Roger John Michaelides

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Washington University in St. Louis
Rudolph Hall 393
1 Brookings Drive
St. Louis, MO 63130

EDUCATION

PhD **Stanford University**, Geophysics — May 2020
Dissertation: "Quantifying Permafrost Processes and Soil Moisture with Interferometric Phase and Closure Phase"
Committee: Howard Zebker (chair), Dustin Schroeder, Rosemary Knight, Alex Konings

BA **Cornell University**, Physics — May 2015
Minored in Planetary Science

BA **Cornell University**, Science of Earth Systems — May 2015
Minored in Geophysics

PROFESSIONAL APPOINTMENTS

Assistant Professor — August 2022 to Present
Department of Earth and Planetary Sciences
Washington University in St. Louis

Colorado School of Mines, Department of Geophysics — June 2020 to July 2022
Postdoctoral Research Associate
Supervisor: Dr. Matthew Siegfried

Stanford University, Department of Geophysics — 2015 to 2020
Stanford, CA
Graduate Student
Advisor: Howard Zebker

Jet Propulsion Laboratory, Solid Earth Group — 2014 to 2014
Pasadena, CA
Summer Internship
Mentors: Thomas Farr and Michael Malaska

Cornell University, Astronomy Department — 2012 to 2015
Undergraduate Researcher
Advisor: Alexander Hayes

SCIENCE TEAM MEMBERSHIP

NASA Surface Topography and Vegetation Science Team — June 2022 to Present
Science Team Member

NASA Arctic Boreal Vulnerability Experiment (ABoVE) — 2016 to Present
Science Team Member

Journal Publications in Review

- Chen, R.H., **Michaelides, R.J.,** Zhao*, Y., Schaefer, K., Parsekian, A., Sullivan, T., Moghaddam, M., Zebker, H.A. (2021) Joint Retrieval of Soil Moisture and Permafrost Active Layer Thickness using L-band InSAR and P-band POLSAR I: Algorithm Formulation, Earth and Space Science.

- **Michaelides, R.J.,** Zebker, H.A. (2021). A Generalized Interferometric SAR Autocorrelation Model Addressing Closure Phase Ambiguities and Variable Soil Moisture States, IEEE Transactions on Geoscience and Remote Sensing.

Journal Publications

- Parsekian, A.D.; Chen, R.H.; **Michaelides, R.J**.; Sullivan, T.D.; Clayton, L.K.; Huang, L.; Zhao, Y.; Wig, E.; Moghaddam, M.; Zebker, H.; Schaefer, K. Validation of Permafrost Active Layer Estimates from Airborne SAR Observations. *Remote Sens.* 2021, *13*, 2876. https://doi.org/10.3390/rs13152876

- **Michaelides, R. J.,** Bryant*, M., Siegfried, M., Borsa, A. (2021) Quantifying Surface Height Change over a Periglacial Environment with ICESat-2 Laser Altimetry, Earth and Space Science.

- **Michaelides, R.J.,** Chen, R.H., Zhao*, Y., Schaefer, K., Parsekian, A., Sullivan, T., Moghaddam, M., Zebker, H.A. (2021) Permafrost Dynamics Observatory (PDO) Part I: Postprocessing and Calibration Methods of UAVSAR L-band InSAR Data for Seasonal Subsidence Estimation, Earth and Space Science.

- Xu*, X., Liu, L., Schaefer, K., **Michaelides, R.J. (**2020) Comparison of Surface Subsidence Measured by Airborne and Satellite InSAR over Permafrost Areas near Yellowknife Canada, Earth and Space Science.

- Clayton*, L., Schaefer, K., Battaglia, M., Bourgeau-Chavez, L., Chen, J., Chen, R.H., Chen, A., Bakian-Dogaheh, K., Grelik, S., Jafarov, E., Liu, L., Ludwig, S., **Michaelides, R.J.,** Moghaddam, M., Parsekian, A., Rocha, A., Schaefer, S.R., Sullivan, T., Tabatabaeenejad, A., Wang, K., Wilson, C., Zebker, H.A., Zhang, Tingjun, Zhao, Y. (2020) Active Layer Thickness as a Function of Soil Water Content, Environmental Research Letters.

- Y. Zheng, H. Zebker and **R. Michaelides**, "A New Decorrelation Phase Covariance Model for Noise Reduction in Unwrapped Interferometric Phase Stacks," in *IEEE Transactions on Geoscience and Remote Sensing*, doi: 10.1109/TGRS.2021.3050087.

- Jingyi Chen, Yue Wu, Michael O'Connor, Meinhard B Cardenas, Kevin Schaefer, **Roger Michaelides**, George Kling. (2020). Active layer freeze-thaw and water storage dynamics in permafrost environments inferred from InSAR, Remote Sensing of Environment, 248. https://doi.org/10.1016/j.rse.2020.112007

- **R. J. Michaelides**, H. A. Zebker and Y. Zheng, (2019) "An Algorithm for Estimating and Correcting Decorrelation Phase From InSAR Data Using Closure Phase Triplets," in IEEE Transactions on Geoscience and Remote Sensing. https://doi.org/10.1109/TGRS.2019.2934362

- **R. J. Michaelides**, Schroeder, Dustin (2019). Doppler-based discrimination of radar sounder target scattering properties: A case study of subsurface water geometry in Europa's ice shell. Icarus, 326, 29-36. https://doi.org/10.1016/j.icarus.2019.02.037

- A. Solomonidou, A. Le Gall, M.J. Malaska, S.P.D. Birch, R.M.C. Lopes, A. Coustenis, S. Rodriguez, S.D. Wall, **R.J. Michaelides**, M.R. Nasr, C. Elachi, A.G. Hayes, J.M. Soderblom, A.M. Schoenfeld, C. Matsoukas, P. Drossart, M.A. Janssen, K.J. Lawrence, O. Witasse, J. Yates, J. Radebaugh (2019), Spectral and emissivity analysis of the raised ramparts around Titan's northern lakes, Icarus, https://doi.org/10.1016/j.icarus.2019.05.040.

- **R. J. Michaelides**, K. Schaefer, H. Zebker, A. Parsekian, L. Liu, J. Chen, S. M. Natali, S. Ludwig, and S. Schaefer, (2019), "Inference of the impact of wildfire on permafrost and active layer thickness in a discontinuous permafrost region using the remotely sensed active layer thickness (resalt) algorithm," Environmental Research Letters. https://doi.org/10.1088/1748-9326/aaf932

- Hayes, A. G., Birch, S. P. D., Dietrich, W. E., Howard, A. D., Kirk, R. L., Poggiali, V., Mastrogiuseppe, M., **Michaelides, R. J.**, Corlies, P. M., Moore, J. M., Malaska, M. J., Mitchelle, K. L., Lorenze, R. D., Wood, C. A. (2017). Topographic constraints on the evolution and connectivity of Titan's lacustrine basins. Geophysical Research Letters, 44. https://doi.org/10.1002/2017GL075468

- **R.J. Michaelides,** A.G. Hayes, M. Mastrogiuseppe, H.A. Zebker, T.G. Farr, M.J. Malaska, V. Poggiali, J.P. Mullen, Constraining the physical properties of Titan's empty lake basins using nadir and off-nadir Cassini RADAR backscatter, Icarus, Available online 8 October 2015, ISSN 0019-1035, http://dx.doi.org/10.1016/j.icarus.2015.09.043.

Selected Conference Papers

- **R.J. Michaelides**, H.A. Zebker (2020). Feasibility of Retrieving Soil Moisture from InSAR Decorrelation Phase and Closure Phase, IGARSS 2020.

- R. Chen, **R.J. Michaelides**, T. Sullivan, A. Parsekian, H.A. Zebker, M. Moghaddam, K. Schaefer (2020). Joint Retrieval of Soil Moisture and Active Layer Thickness using L-band InSAR and P-band POLSAR, IGARSS 2020.

- Y. Zheng, H.A. Zebker, **R.J. Michaelides** (2020). A Physics-based Decorrelation Phase Covariance Model for Effective Decorrelation Noise Reduction in Interferogram Stacks, IGARSS 2020.

- **R.J. Michaelides**, A.G. Hayes, M. Mastrogiuseppe, H.A. Zebker, T.G. Farr, M.J. Malaska, V. Poggiali (2015) Titan's Empty Lake Basins: Constraining Surface Physical Properties by Investigating Radar Backscatter Behavior at Multiple Incidence Angles, Lunar and Planetary Science Conference, 2015.

- AG Hayes, **RJ Michaelides**, et al. (2014). The distribution and volume of Titan's hydrocarbon lakes and seas, Lunar and Planetary Science Conference, 2014.

Published Datasets

- Schaefer, K., **R.J. Michaelides**, R.H. Chen, T. Sullivan, A.D. Parsekian, K. Bakian-dogaheh, A. Tabatabaeenejad, M. Moghaddam, J. Chen, A.C. Chen, L. Liu, and H.A. Zebker. 2019. ABoVE: Active Layer Thickness Derived from Airborne L- and P-band SAR, Alaska, 2017. ORNL DAAC, Oak Ridge, Tennessee, USA. https://doi.org/10.3334/ORNLDAAC/1676

AWARDED GRANTS

NASA 2022
Decadal Survey Incubation, "Quantifying bias and uncertainty sources between laser and radar retrievals of surface topography over cryospheric targets" M.R. Siegfried (PI), **R.J. Michaelides (Science-PI),** ($590,726 total, $352,775 awarded to WUSTL)

AWARDS AND FELLOWSHIPS

Citizenship Award 2020
Department of Geophysics, Stanford University
Awarded for co-developing the Geophysics Wellness Program and efforts as departmental TA liaison

National Science Foundation 2017
Graduate Research Fellowship Program (GRFP) ($102,000)

Centennial Teaching Assistant Award 2017
Stanford University
Awarded for excellence in teaching

Honorable Mention, Undergraduate Oral Presentation 2015
46th Lunar and Planetary Science Conference (LPSC)

Michael W. Mitchell Prize 2014
Department of Earth and Atmospheric Sciences, Cornell University

TEACHING EXPERIENCE

Colorado School of Mines, Golden, CO May-June 2021
Course Co-Instructor, Department of Geophysics
- Assisted teaching the Departmental summer Geophysics Field Camp, a rigorous, hands-on course that teaches undergraduates how to operate geophysical instruments in the field and collect and analyze data.

Stanford University, Stanford CA January 2019 to March 2019
Teaching Assistant, Department of Electrical Engineering
- Assisted teaching EE 262: Two Dimensional Imaging, a graduate-level course, ran office hours, taught several lectures, graded coursework.

Stanford University, Stanford CA Spring 2018/2019
Guest Lecturer, Department of Earth Systems Science
- Developed and delivered lectures on Synthetic Aperture Radar (SAR) imaging applications for hydrologic remote sensing for the graduate-level course ESS 244: Remote Sensing of Hydrology

Stanford University, Stanford CA April 2018 to June 2018
Teaching Assistant, Department of Geophysics
- Assisted teaching GEOPHYS 230 Ice Penetrating Radar, a graduate-level course, ran office hours, taught several lectures, developed problem sets and graded coursework.

Stanford University, Stanford CA August 2016 to December 2016
Teaching Assistant, Department of Geophysics
- Assisted teaching GEOPHYS 110 Introduction to the Foundations of Contemporary Geophysics, an undergraduate-level course, ran office hours, taught several lectures, developed problem sets and graded coursework.

Adler Planetarium, Chicago, IL Summer 2010/2011
Educational Camp Counselor
- Taught students at the elementary, junior high, and high school level about astronomy, physics, and earth science. Built and operated high-altitude weather balloons with several basic scientific payloads

MENTORING EXPERIENCE

Graduate student mentoring:

Elizabeth Wig, Stanford University 2020-present
Marnie Bryant, University of California San Diego, 2020-present
Jared Klemm, Colorado School of Mines, 2020-2021
Elena Savidge, Colorado School of Mines, 2020-2022

Yuhuan Zhao, University of Southern California, 2020-2021
Shichao Jia, Lanzhou University, 2021-2022

Undergraduate student mentoring:

Venezia Follingstad, Colorado School of Mines, 2021-present
Hannah Haugen, Colorado School of Mines, 2021
Maya Acharya, Stanford University, 2015-2016

INVITED TALKS

- Quantifying Arctic permafrost evolution with radar remote sensing and satellite geodesy, Department of Earth and Planetary Sciences, Washington University in St. Louis, St. Louis, MO, May 2021.
- Quantifying wildfire impacts on permafrost regions using InSAR, Department of Geological Sciences, University of Alaska Anchorage, Anchorage, AK, January 2021.
- Quantifying wildfire impacts on permafrost regions using InSAR, Department of Geophysics brown bag, Colorado School of Mines, Golden, CO, November 2020.
- Quantifying wildfire impacts on permafrost regions using InSAR, Division of Radar Science and Engineering, Jet Propulsion Laboratory, Pasadena, CA, March 2020.
- A brief survey of emerging scientific applications using InSAR, Capella Space, San Francisco, CA February 2020.
- Quantifying wildfire impacts on permafrost regions using InSAR, Geophysics Brown bag lunch, Department of Geophysics, Stanford University, Stanford, CA 2019.
- Measuring the impact of wildfire on active layer thickness in a discontinuous permafrost region using Interferometric Synthetic Aperture Radar (InSAR), 2018 UNAVCO Science Workshop, Broomfield, CO, March 2018.
- Mapping and Analyzing Lacustrine Features on Titan. Cornell Planetary Lunch Seminar, Department of Astronomy, Cornell University, Ithaca, NY, May 2013.

PRESENTATIONS

* DENOTES A MENTEE-LED PRESENTATION

- *M Bryant, A Borsa, **R Michaelides**, M Siegfried, Exploring coupled surface hydrology and freeze-thaw dynamics around Toolik Lake, Alaska, using ICESat-2 and InSAR data, , American Geophysical Union, Fall Meeting 2021
- **Michaelides, R.J.**, Siegfried, M.R., Lovekin, J., Berry, K., Dugan, B., Roth, D.L., Discrimination of Active and Inactive Burn Areas in the 2020 Cameron Peak Fire from Interferometric Synthetic Aperture Radar (InSAR) Time Series, American Geophysical Union, Fall Meeting 2021
- *Clayton, L., Schaefer, K., Chen, R.H., Hoy, E., **Michaelides, R.**, Parsekian, A., Zhao, Y., Active Layer Thickness as a Function of Soil Water Content in Alaska and Canada, American Geophysical Union, Fall Meeting 2021
- *Wig, E., **Michaelides, R.J.,** Zebker, H.A., Fine-Resolution Measurement of Soil Moisture from InSAR Phase Closure, American Geophysical Union, Fall Meeting 2021
- *Follingstad, V., **Michaelides, R.J.**, Siegfried, M.R., Quantifying the Surface Deformation of Pingos on the Alaskan North Slope using Interferometric Synthetic Aperture Radar (InSAR), 2021 Regional Conference on Permafrost & 19th International Conference on Cold Regions Engineering

- **R.J. Michaelides**, M. Bryant, M.R. Siegfried, A. Borsa, Quantifying Surface-Height Change over a Periglacial Environment with ICESat-2 Laser Altimetry, 2021 Regional Conference on Permafrost & 19th International Conference on Cold Regions Engineering

- K. H. G. Hughson, B. E. Schmidt, E. Quartini, **R. J. Michaelides**, M. R. Siegfried, A. D. Mullen, J.H. Bradford, A. Swidinsky, H. G. Sizemore. Pingos as Planetary Analogs: The Geophysical Perspective, GSA 2021.

- K. H. G. Hughson, B. E. Schmidt, E. Quartini, **R. J. Michaelides**, M. R. Siegfried, A. D. Mullen, J.H. Bradford, A. Swidinsky, H. G. Sizemore. The Fool on the Hill: Chasing Pingos with PINGO STARR, 2021 Planetary Analogs Workshop.

- Schaefer, K.M., Chen, R.H., Frost, G.V., **Michaelides, R.J.**, Moghaddam, M., Parsekian, A., Sullivan, T.D., Zebker, H.A. Estimating permafrost thickness in the Yukon-Kuskokwim Delta using LIDAR, American Geophysical Union, Fall Meeting 2020.

- *Y. Zhao, R.H. Chen, **R.J. Michaelides**, T.D. Sullivan, A. Parsekian, H.A. Zebker, K.M. Schaefer, M. Moghaddam. Improved calibration of absolute InSAR deformation estimates in support of permafrost active layer retrievals, American Geophysical Union, Fall Meeting 2020.

- E. Biondi, S.H. Yun, H.A. Zebker, **R.J. Michaelides**. Multi-depth multi-focusing SAR algorithm, American Geophysical Union, Fall Meeting 2020.

- **R.J. Michaelides**, R.H. Chen, K.M. Schaefer, A. Parsekian, G.V. Frost Jr, T.D. Sullivan, H.A. Zebker, M. Moghaddam, S. Natali, M.R. Siegfried, American Geophysical Union, Fall Meeting 2020.

- *M. Bryant, A.A. Borsa, H.A. Fricker, **R.J. Michaelides**, W. Neely, M.R. Siegfried. Integrating ICESat-2 and Sentinel-1 measurements to quantify thaw subsidence in Alaska, American Geophysical Union, Fall Meeting 2020.

- M. Jakovljevic, **R.J. Michaelides**, E. Biondi, C. Herickhoff, D. Hyun, H.A. Zebker, J. Dahl, Application of a Range-Doppler Algorithm to Frequency-Domain Beamforming of Ultrasound Signals, 2020 IEEE International Ultrasonics Symposium (IUS).

- R.H. Chen, **R.J. Michaelides**, T.D. Sullivan, A.D. Parsekian, H.A. Zebker, M. Moghaddam, K.M. Schaefer, Joint Retrieval of Soil Moisture and Permafrost Active Layer Thickness Using L-Band Insar and P-Band Polsar, IGARSS 2020-2020 IEEE International Geoscience and Remote Sensing Symposium.

- Y. Zheng, H.A. Zebker, **R.J. Michaelides**. A Physics-Based Decorrelation Phase Covariance Model for Effective Decorrelation Noise Reduction in Interferogram Stacks, IGARSS 2020-2020 IEEE International Geoscience and Remote Sensing Symposium.

- **R.J. Michaelides**, H.A. Zebker, Feasibility of Retrieving Soil Moisture from InSAR Decorrelation Phase and Closure Phase, IGARSS 2020-2020 IEEE International Geoscience and Remote Sensing Symposium.

- G.V. Frost Jr, L.B. Saperstein, R. Loehman, K.M. Schaefer, **R.J. Michaelides**, M.J. Macander, D. Dissing, Does Tundra Fire Accelerate Drainage of Lakes in Discontinuous Permafrost? Evidence from the Yukon-Kuskokwim Delta, Alaska, 2019 AGU Fall Meeting.

- A. Solomonidou, A.A. Le Gall, M. Malaska, S. Birch, R.M.C. Lopes, A. Coustenis, S. Rodriguez, S.D. Wall, **R.J. Michaelides**, M. Nasr, C. Elachi, A. Hayes, A. Schoenfeld, C. Matsoukas, P. Drossart, M.A. Janssen, K.J. Lawrence, O.G. Witasse, J. Radebaugh, The raised ramparts around Titan's northern lakes: Spectral and emissivity analysis, 2019 AGU Fall Meeting.

- **R.J. Michaelides**, H.A. Zebker, A Partially-Correlated SAR Interferometric Model: Addressing Closure Phase Ambiguities and Variable Soil Moisture States, 2019 AGU Fall Meeting.

- K.M. Schaefer, R.H. Chen, **R.J. Michaelides**, M. Moghaddam, A. Parsekian, T.D. Sullivan, H.A. Zebker, Remotely Sensed Active Layer Thickness and Soil Moisture using Airborne L-band and P-band Radar, 2019 AGU Fall Meeting.

- R.H. Chen, **R.J. Michaelides**, T.D. Sullivan, A. Parsekian, H.A. Zebker, K.M. Schaefer, M. Moghaddam, Simultaneous retrieval of soil moisture profiles and permafrost active layer thickness using P-band polarimetric backscatter and seasonal subsidence derived from L-band interferometry, 2019 AGU Fall Meeting.

- T.D. Sullivan, A. Parsekian, T.A. Douglas, K.M. Schaefer**, R.J. Michaelides**, S. Saari, K.L. Broberg, J.H. Westenhoff, S. Schaefer, Geophysical Observations of Organic Matter and Soil Moisture Interactions during Freezing and Thawing of Alaskan Boreal Permafrost, 2019 AGU Fall Meeting.

- M. Jakovljevic, **R.J. Michaelides**, E. Biondi, H.A. Zebker, J.J. Dahl, Frequency domain beamforming of ultrasound signals from inhomogeneous media using range Doppler method, 2019 Acoustical Society of America.

- A. Solomonidou, A. Le Gall, M. Malaska, S. Birch, R. Lopes, A. Coustenis, S. Rodriguez, S. Wall, **R.J. Michaelides**, M. Nasr, C. Elachi, A Hayes, J.Soderblom, A. Schoenfeld, C. Matsoukas, P. Drossart, M. Janssen, K. Lawrence, O. Witasse, J. Radebaugh, The raised ramparts around Titan's northern lakes, 2019 EGU General Assembly Conference Abstracts.

- T.D. Sullivan, A. Parsekian, K.M. Schaefer, **R.J. Michaelides**, J.H. Westenhoff, S. Schaefer, T.A. Douglas, Geophysical Investigation of Soil Moisture Distribution and Behavior in Permafrost Soils from Interior Alaska, 2018 AGU Fall Meeting Abstracts.

- **R.J. Michaelides**, H.A. Zebker, A Singular-Value Decomposition of Closure Phase from InSAR Phase Triplets: Potential for Improved InSAR Time-Series Analysis, and Soil Moisture Time-Series Analysis, 2018 AGU Fall Meeting.

- E. Biondi, H.A. Zebker, **R.J. Michaelides**, GPU-accelerated 3D backprojection of ALOS SAR data from Greenland, 2018 AGU Fall Meeting.

- **R.J. Michaelides**, D.M. Schroeder, Assessing the Ability of Radar Sounders to Discriminate Between Corner-Reflections and Point Scatterers: Application to Europa's Chaos Terrains, 2018 Lunar and Planetary Science Conference.

- **R.J. Michaelides**, K.M. Schaefer, H.A. Zebker, L. Liu, J. Chen, A. Parsekian, Measuring the Impact of Wildfire on Active Layer Thickness in a Discontinuous Permafrost region using Interferometric Synthetic Aperture Radar (InSAR), 2017 AGU Fall Meeting.

- K.M. Schaefer, A. Chen, J. Chen, R.H. Chen, L. Liu, **R.J. Michaelides**, M. Moghaddam, A. Parsekian, A. Tabatabaeenejad, J.A. Thompson, H.A. Zebker, F.J. Meyer, Leveraging Subsidence in Permafrost with Remotely Sensed Active Layer Thickness (ReSALT) Products, 2017 AGU Fall Meeting.

- J. Chen, K.M. Schaefer, L. Liu, **R.J. Michaelides**, H.A. Zebker, Advancing InSAR technology for monitoring the active layer terrestrial water storage and freeze-thaw cycle at Toolik, Alaska, 2017 AGU Fall Meeting.

- K.M. Schaefer, A. Chen, J. Chen, R.H. Chen, E. Jafarov, L. Liu, **R.J. Michaelides**, M. Moghaddam, A. Parsekian, A. Tabatabaeenejad, J.A. Thompson, H.A. Zebker, Combining geophysical techniques to measure soil moisture in permafrost regions, 2017 AGU Fall Meeting.

- K.M. Schaefer, A. Parsekian, S. Natali, S. Ludwig, **R.J. Michaelides**, H.A. Zebker, J. Chen, The Impact of Fire on Active Layer Thickness, 2016 AGU Fall Meeting.

- **R.J. Michaelides**, H.A. Zebker, K.M. Schaefer, J. Chen, A. Parsekian, E.E. Jafarov, L. Liu, Active-Layer Thickness estimation in the Yukon-Kuskokwim Delta, Alaska, via inversion of InSAR data and field measurements, 2016 AGU Fall Meeting.

- **RJ Michaelides**, AG Hayes, M Mastrogiuseppe, HA Zebker, TG Farr, MJ Malaska, V Poggiali, Titan's Empty Lake Basins: Constraining Surface Physical Properties by Investigating Radar Backscatter Behavior at Multiple Incidence Angles, 46th Lunar and Planetary Science Conference (LPSC), The Woodlands, TX, March 2015

- **R.J. Michaelides**, Quasi-specular radar backscatter responses from Titanian and Terrestrial closed basins 2014 Cornell SES Undergraduate Research Symposium, Ithaca, NY. October 2014

- **R.J. Michaelides**, Constraining the physical surface properties of Titan's empty lake basins Titan Surface Workshop 2014, Ithaca, NY. October 2014

- **R.J. Michaelides**, 45th LPSC Recap. Cornell Planetary Lunch Seminar, Department of Astronomy, Cornell University. April 2014

- AG Hayes, **RJ Michaelides**, EP Turtle, JW Barnes, JM Soderblom, M Masrtogiuseppe, RD Lorenz, RL Kirk, JI Lunine, The distribution and volume of titan's hydrocarbon lakes and seas, 2014 Lunar and Planetary Science Conference.

- **RJ Michaelides**, AG Hayes, Determining physical properties of Titan's empty lake basins through radar backscatter modeling. 45th Lunar and Planetary Science Conference (LPSC), Springtime for Titan's Lake District. The Woodlands, TX, March 2014

- **R.J. Michaelides**, Mapping and Analyzing Lacustrine Features on Titan. Cornell Planetary Lunch Seminar, Department of Astronomy, Cornell University. May 2013

- AG Hayes, WE Dietrich, RL Kirk, **R Michaelides**, KL Mitchell, M Malaska, EP Turtle, JW Barnes, A Lucas, O Aharonson, Constraining the Evolution of Titan's North Polar Landscape, 2013 European Planetary Science Congress.

PROFESSIONAL AFFILIATIONS

American Geophysical Union (AGU), 2015 to Present
Institute of Electrical and Electronics Engineers (IEEE), 2019 to Present

PROFESSIONAL SERVICE

- NSF Reviewer
- NASA Review Panel Member
- Mentor for the 2021 Polar Vortex Hackathon
- Session Convener and Chair for AGU Fall Meeting 2022
- Session Convener and Chair for IEEE IGARSS 2021
- Review Panel Member for 2020 Future Investigators in NASA Earth and Space Science and Technology (FINESST)
- Judge, 2021 Undergraduate Research Symposium, Colorado School of Mines

***Peer-Review**:*

- IEEE Transactions on Geoscience and Remote Sensing, Environmental Research Letters, Remote Sensing of Environment, The Cryosphere**,** Remote Sensing, Permafrost and Periglacial Processes, Journal of Geophysical Research-Earth Surface, Remote Sensing in Earth Systems Science**,**

International Journal of Applied Earth Observation and Geoinformation**,** Journal of Glaciology**,** Environmental Research Communications, Geocarto International

UNIVERSITY SERVICE

Stanford University, Stanford CA 2018-2020
Teaching Assistant Liaison and Mentor, Department of Geophysics

- Advocated for TAs and served as a coordinator between faculty and students. Taught good practices to new and inexperienced TAs.

Stanford University, Stanford CA 2019-2020
School of Earth Wellness Liaison, Department of Geophysics

- Advocated for mental health and wellness resources on campus for the School of Earth. Developed several departmental services and activities to improve Mental Health and Awareness.

FIELD EXPERIENCES

2021: Pingo SubTerranean Aquifer Reconnaissance and Reconstruction (Pingo STARR)
2019: Active Layer thickness measurement and in-situ validation of PDO data products for the NASA ABoVE Project
2018: Active Layer thickness measurement and in-situ validation of PDO data products for the NASA ABoVE Project
2017: Active Layer thickness measurement and in-situ validation of InSAR data on the North Slope, AK
2016: Investigating the effect of wildfires on permafrost active layer thickness in the YK Delta, Alaska, using ground-penetrating radar
2014: Geomorphologic field mapping of playas in the Mojave Desert

LANGUAGES AND CITIZENSHIP

English: Native Language
French: Proficient
Greek: Proficient
Citizenship: USA, Cyprus (EU Citizenship)

RELEVANT SKILLS

Programming: Python, Fortran, Matlab, Mathematica

Field Instrument Proficiency: Ground-Penetrating Radars, Gravimeters, Electrical Resistivity Mapping, Time-Domain Reflectometry, Transient Electromagnetics, Capacitively-Coupled Resistivity, Handheld Soil Moisture Sensors

REFERENCES

1. Dr. Howard Zebker, Professor
Department of Geophysics
Stanford University
Phone: (650) 723-8067
Email: zebker@stanford.edu

2. Dr. Matthew Siegfried, Assistant Professor
Department of Geophysics
Colorado School of Mines
Phone: (303) 384-2004
Email: siegfried@mines.edu

3. Dr. Dustin Schroeder, Assistant Professor
Department of Geophysics
Stanford University
Phone: (650) 725-7861
Email: dustin.m.schroeder@stanford.edu

4. Dr. Kevin Schaefer, Lead Scientist
National Snow and Ice Data Center
Phone: (303) 492-8869
Email: kevin.schaefer@nsidc.org

5. Dr. Andrew Parsekian, Assistant Professor
Department of Geology and Geophysics
University of Wyoming
Phone: (307) 223-1197
Email: aparseki@uwyo.edu

6. Dr. Adrian Borsa, Director of IGPP
Scripps Institution of Oceanography
University of California, San Diego
Phone: (858)353-5603
Email: aborsa@ucsd.edu

7. Dr. Lin Liu, Associate Professor
Faculty of Science
The Chinese University of Hong Kong
Phone: (852) 3943 9862
Email: liulin@cuhk.edu.hk

8. Jingyi "Ann" Chen, Assistant Professor
Aerospace Engineering and Engineering Mechanics
The University of Texas at Austin
Phone: (512)-471-7034
Email: jingyi.ann.chen@utexas.edu

9. Dr. Alexander Hayes, Associate Professor
Astronomy Department
Cornell University
Phone: (607) 255-1712
Email: agh4@cornell.edu

10. Dr. Mahta Moghaddam, Professor
Electrical Engineering
University of Southern California
Phone: (213) 740-4712
Email: Mahta@usc.edu