocean Worlds and Dwarf Planets Panel for the 'Planetary Science and Astrobiology Decadal Survey 2023-2032'	October 2020 – May 2022
Icarus Editor	2017-2024
Outer Planets Assessment Group Steering Committee	2016-present
Conference Organizer: Host Europa Clipper PSG, Sept., 2020, @UO	2019-2020
Conference Organizer: LOC - Division of Planetary Sciences, Fall, 2020	2019-2020
National Academy of Sciences – Committee Member for 'Large Strategic NASA Science Missions: Science Value and Role in a Balanced Portfolio'	July 2016-2017
Europa Mission Thematic Working Group Co-Chair: Interiors Working Group	2015-2019
Conference Organizer: The Magnetospheres of Outer Planets Meeting, Atlanta	June 1-5, 2015
Conference Organizer: Outer Planets Assessment Group, Atlanta, GA	January 10-11, 2013

Conference Organizer: Cassini Plasma Spectrometer Team Meeting #39, Atlanta, Oct. 29-30, 2009

Classes Taught

History of Space Exploration, Planetary Seminar, Quantitative Techniques, Physics of Planets, Introduction to Space Physics & Instrumentation, Introduction to Research, Introduction to Space Physics, Planetary Modeling, Calderwood Public Writing Seminar: Chasing Planets, Thesis Orientation, First-Year Interest Group: Exploring Planets, Introduction to Liberal Arts: Voyages of Exploration

Refereed Publications: (*Student or †Postdoc at time of submission, ^Europa Clipper Space Science Review Paper Series)

a.) Published/In Press

Donaldson, K.,* Olsen, A.J.,* **Paty, C.S.**, & Caggiano, J.* (2024). Characterizing the solar wind-magnetosphere viscous interaction at Uranus and Neptune. Journal of Geophysical Research: Space Physics, 129, e2024JA032518, doi:10.1029/2024JA032518K

^Pappalardo, R.T., Buratti, B.J., Korth, H. et al. Science Overview of the Europa Clipper Mission. Space Sci Rev 220, 40 (2024). doi:10.1007/s11214-024-01070-5

^Blankenship, D.D., Moussessian, A., Chapin, E. et al. Radar for Europa Assessment and Sounding: Ocean to Near-Surface (REASON). Space Sci Rev 220, 51 (2024). doi:10.1007/s11214-024-01072-3

^Westlake, J.H., McNutt, R.L., Grey, M. *et al.* (2023), The Plasma Instrument for Magnetic Sounding (PIMS) on the Europa Clipper Mission. *Space Sci Rev* **219**, 62, doi:10.1007/s11214-023-01002-9

^Meitzler, R., Jun, I., Blase, R. *et al.* (2023), Investigating Europa's Radiation Environment with the Europa Clipper Radiation Monitor. *Space Sci Rev* **219**, 61, doi:10.1007/s11214-023-01003-8

^Roberts, J.H., McKinnon, W.B., Elder, C.M. *et al.* (2023), Exploring the Interior of Europa with the Europa Clipper. *Space Sci Rev* **219**, 46, doi:10.1007/s11214-023-00990-y

Cao, X., Chu, X., Hsu, H.-W., *et al.* (2023), Science Return of Probing Magnetospheric Systems of Ice Giants. *Bulletin of the AAS*, 55(3), doi:10.3847/25c2cfeb.c240b4b6

Arridge, C.S., Xystouris, G., Cochrane, C., *et al.* (2023), Fundamental Space Physics in Uranus' Magnetosphere. *Bulletin of the AAS*, *55*(3). doi:10.3847/25c2cfeb.15e9f2c8

Caggiano, J. A.*, & **Paty, C. S.** (2022). Analysis of E × B drifts in Earth's magnetosphere during geomagnetic reversals: Potential consequences for plasmasphere behavior and stability. *J. of Geophys. Res. Space Physics*, 127, e2021JA029414, doi:10.1029/2021JA029414

C. J. Cochrane, R. R. Persinger, S. D. Vance, E. L. Midkiff, J. Castillo-Rogez,A. Luspay-Kuti, L. Liuzzo, **C. Paty**, K. L. Mitchell, L. M. Prockter (2022), Single- and Multi-Pass Magnetometric

Subsurface Ocean Detection and Characterization in Icy Worlds Using Principal Component Analysis (PCA): Application to Triton, Earth and Space Science, doi:10.1029/2021EA002034

Liuzzo, L., **Paty, C.**, Cochrane, C., Nordheim, T., Luspay-Kuti, A., Castillo-Rogez, J., et al. (2021). Triton's variable interaction with Neptune's magnetospheric plasma. *J. of Geophys. Res. Space Physics*, 126, e2021JA029740, doi:10.1029/2021JA029740

Rymer, A. M., et al., (2021), Neptune Odyssey: A Flagship Concept for the Exploration of the Neptune–Triton System, *Planet. Sci. J.* **2** 184, doi: 10.3847/PSJ/abf654

Hansen, C. J., W. Grundy, J. D. Hofgartner, E. S. Martin, K. Mitchell, F. Nimmo, T. A. Nordheim, **C. Paty**, J. H. Roberts, K. Runion, L. C. Quick, P. Schenk, A. Stern, O. Umurhan (2021), Triton: Fascinating Moon, Likely Ocean World, Compelling Destination! *Planet. Sci. J.* **2** 137, doi:10.3847/PSJ/abffd2

Arridge, C.S. and **Paty, C**. (2021). Asymmetrical Magnetospheres. In Magnetospheres in the Solar System (eds R. Maggiolo, N. Andr., H. Hasegawa, D.T. Welling, Y. Zhang and L.J. Paxton). doi:10.1002/9781119815624.ch33

Cao, X., and **C. Paty**, 2020, Asymmetric Structure of Uranus' Magnetopause Controlled by IMF and Planetary Rotation, *Geophys. Res. Lett.,* doi:10.1029/2020GL091273

Vance, S. D., M. J. Styczinski*, B. G. Bills, C. J. Cochrane, K. M. Soderlund, N. Gomez-Perez, and **C. Paty**, 2020, Magnetic Induction Responses of Jupiter's Ocean Moons Including Effects from Adiabatic Convection, *J. Geophys. Res. Planets,* doi:10.1029/2020JE006418

Paty, C., C. S. Arridge, I. J. Cohen, G. A. DiBraccio, R. W. Ebert, and A. M. Rymer, 2020, Ice Giant Magnetospheres, *Phil. Trans. R. Soc. A.*, doi:10.1098/rsta.2019.0480

Winslow, R. M., † N. Lugaz, C. J. Farrugia, C. L. Johnson, B. J. Anderson, **C. S. Paty**, N. A. Schwadron, L. Philpott, M. Al Asad, 2020, First observations of an ICME compressing Mercury's dayside magnetosphere, The Astrophysical Journal, 889:184 (10pp), 2020 February 1, https://doi.org/10.3847/1538-4357/ab6170

Orlando, T. M., B. M. Jones, **C. Paty**, M. J. Schaible, J. R. Reynolds, P. N. First, S. K., Robinson, V. La Saponara, and E. Beltran, 2018. Catalyst: Radiation effects on volatiles and exploration of asteroids and the lunar surface. *Chem* 4, 8–12, https://doi.org/10.1016/j.chempr.2017.12.004

Molyneux, P. M., Nichols, J. D.,Bannister, N. P., Bunce, E. J., Clarke, J. T.,Cowley, S. W. H., J.-C. Gérard, D. Grodent, S. E. Milan, and **C. Paty**, 2018. HubbleSpace Telescope observations of variations in Ganymede's oxygen atmosphere and aurora. *Journal of Geophysical Research: Space Physics*,123,3777–3793. https://doi.org/10.1029/2018JA025243

Cao, X., * and **C. Paty**, 2017, Diurnal and seasonal variability of Uranus's magnetosphere, *J. Geophys. Res. Space Physics*, 122, doi:10.1002/2017JA024063.

Winslow R.M. †, L. Philpott, **C. S. Paty**, N. Lugaz, N.A. Schwadron, C.L. Johnson, and H. Korth, 2017, Statistical study of ICME effects on Mercury's magnetospheric boundaries and northern cusp region from MESSENGER, *J. Geophys. Res*., 122, doi:10.1002/2016JA023548.

Hale, J. P. M.*, and **C. Paty**, 2016, Investigating Charon's Impact on Pluto's Interaction with the Solar Wind through Multifluid MHD Simulations. Published online 12/6/2016 *Icarus* 287 (2017) 131–139

Simon, S., E. Roussos, and **C. S. Paty,** 2015, The interaction between Saturn's moons and their plasma environment, *Physics Reports*, 602 (2015), 1-65, doi:10.1016/j.physrep.2015.09.005

Payan, A. P.*, **C. S. Paty**, and K. D. Retherford, 2015, Uncovering local magnetospheric processes governing the morphology and variability of Ganymede's aurora using threedimensional multifluid simulations of Ganymede's magnetosphere, *J. Geophys. Res. Space Physics*, 120, doi:10.1002/2014JA020301.

Payan, A.*, A. Rajendar*, **C. S. Paty**, and F. J. Crary, 2014, Effect of Plasma Torus Density Variations on the Morphology and Brightness of the Io Footprint, *J. Geophys. Res. Space Physics, 119, 3641–3649, doi:10.1002/2013JA019299.*

Riousset, J., † **C. S. Paty**, M. Fillingim, R. Lillis, S. England, P. Withers, and J. P. M. Hale*, 2014 Electrodynamics of the Martian dynamo region near magnetic cusps and loops, *Geophys. Res. Lett.*, 41, doi:10.1002/2013GL059130.

Winglee, R. M., A. Kidder*, E. Harnett, N. Ifland*, **C. Paty**, and D. Snowden, 2013, Generation of periodic signatures at Saturn through Titan's interaction with the centrifugal interchange instability, *J. Geophys. Res. Space Physics*, 118, doi:10.1002/jgra.50397.

Riousset, J.†, **C. S. Paty**, M. Fillingim, R. Lillis, S. England, Paul Withers, and J. P. M. Hale*, 2013, Three-dimensional multifluid modeling of atmospheric electrodynamics in Mars' dynamo region, *J. Geophys. Res. Space Physics*, 118, doi:10.1002/jgra.50328.

Kidder, A.*, **C. S. Paty**, R.M. Winglee, E.M. Harnett, 2012, External triggering of plasmoid development at Saturn, *J. Geophys. Res.*, 117, A07206, doi:10.1029/2012JA017625

Dong, C. F.* and **C. S. Paty**, 2011, Response to Comment on 'Heating of ions by low-frequency Alfvén waves in partially ionized plasmas,' Phys. Plasmas 18, 084704; doi:10.1063/1.3626548

Dong, C. F.* and **C. S. Paty**, 2011, Application of adaptive weights to intelligent information systems: An intelligent transportation system as a case study, *Inform. Sci.*, doi:10.1016/j.ins.2011.07.018

Fillingim, M. O., R. J. Lillis, S. L. England, L. M. Peticolas, D. A. Brain, J. S. Halekas, **C. Paty**, D. Lummerzheim, and S. W. Bougher, 2011, On wind-driven electrojets at magnetic cusps in the nightside ionosphere of Mars, *Earth Planets Space, doi:10.5047/eps.2011.04.010*

Dong, C.* and **C. S. Paty**, 2011, Heating of ions by low-frequency Alfven waves in partially ionized plasma, *Phys. Plasmas* 18, 030702; doi:10.1063/1.3555532

Tokar, R. L., R. E. Johnson, M. F. Thomsen, R. J. Wilson, D. T. Young, F. J. Crary, A. J. Coates, G. H. Jones, and **C. S. Paty**, 2009, Cassini Detection of Enceladus's Cold Water-Group Plume Ionosphere, *Geophys. Res. Lett.*, 36, 13, doi:10.1029/2009GL038923.

Burch, J. L., J. Goldstein, P. Mokashi, W. S. Lewis, **C. Paty**, D. T. Young, A. J. Coates , M. K. Dougherty, and N. Andre, 2008, Cause of Saturn's Plasma Periodicity, *Geophys. Res. Lett.*, 35, L14105, doi:10.1029/2008GL034951.

Paty, C., W. R. Paterson, and R.M. Winglee, 2008, Ion energization in Ganymede's magnetosphere: Using multi-fluid simulations to interpret ion energy spectrograms, *J. Geophys. Res.*, 113, A06211, doi:10.1029/2007JA012848.

Lawrence, K. P.*, **C. Paty**, C. L. Johnson, E. Harnett, and C. Milbury, 2007, Possible Shielding of the Martian Atmosphere by a Crustal Magnetic Field, Lunar and Planetary Science Conference, Contributed Published Submission #1453.

Harnett, E., R. Winglee and **C. Paty**, 2006. Multi-scale/multi-fluid simulations of the post plasmoid current sheet in the terrestrial magnetosphere, *Geophys. Research. Lett.,* 33, L21110, doi:10.1029/2006GL027376.

Paty, C, and R Winglee, 2006. The role of ion cyclotron motion at Ganymede: Magnetic field morphology and magnetospheric dynamics. *Geophys. Res. Lett*., 33, L10106, doi:10.1029/2005GL025273.

Paty, C. and R. Winglee, 2004. Multi-fluid simulations of Ganymede's magnetosphere. *Geophys. Res. Lett*., Vol. 31, No. 24, L24806 10.1029/2004GL021220.

Beckmann, P. A., **C. Paty**, E Allocco, M Herd, C. Kuranz, and A L Rheingold, 2004. The relationship between crystal structure and methyl and t-butyl group dynamics in van der Waals organic solids. *J. Chem. Phys*., 120, 5309-5314.

b.) Submitted

Stern, S.A., Hansen, C., McKinnon, W.B., **Paty, C.**, Prockter, L., and Young, L.A., Book Chapter: *Pluto and Triton: Open Questions and Decadal Linkages,* submitted, accepted and under book proof review 9/2024.

c.) Other Publications

National Academies of Sciences, Engineering, and Medicine. 2023. *Origins, Worlds, and Life: A Decadal Strategy for Planetary Science and Astrobiology 2023-2032*. Washington, DC: The National Academies Press. doi:10.17226/26522. ISBN: 978-0-309-47578-5

Tiscareno, M. S., et al., The Saturn Ring Skimmer Mission Concept: The next step to explore Saturn's rings, atmosphere, interior and inner magnetosphere, NASA Planetary Science and Astrobiology Decadal Survey White Paper, A report to the National Academies of Sciences, Engineering and Medicine, Space Studies Board, 15 August, 2020.

Rymer, A. M., et al., Neptune and Triton: A Flagship for Everyone, NASA Planetary Science and Astrobiology Decadal Survey White Paper, A report to the National Academies of Sciences, Engineering and Medicine, Space Studies Board, 15 August, 2020.

Hansen, C., et al., Triton: Fascinating Moon, Likely Ocean World, Compelling Destination!, NASA Planetary Science and Astrobiology Decadal Survey White Paper, A report to the National Academies of Sciences, Engineering and Medicine, Space Studies Board, 15 July, 2020.

Moore, J., et al., Exploration Strategy for the Outer Planets 2023-2032: Goals and Priorities, NASA Planetary Science and Astrobiology Decadal Survey White Paper, A report to the National Academies of Sciences, Engineering and Medicine, Space Studies Board, 15 July, 2020.

Rymer, A., et al., Solar System Ice Giants: Exoplanets in our Backyard, 2018. Exoplanet Science Strategy White Paper, A report to the National Academies of Sciences, Engineering and Medicine, Space Studies Board, 9 March 2018.

Cao. X. and **C. Paty**, The Magnetosphere of Uranus. Oxford Research Encyclopedia of Planetary Science, Subject: Planetary Ionospheres and Magnetospheres (Published Summary) DOI: 10.1093/acrefore/9780190647926.013.166

Prockter, L. M., M. R. Wheeler, K- M. Aye, K. H. Baines, M. T. Bland. D. T. Blewett, S. Diniega, L. M. Feaga, J. R. Johnson, H. Y. McSween, C. R. Neal, **C. S. Paty**, J. A. Rathbun, B. E. Schmidt, D. B. Schwartz, J. A. Vertesi, 2017. The Value of Participating Scientist Programs to NASA's Planetary Science Division. A report to NASA Planetary Science Division.

National Academies of Sciences, Engineering, and Medicine. 2017. *Powering Science: NASA's Large Strategic Science Missions*. Washington, DC: The National Academies Press. doi:10.17226/24857, ISBN: 978-0-309-46383-6

Research Grants and Contracts:

a.) Awarded

- Plasma Instrument for Magnetic Sounding (PIMS), NASA Europa Mission Phase A

Selection, (CoI-Paty), Budget Awarded so far:
Phase A-C (FY16-FY22) Extended through 2024 for Phase D **$212K**
Extended through Phase E (FY24-34) **$1M**

- Radar for Europa Assessment and Sounding: Ocean to Near-surface (REASON), NASA Europa Mission Phase A Selection (CoI-Paty), Budget Awarded so far to CoI:
  Phase A-B (FY16-FY19) **$138K**
  Extended thought Phase C/D 2024 at **$68K**,
  Extended through Phase E (FY24-34) **$396K**

- Particle Environment Package for the Jupiter Icy Moon Explorer (JUICE), ESA L-Class Program, NASA HQ for US Participation, FY13-FY33, $60M, (Co-I Paty, Subcontract via JHU/APL, initial subcontract budget through 2021: **$290K**)
  Extended to 2022: **$50K**
  Extended to 2023: **$10K**
  Extended to 2035: **$438K**
- Uranus System Magnetosphere Mission Planning, Jet Propulsion Laboratory, FY22, PI – C. Paty **$39K**

- Discovery Mission Announcement of Opportunity (Submitted June 2019):
  Trident: Mission to an Exotic Active World (PI – Louise Prockter USRA, C. Paty is Co-Investigator FY21- FY40)
  Selected for Phase A (1 of 4 Mission Proposals Selected, Concept Report Due 9/2020,
  Not selected for Discovery Mission

- Odyssey: A Large Strategic Class Mission Study for the Exploration of the Neptune-Triton System, NASA Planetary Mission Concept Study, FY2020, (PI-Rymer, JHU/APL, CoI-Paty, funding negligible/travel only)

- Radiation Effects on Volatiles and Exploration of Asteroids and Lunar Surfaces (REVEALS), NASA Solar System Exploration Virtual Research Institute (SSERVI), Five year grant (FY18-FY22) **$5.5M** (PI-Orlando, EPO Deputy PI- Paty, funding to UO ~**$70K**)

- Europa's magnetic field: Separating plasma perturbations from an ocean-induced dipole, NASA Solar System Workings, FY 2017-2020, **$51K** to CoI-Paty (PI-Crary, UC Boulder)

- Magnetospheres of Outer Planets Conference 2015, NASA Topical Workshops, Symposium, and Conferences (PI-Paty), Budget **$45K**

- Characterizing the influence of ICMEs at Mercury using MESSENGER observations and multifluid simulations, NASA Discovery Data Analysis Program, Start of FY2016 extended through end of FY 2020, **$224K** (PI-Paty)

- The Interaction between Callisto and Jupiter's Magnetosphere: A Hybrid Approach, NASA Outer Planets Research Program, FY2014-FY2017, **$378K**, (PI- Simon, Co-I Paty, Georgia Institute of Technology)

- Observing Ganymede's atmosphere and auroras with COS and STIS, Hubble Space Telescope Cycle 21, Space Telescope Science Institute, FY13/14, (Co-I Paty, only travel funds, **$5K** as proposal funds support Hubble Space Telescope Observations.)

- Seasonal variability of Saturn's magnetosphere: A synoptic study of dynamic and morphologic changes using simulation and observation, NASA Cassini Data Analysis and Participating Scientist Program, Start of FY2012 though the end of FY2014, **$322K** (PI-Paty) → **Awarded: Cassini Participating Scientist**

- Enceladus' Plume: Coupling Eruptive Dynamics to Plasma Dynamics, NASA Outer Planets Research Program, Start of FY2012 through end of FY 2014, **$280K**. (PI- Paty with CoI-Dufek, also Georgia Institute of Technology)

- Developing a Novel Modeling Approach for Mars' Ionospheric Electrodynamics, NASA Mars Fundamental Research Program, FY2010 to FY2013, **$310K**. (PI- Paty)

- Vacuum ultraviolet photon induced formation of O and O2 in Saturn's ring particle atmosphere, NASA Outer Planets Research Program, FY2009 to FY2012, **$384K**. (Co-I Paty with PI Thom Orlando, Georgia Institute of Technology) (no cost extended to 2013)

- Incorporating Ion-Neutral Interactions Into 3D Multi-fluid Simulations: Understanding Enceladus' Plume Through Observation and Simulation, NASA Cassini Data Analysis Program, FY2008 to FY2010, **$200K** (no cost extended through FY2011).

- Developing a Novel Modeling Approach for Mars' Ionospheric Electrodynamics, NASA Mars Fundamental Research Program, FY2009 to FY2010, **$100K** (no cost extended to 2011).

- Planetary and Space Science Initiative, Georgia Tech Fund for Innovation in Research and Education, 2012, **$4K**. (PI- Paty and Co-PI Wray)

b. In Review

- Observing the Impacts of Local Sources and Sinks on Atmospheric Water Vapor, FY25-28, NASA MDAP Program, **$600K** (PI- Paty, Science-PI McDonald)

- The interaction between the moons of Uranus and their magnetospheric environment, FY24-27, NASA SSW Program UOregon subaward value **$90K** (PI- Simon @ GaTech, Co-I Paty)

Keynote and Invited Conference talks:

1.) Ice Giant Magnetospheres, Invited Tutorial Talk, **Magnetospheres of Outer Planets Conference**, Minneapolis, MN, July 8-13, 2024 (DOI: doi.org/10.52843/cassyni.jm8lxg)
2.) Stay Curious, **University of Oregon, Department of Earth Sciences, Commencement Speaker**, June 16, 2024
3.) Trident: A template for a lower cost mission to explore the Triton-Neptune Magnetosphere Interactions, Oral Presentation, **3rd Outer Planets Moon-Magnetosphere Interaction Workshop**, Dublin, Ireland, May 13-17, 2024
4.) Uranus' Magnetosphere: A Model for Cross-Disciplinary Science, **Uranus Flagship 2023: Investigations and Instruments for Cross-Disciplinary Science Workshop**, Pasadena, CA, July 25-27, 2023
5.) Training the Next Generation in Public Writing, Oral Presentation, **American Geophysical Union Meeting**, Virtual, 12/10/2020
6.) Ice Giant Magnetospheres, Invited Plenary Speaker, **Royal Society Meeting: Ice Giants 2020,** London, UK, 1/20/2020
7.) Potential Investigations of Outer Planet Magnetospheres, Invited Presentation, **Interstellar Probe Exploration Workshop**, The Explorers Club, New York City, 10/16/2019
8.) Similarities and differences: Comparing the upstream conditions and magnetospheric interactions at Europa, Callisto, and Triton, **Europlanet workshop: Outer planet moon-magnetosphere interactions**, Selfoss, Iceland, 11-15 Feb 2019
9.) *The Jovian System: Icy Moons, Volcanos and Magnetic Fields,* **The Georgia Regional Astronomers Meeting,** Invited Public Lecture**,** Georgia State University, October 28, 2016
10.) *Modeling Magnetospheric Current Systems*, **Chapman Conference on Currents in Geospace and Beyond,** Invited Talk, May 26, 2016, Dubrovnik, Croatia
11.) *Critical Models: Plasma Dynamic Simulations*, **Juno/Cassini Workshop,** Invited Talk, May 31, 2015
12.) *From Ionospheric Electrodyamics at Mars to Mass and Momentum Loading at Saturn: Quantifying the Impact of Neutral-Plasma Interactions using Plasma Dynamic Simulations*, **Chapman Conference on Magnetosphere-Ionosphere Coupling in the Solar System,** Invited Keynote, Yosemite, CA, February 14, 2014
13.) *Defining your path,* **University of Washington, Earth and Space Sciences Commencement Speaker***, June, 2011*
14.) *The Cassini Mission: A close look at Enceladus*, **Georgia Regional Astronomers Meeting (GRAM)** Invited Public Talk, Atlanta, GA., Nov., 2010
15.) *Coupling between the magnetospheres of Ganymede and Jupiter*, (Invited Talk **Fall American Geophysical Union, 2009**) Paty, C., K. D. Retherford, R. Winglee, and W. R. Paterson (2009), Eos Trans. AGU, 90(52), Fall Meet. Suppl., Abstract SM11C-06.
16.) *Enceladus' Plume: An Overview of Observations and Interpretation Through Multi-fluid Simulations*, **Magnetospheres of Outer Planets Conference** (Invited Keynote), Cologne, Germany, 2009.
17.) *Coupling between the magnetospheres of Ganymede and Jupiter*, (Invited Talk **European Planetary Science Congress, 2008**, Münster, Germany) Paty, C. and R. Winglee (2008), European Planetary Science Congress, EPSC2008-A-00443.
18.) *Understanding the interaction between Ganymede's and Jupiter's magnetospheres through multi-fluid simulations and observations*, (Invited Talk **European Geophysical Union,**

2006, Vienna, Austria) Paty C., and R. Winglee (2006), Geophysical Research Abstracts, Vol. 8, 10724, 2006 SRef-ID: 1607-7962/gra/EGU06-A-10724.

Invited Seminars, Colloquia, and Lectures:

1.) Science of the Europa Clipper Mission: T-2 Months to Launch, **Austin Astronomical Society General Assembly Lecture**, 8/9/2024
2.) Science of the Europa Clipper Mission: T-6 Months to Launch, **2024 Northwest Earth and Space Sciences Pathways Annual Meeting**, Museum of Flight, Washington, 4/17/2024
3.) Exploring the Magnetosphere of an Ice Giant: Probing Uranus is No Laughing Matter, **Jet Propulsion Laboratory Science Visitor Colloquium**, 2/26/2024
4.) Science of the Europa Clipper Mission: T-8 Months to Launch, **Rose City Astronomers Lecture**, Oregon Museum of Science and Industry, 2/19/2024
5.) Exploring the Magnetosphere of an Ice Giant: Probing Uranus is No Laughing Matter, **University of Oregon Physics Colloquium**, 10/25/2023
6.) Exploring Uranus' Magnetosphere, **UC Berkeley Space Sciences Laboratory Seminar**, 10/17/2023
7.) Exploring the Magnetospheres of the Ice Giant Planets: Revisiting Uranus and Neptune, **Oregon State University Geology & Geophysics Seminar**, 3/9/2023
8.) Exploring the Magnetospheres of the Ice Giant Planets: Revisiting Uranus and Neptune, **Chester County Astronomical Society Public Lecture**, 1/10/2023
9.) Searching for Habitable (Ocean) Worlds, **University of Idaho Physics Colloquium**, 3/7/2022
10.) In Search of Habitable Ocean Worlds, **Fernbank Science Center and the Jim Cherry Memorial Planetarium Public Lecture**, 8/6/2021
11.) Searching for (Habitable) Ocean Worlds, **Florida Institute of Technology Ortega Public Science Lecture**, 4/23/2021 (https://www.youtube.com/watch?v=vA4VR-vpA0A)
12.) Probing the Interior of Europa: Magnetic Fields and Plasma and Radio Waves, Oh My! **University of Oregon Physics Colloquium**, 3/7/2019
13.) Probing the Interior of Europa: Magnetic Fields and Plasma and Radio Waves, Oh My! **University of Washington Astrobiology Colloquium**, 10/2/2018
14.) *Comparative Planetology: Volcanic moons, giant magnetospheres, and hidden oceans,* **Stanford Colloquium,** April 13, 2017
15.) *Comparative Planetology: Volcanic moons, giant magnetospheres, and hidden oceans,* **Seminar University of Oregon,** March 2, 2017
16.) *A Tour of the Outer Solar System: Exploring Volcanos, Moons, and Giant Planets***, Fernbank Science Center and Planetarium**, Keynote Talk for Earth Science Day, October 15, 2016, Atlanta, GA
17.) *Moon-Magnetosphere Interactions at Jupiter & Saturn,* **University of Arizona Lunar and Planetary Laboratory Seminar**, September 21, 2016, Tucson, AZ
18.) *The Cassini Mission to Saturn*, **Agnes Scott College, Bradley Observatory Open House,** May 15, 2015
19.) *Exploring the Solar System with Robots and Computers*, **Siemens Science Competition Awards Ceremony Keynote,** Nov. 22, 2014

20.) *From Ionospheric Electrodyamics at Mars to Mass and Momentum Loading at Saturn: Quantifying the Impact of Neutral-Plasma Interactions using Plasma Dynamic Simulations*, **University of Arizona Lunar and Planetary Laboratory Colloquium,** Oct. 7, 2014
21.) *From local interaction to global impact: The role of Enceladus at Saturn*, **Georgia Institute of Technology NASA Space Science Day with the Society of Hispanic Professional Engineers**, Oct. 4, 2013
22.) *From local interaction to global impact: The role of Enceladus at Saturn*, **Physics and Astronomy Colloquium, Georgia State University**, Sept. 24, 2013.
23.) *Magnetospheric dynamics: From giant planets to tiny moons*, **School of Earth and Atmospheric Sciences Seminar, Georgia Institute of Technology**, Sept. 19, 2013.
24.) *Cassini at Saturn: Icy Moons, Rings, and Volcanos*, **College of Science Advisory Board, Georgia Institute of Technology**, Oct., 26, 2012.
25.) *Unraveling the role of Enceladus in Saturn's magnetosphere through observation & simulation*, **Bryn Mawr College, Physics Colloquium Series**, Bryn Mawr, PA, Sept. 24, 2012.
26.) *Space Physics and Planetary Sciences*, **Georgia Institute of Technology NASA Space Science Day with the Society of Hispanic Professional Engineers**, August, 24, 2012
27.) *The future of outer solar system exploration lies with JUICE,* **Mars Landing Party with the Atlanta Science Tavern**, August 5, 2012
28.) *Neutrals and Charged Dust in Plasma Dynamic Simulations*, **University of Washington, Space Physics Seminar,** Seattle, WA, March 7, 2012
29.) *From local interaction to global impact: The role of Enceladus at Saturn*, **University of Washington, Earth & Space Sciences Seminar**, Seattle, WA, March 6, 2012
30.) *Enceladus' Plume: Perspectives from Simulations and Observations*, **Southwest Research Institute, Planetary Science Directorate Seminar**, Boulder, CO, February 7, 2012.
31.) *Enceladus' Plume: Perspectives from Simulations and Observations*, **Boston University, Center for Space Physics Seminar**, February, 2011.
32.) *The Solar Resource: The Sun as a Source of Energy*, **Keynote Lecture, Georgia Tech's Open Forum on Energy and Environment**, Jan., 2010
33.) *Modeling magnetospheric interactions in the solar system,* **Physics Colloquium, Georgia Institute of Technology**, Oct., 2008
34.) *Understanding the Interaction between Ganymede's and Jupiter's Magnetospheres: Combining Observations and Multi-fluid Simulations,* **University of Maryland, Physics Seminar**, May, 2006
35.) *Understanding the Interaction between Ganymede's and Jupiter's Magnetospheres: Combining Observations and Multi-fluid Simulations,* **Georgia Institute of Technology, School of Earth & Atmospheric Sciences Seminar**, April, 2006
36.) *A tale of two magnetospheres: Understanding the Complex Interaction between Ganymede's and Jupiter's Magnetospheres,* **Southwest Research Institute, Space Physics Seminar**, Jan., 2006
37.) *The importance of being O+: The role of heavy ions in shaping Ganymede's magnetosphere,* **Los Alamos National Laboratory, Space Science Seminar**, Nov., 2005
38.) *Planetary Magnetospheres: Understanding the Complex Relationship between the Sun our Magnetosphere and Us*, **Rocks and Stars Lecture Series, hosted by NASA's Washington State Space Grant**, May, 2005

Service/Committees

University of Oregon:

UO New Faculty Launch Committee 2024-25	(UO/CAS)
UO CHC Dean Search Committee 2024	(UO/CHC)
UO Council of Assistant/Associate Deans of Research 2023-24	(VPRI's Office)
Merit Review Committee 2023	(CHC)
Retention Committee Chair 2022-2023	(CHC)
Executive Committee 2021-2024	(CHC)
Provost's Office Active Recruitment Team 2019 – 2021	(Provost's Office)
Equity Justice & Inclusion Virtual Faculty in Residence Search Committee 2021	(CHC)
Curriculum Committee (Chair) 2018 – 2020	(CHC)
Academic Continuity Team 2019 – 2020	(CHC)
Career Faculty (NTTF Biology) Search Committee 2020	(CHC)
Career Faculty (NTTF Biology) Search Committee 2019	(CHC)

Thesis Committees (CHC): Yessica Roland (2023), Kaden Wheeler (2023), Parker, McNair (2023), Donovan Muniz (2023), Salvador Garcia-Perez (2023), Francis Duey (2023), Liliana Barnatan (2023), Teagan Furbish (2023), Ryan McCarthy (2023), Sebastian Bergen (2022), Annaliese Elliot (2022), Thalia Essaides (2022), Rebecca Vance (2022), Nathaniel Olds (2022), Audra McNamee (2022), Briana Mofhitz-Faieta (2022), Charlie Holden (2022), Danielle Lewis (2021), Sean Silverman (2021), Parker Morris (2021), Annie Weibezahn (2021), William Wertz (2021), Paul Dawson (2020), Nicholas Belair (2019), Theo Faridani (2019)
(* indicates Primary Advisor)
Comprehensive Exam Committees: Joe Caggiano* (2020), Paul Regensburger* (2020), Angela Olsen* (2021), Justin Krier* (2022)
PhD Committees (Earth Sciences): Joe Caggiano* (2018-2023), Paul Regensburger* (2018-Present), Justin Krier* (2021-Present)
PhD Committees (Physics/Chemistry): Jonathan Mills - PHYS (2019-), Kara Merfeld – PHYS (2020-23), Bruce Edelman – PHYS (2021-23), Kira Thurman (2021-Present), Katelin Donaldson* (2023-present)

Georgia Tech:

Co-Chair, College of Science Diversity Council 2017-2018	(COS)
College of Science Diversity Council 2015-2018	(COS)
Faculty Council for the Center for Space Technology & Research 2013-	(COS/COE)
Co-Chair, Graduate Studies Committee 2013/2014/2016	(EAS)
School Chair's Advisory Committee 2017/2018	(EAS)
Chair, Planetary Faculty Search Committee 2012/2013	(EAS)
Solid Earth Geosciences Faculty Search Committee 2012/2013	(EAS)
Internal Review Panel for the Center for Relativistic Astrophysics, 2012	(COS)
Graduate Studies Committee 2008-2009, 2010-2018	(EAS)
Web and Computing Committee 2010-2018	(EAS)
Center for Space Systems 2008-2018	(AE)

Undergraduate Studies Committee 2009-2010 (EAS)
Geophysics Search Committee 2009-2010 (EAS)
Senior Design Project Assessment Panel 2008-2009 (AE)

Comprehensive Exam Committees: Dasa Gu (2009), Zhen Liu (2010), Andrew Davis (2010), John Trostel (2010), Jennifer Telling (2011), Mary Benage (2011), Ashok Rajendar (2012), Yuzhong Zhang (2012), Yohei Takano (2013), Lujendra Ojha (2014), Zefeng Li (2014), Yanqing Su (2014), John Hale (2014), Xin Cao (2014)
PhD Dissertation Committees: Dr. Ashok Rajendar (2011-2015), Dr. Michele Dawley (2008-2013), Dr. Bryan Karpowicz (2007-2009), Dr. Gregory Boer (2009), Dr. Kiruthika Devaraj (2008-2011), Dr. Samuel Langendorf (2014-2015), Dr. Jonathan Walker (2015-2016), Dr. John Hale (2012-2017), Dr. Xin Cao (2012-2018), Dr. Raj Gohil (2017-2018)

Service/Committees External:

Editor for Icarus (Planetary Magnetospheric Physics) (9/2017-6/2024)
NASA Outer Planets Assessment Group – Steering Committee Member (2016-present)
Science Organizing Committee Uranus Flagship Workshop, Cal Tech, July 2023
National Academy of Sciences – Ocean Worlds and Dwarf Planets Panel for the 'Planetary Science and Astrobiology Decadal Survey 2023-2032' October 2020 – April 2022
Organizer Uranus Magnetospheres Workshop, JPL, August 2022
NASA Planetary Mission Senior Review Panel 2022
Search committee for the inaugural Inter-AG Ocean World Working Group co-chairs (2022-23)
Division of Planetary Sciences Annual Meeting 2020, Local Organizing Committee (2019-2021)
Europa Clipper PSG #9 at University of Oregon, 9/21/2020 Local Host & Organizer (2019-Covid Canceled/Transitioned to Virtual)
National Academy of Sciences – Committee Member for 'Large Strategic NASA Science Missions: Science Value and Role in a Balanced Portfolio' July 2016-2017
NASA Outer Planets Assessment Group – Steering Committee Member (2016-present)
NASA Outer Planets Assessment Group (2011-present)
NASA Uranus Working Group (2011-present)
Science Program Committee for the Magnetospheres of Outer Planets Conference (2007-2015)
Fall 2010 AGU Meeting: Planetary Undergraduate/Graduate Career Panel. This first annual student/scientist event was developed by the Planetary Division Education Working Group to provide a forum for students to learn about career paths and get advice from scientists in various roles in the Planetary Science Community.
2008 ISSI International Team: Intercomparison of Global Models and Measurements of the Martian Plasma Environment.
NASA Review Panels (1 in 2020 – Group Chief, 1 in 2019, 2 in 2018, 2 in 2017, 1 in 2014, 2 in 2013, 1 in 2012, 2 in 2010, 2 in 2008) for the NASA Mission Participating Science Program, the Cassini Data Analysis Program, Outer Planets Research Program, Discovery Data Analysis Program, Lunar Advanced Science and Exploration Research Program, and ICEE – Instrument Concepts for Europa Exploration Program, Mars Data Analysis Program, NASA Mission Panel, Solar System Workings
Conference Organizer for 3+ international meetings at Georgia Tech:
Cassini Plasma Spectrometer Team Meeting #39, Oct. 29-30, 2009

Outer Planets Assessment Group, January 10-11, 2013
Magnetospheres of Outer Planets Meeting, June 2015

Refereeing:
Journal of Geophysical Research: Space Physics
Journal of Geophysical Research: Planets
Geophysical Review Letters
Space Science Reviews
Icarus
Annales Geophysicae

Education and Public Outreach:

- Europa Clipper Middle School Outreach Day, Merritt Island, FL, 10/7/2024 – Gave a school-wide (200+) lecture on the science of Europa Clipper and met with students at lunch (Outreach day combined scientists with NASA Launch Services representatives to visit 4 middle schools the day before the Clipper PSG meeting).

- Inspiring Clipper: Opportunities for Next-generation Scientists (ICONS) mentor for Summer 2024 – Hosted two undergraduate interns from across the country at the UO for a 10-week supported summer research experience funded by NASA.

- Europa Clipper Outreach Day, San Juan, Puerto Rico, 11/10/2023 – Ran Interactive Outreach Experiments and Activities for 400+ San Juan school age children (Outreach day coordinated 30 Clipper Science Team members the day after the Clipper PSG meeting).

- Meet a Scientist: Virtual Guest Speaker at Burke Catholic High School, 5/2/2022

- Apollopalooza – Eugene Science Center – Ran a booth at the festival Celebrating 50 Years from Apollo 11 7/20/2019. (200 Attendees)

- Eugene Public Library Public Lecture – 'The Evolution of Space Exploration: 50 Years Before and After Apollo' 7/21/2018 (50+ Attendees)

- Atlanta Science Tavern - Helped organized eight major events with the Atlanta Science Tavern including:

  Exploring Icy Moons and Planets - A Benefit for Cosmos Education, *Dinner and a seminar with Dr. Kevin Hand, JPL Scientist and Founder of Cosmos Education (80+ attendees) 10/23/2010*
  Mars Rover Landing Party and Planetary Science Symposium, *An all night affair with 5 science talks followed by discussion and live feed from the Mars Science Lander arrival at Mars! (300+ Attendees) 8/5/2012*
  'Europa Report' viewing party, *Midtown Arts Cinema Matinée followed by dinner and discussion of this scientifically grounded scifi thriller. (58+ Attendees) 8/11/2013*

Exploring the Solar System with Robots, *An Atlanta European Science Café with the Atlanta Science Tavern featuring Dr. Christopher Arridge, Royal Society University Research Fellow Mullard Space Science Laboratory, University College London (80+ Attendees) 12/4/2013*
The Voyager spacecraft after 37 years in space: The quest for traveling beyond our solar system, *Part of the CSTAR Distinguished Lecture Series featuring Dr. Stamatios Krimigis, Johns Hopkins Applied Physics Laboratory, (200+ Attendees) 1/12/2015*
Roving Mars: Spirit, Opportunity and the Exploration of the Red Planet, *Part of the CSTAR Distinguished Lecture Series featuring Dr. Steve Squyres, Cornell University (200+ attendees) 4/13/2015*
Understanding Particles and Fields Throughout the Solar System, *Part of the CSTAR Distinguished Lecture Series featuring Dr. Daniel Baker, University of Colorado, LASP, (100+ attendees) 10/7/2015*
Why We Explore? *Part of the CSTAR Distinguished Lecture Series featuring Dr. James Crocker, Lockheed, (~100 attendees) 11/18/2015*
Going out in a Blaze of glory: Cassini Science Highlights and the Grand Finale *Part of the CSTAR Distinguished Lecture Series featuring Dr. Linda Spilker, JPL, (~200+ attendees) 2/22/2017*

- NASA Science Day at Georgia Tech (9/28/2012, 10/4/2013): Worked with the Society of Hispanic Professional Engineers university chapter of undergrad and graduate students along with of Johnson Spaceflight Center's Astromaterials Research and Exploration Science group to put on NASA Science Day for local middle school students. This involved training students with the SHPE chapter in August and helping to coordinate the event in September/October.

- Observatory Special Events:

    - Yuri's Night (4/12/2016): Helped organize an observing night and outreach party and talk with the Planetary Society at Georgia Tech celebrating Yuri Gargarin's historic trip into space. Talk: 'Exploring the Solar System with Robert, Computers, and Humans' – *C. Paty*, 100+ guests

    - Venus Transit (6/5/2012): Coordinated a Venus transit viewing party with Dr. Jim Sowell (Physics) at the Georgia Tech Observatory. 400+ guests viewed the transit through 6 solar telescopes.

- Founded, contribute to, and manage the Atlanta Spaceport Blog (2012-2014): Space Science and Exploration updates from Georgia Tech's Planetary Science Group, http://atlantaspaceport.blogspot.com/

- Interviews with local and national news venues on various space and planetary events including: New York Times, NPR Market Place, Tech News World, CNN, and 11Alive News

- Science Outreach to Newton County Middle School Science Teachers (2012-2018): Participated in a workshop with Newton Country Middle School science teachers to bring fundamental earth science and physics to the classroom through learning about planetary science. Developed interactive lectures/demonstration distributed to teachers.

- Science outreach to Atlanta area elementary schools (2010-2018): This grass roots program strives to bring planetary science to the classrooms of local elementary schools through 1-2 hour interactive classroom visits and follow-up in class activities. It works with the science topics outlined in Georgia's science curriculum and incorporates them into lesson plans related to planetary science. This program is continuously under development, and has been successfully applied at the 4-5th grade level.

- Chautauqua Instructor (2006): This programs goal is to continue the education of high school and community college instructors by presenting new and cutting-edge research topics in a format transportable to their own classrooms. Courses are designed to run for three days and provide participants with lectures, online resources and demonstration ideas to bring research into the classrooms.

Honors Awards and Recognition:

European Space Agency Outstanding Contributions Award, Plasma Experiment Package Team on the JUICE Mission (2023)
Fund for Faculty Excellence Award Recipient, University of Oregon (2020)
Royal Astronomical Society's Group Achievement Award for the Cassini Magnetometer Team (2014)
NASA Cassini Participating Scientist (2011), the first competition for Participating Scientist since the launch in 1997. Only 8 slots were available for U.S. scientists.
NASA Group Achievement Award given to the Cassini Plasma Spectrometer Team (2009).
Howard A. Coombs Fellowship for excellence in teaching (2005), Dept. of Earth and Space Sciences, University of Washington.
Student Technology Fee Grant Proposal (from the University of Washington, $30K, 2003).
Graduated Magna Cum Laude with Departmental Honors from Bryn Mawr College (2001).

Membership in Professional and Honor Societies:

American Geophysical Union
European Geosciences Union

Graduate and Undergraduate Students Supervised:

Ph.D. students (3):
Olivia Corrin, Fall 2024 – present
Justin Krier, Fall 2021 – present
Katelin Donaldson, PHYS, Spring 2023 - present
Paul Regensburger, Fall 2018 – present, co-advised

Past Graduate students (13):
Dr. Joseph Caggiano, Fall 2018 – Spring 2023 (Currently a Postdoc, JHU/APL)

Angela Olsen, Fall 2019 – Fall 2021 Masters (Currently Optical Systems Integration Engineer at ASML)
Dr. Xin Cao, Fall 2012 – Winter 2018 (Currently a Research Scientist, CU Boulder/LASP)
Dr. Raj Gohil, Fall 2017 – Spring 2018 (Secondary project, completed Physics PhD 2018 Currently at the Aerospace Corporation)
Ayanna Jones, Fall 2016 – Spring 2018 (Completed Masters, Currently PhD program Emory U)
Dr. John Hale, Fall 2012 – Summer 2017 (Completed PhD, Currently at the Naval Research Lab, and the AAAS Science & Technology Policy Fellow)
Stoyan Ivanov, Fall 2013 – 2016 (Withdrew, Returned, Completed EAS Masters)
Dr. Ashok Rajendar, Spring 2011-Fall 2015 (Completed PhD, Currently at Accenture, Business Strategy Manager)
Katie Milway, Fall 2011-Spring 2014 (Completed Masters, Data Engineer at The Home Depot)
Dr. Alexia Payan, Spring 2011-Spring 2013 (EAS Masters/ AE PhD, 4/2013, Research Engineer at the Aerospace Systems Design Laboratory)
Dr. Ariah Kidder, 2006-2011 (Remotely Co-Advised, PhD 12/2011 from U. of Washington, Currently a Program Manager at the UW)
Dr. Chuanfei Dong, Fall 2009-2010 (Completed Masters 12/2010, PhD at U. Michigan 2015, Princeton Plasma Physics Laboratory, now Assistant Prof. at BU)
Dana Ionita, Fall 2008-Spring 2010 (Withdrew for military service: Air National Guard)

Past Undergraduate Students (10 total):
Hayden Stotts, Fall 2021 – Summer 2022 – currently applying to graduate programs
Jada Walters, Fall 2017 – Spring 2018 – PhD program U. of Arizona in Fall 2019
Joseph Caggiano, Fall 2017 – Spring 2018 – PhD program University of Oregon in Fall 2018
Nicholas Lucas (PHYS), Summer 2014 – Spring 2015, PhD program Penn State in Fall 2015
Stoyan Ivanov (PHYS), Summer 2011-Fall 2012, Attended Georgia Tech, Masters Fall 2013
Maria Rusert (GSU, PHYS), Spring 2012
John Hale (PHYS), Summer 2011-Spring 2012, Georgia Tech, PhD 2017
Robert Cooper (PHYS), Fall 2011
Derek Podowitz (EAS), Fall 2010-Spring 2011, Attended Texas A&M, Masters 2013
Carlos Carrera (PHYS), Fall 2009-Spring 2010, Attended Georgia State U. for Masters
Thom Muccillo (EAS), Spring 2010, Fall 2010-Spring 2011

Postdoctoral Fellows Supervised:
Dr. Reka Winslow, Oct. 2015-2019, Now a Research Scientist at UNH
Dr. Jeremy Riousset, Jan. 2011-Dec. 2013 - Assistant Professor at Embry-Riddle Aeronautical University – Postdoc at Braunschweig University 2014-2016)