MUSTAFA AKSOY

Associate Professor
Undergraduate Program Director
Equity and Excellence in Education (E^3) Fellow

University at Albany, State University of New York

Department of Electrical and Computer Engineering
College of Nanotechnology, Science, and Engineering Building, Room 305F, Albany, NY 12222

Email: maksoy@albany.edu
Phone: 518-442-2597

June 2025

RESEARCH INTERESTS

Earth and Planetary Remote Sensing, Microwave Technologies, Electromagnetic Theory, Signal Processing.

EDUCATION

2015 **Ph.D.**, Electrical and Computer Engineering, The Ohio State University
Dissertation Title: "Radio Frequency Interference Characterization and Detection in L-band Microwave Radiometry"
Advisor: Prof. Joel T. Johnson

2014 **M.S.**, Electrical and Computer Engineering, The Ohio State University

2010 **B.S.**, Electrical and Electronics Engineering, Bilkent University

EMPLOYMENT

2024-Present **Associate Professor**, Department of Electrical and Computer Engineering, University at Albany, SUNY, Albany, NY

2017-2024 **Assistant Professor**, Department of Electrical and Computer Engineering, University at Albany, SUNY, Albany, NY

2016-2017 **Post-Doctoral Research Associate**, Joint Center for Earth Systems Technology, University of Maryland Baltimore County, NASA Goddard Space Flight Center, Greenbelt, MD

2010-2015 **Graduate Research Associate**, ElectroScience Laboratory, The Ohio State University, Columbus, OH

2009 **Intern**, Radar System Engineering Department, ASELSAN A.S., Ankara, Turkey

2008 **Intern**, Informatics Network Department, Turkish Telecommunication I.C., Ankara, Turkey

MAJOR HONORS & AWARDS

- University at Albany, The Office of the Provost, "Equity and Excellence in Education (E^3) Provost Fellowship," August 2024.
- The Institute of Electrical and Electronics Engineers (IEEE), "Senior Member," February 2024.
- National Science Foundation (NSF), "Faculty Early Career Development Program (CAREER) Award," June 2022.
- National Aeronautics and Space Administration (NASA) Space Technology Mission Directorate, "Early Career Faculty Award," September 2019.
- Oak Ridge Associated Universities (ORAU), "Ralph E. Powe Junior Faculty Enhancement Award," May 2019.
- National Aeronautics and Space Administration (NASA), "Robert H. Goddard Exceptional Achievement for Engineering Award", March 2016.
- Bilkent University, "Undergraduate Fellowship", 2005 – 2010.
- Presidential Fellowship awarded to Top 100 students based on the nationwide university entrance exam scores, 2005 – 2010, Turkey.

PUBLICATIONS (Authors in red are students advised by Dr. Aksoy)

Refereed Journal Articles

1. Bradburn, J., **Aksoy, M.**, Apudo, L., Vukolov, V., Ashley, H., & VanAllen, D. (2025). ACCURACy: A Novel Calibration Framework for CubeSat Radiometer Constellations. Remote Sensing, 17(3), 486.
2. Kar, R., & **Aksoy, M.** (2024) Passive Microwave Remote Sensing of the Antarctic Ice Sheet: Retrieval of Firn Properties Near the Concordia Station. IEEE Geoscience and Remote Sensing Letters, 21, 1-5.
3. Mohamed Nazar, I., & **Aksoy, M.** (2023) Radio Frequency Interference Detection in Passive Microwave Remote Sensing Using One-Class Support Vector Machines. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 16, 6682-6692.
4. Zheleva, M., Anderson, C. R., **Aksoy, M.**, & Johnson, J. T. (2023). Radio Dynamic Zones: Motivations, Challenges and Opportunities to Catalyze Spectrum Coexistence. IEEE Communication Magazine, 61(6), 156-162.
5. Jezek, K., Johnson, J. T., Tsang, L., Brogioni, M., Macelloni, G., **Aksoy, M.**, Kaleschke, L., Wang, S., Leduc-Leballeur, M., Yardim, C., Andrews, M., Xu, H., Demir, O., Tan, S., & Miller, S. (2022). A Review of Recent Developments in Low-Frequency Ultra-Wideband Microwave Radiometry for Studies of the Cryosphere. Frontiers in Earth Science, 10, 1029216.
6. Duan, Y., Yardim, C., Duran, M., Jezek, K., Johnson, J. T., Bringer, A., Tan, S., Tsang, L., & **Aksoy, M.** (2022). Feasibility of Estimating Ice Sheet Internal Temperatures Using Ultra-Wideband Radiometry. IEEE Transactions on Geoscience and Remote Sensing, 60, 1-11.
7. Kar, R., **Aksoy, M.**, Kaurejo, D., Atrey, P., & Devadason, J. A. (2022). Antarctic Firn Characterization via Wideband Microwave Radiometry. Remote Sensing, 14(9), 2258.
8. Johnson, J. T., Jezek, K. C., Macelloni, G., Brogioni, M., Tsang, L., Dinnat, E. P., Walker, J. P., Ye, N., Misra, S., Piepmeier, J. R., Bindlish, R., LeVine, D. M., O'Neill, P. E., Kaleschke, L., Andrews, M. J., Yardim, C., **Aksoy, M.**, Durand, M., Chen, C., Demir, O., Bringer, A., Miller, J. Z., Brown, S. T.,

Kwok, R., Lee, T., Kerr, Y., Entekhabi, D., Peng, J., Colliander, A., Chan, S., MacGregor, J. A., Medley, B., DeRoo, R., & Drinkwater, M. (2021). Microwave Radiometry at Frequencies From 500 to 1400 MHz: An Emerging Technology for Earth Observations. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 14, 4894-4914.

9. **Aksoy, M.**, Rajabi, H., Atrey, P., & Mohamed Nazar, I. (2021). Characteristics of the Global Radio Frequency Interference in the Protected Portion of L-Band. Remote Sensing, 13(2), 253.
10. Mohamed Nazar, I., & **Aksoy, M.** (2020). Radio Frequency Interference Detection in Microwave Radiometry Using Support Vector Machines. Radio Science Letters, 2, 20-0034.
11. **Aksoy, M.**, Rajabi, H., Racette, P. E., & Bradburn, J. (2020). Analysis of Nonstationary Radiometer Gain Using Ensemble Detection. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 13, 2807-2818.
12. Coakley, K. J., Splett, J., Walker, D., **Aksoy, M.**, & Racette, P. (2020). Microwave Radiometer Instability Due to Infrequent Calibration. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 13, 3281-3290.
13. **Aksoy, M.**, & Racette, P. E. (2019). A Preliminary Study of Three-Point Onboard External Calibration for Tracking Radiometric Stability and Accuracy. Remote Sensing, 11(23), 2790.
14. Rajabi, H., & **Aksoy, M.** (2019). Characteristics of the L-band Radio Frequency Interference Environment Based on SMAP Radiometer Observations. IEEE Geoscience and Remote Sensing Letters, 16(11), 1736-1740.
15. Jezek, K. C., Johnson, J. T., Tan, S., Tsang, L., Andrews, M. J., Brogioni, M., Macelloni, G., Durand, M., Chen, C-C., Belgiovane, D. J., Duan, Y., Yardim, C., Li, H., Bringer, A., & **Aksoy, M.** (2017). 500–2000-MHz Brightness Temperature Spectra of the Northwestern Greenland Ice Sheet. IEEE Transactions on Geoscience and Remote Sensing, 56(3), 1485-1496.
16. Mohammed, P. N., **Aksoy, M.**, Piepmeier, J. R., Johnson, J. T., & Bringer, A. (2016). SMAP L-band Microwave Radiometer: RFI Mitigation Prelaunch Analysis and First Year On-orbit Observations. IEEE Transactions on Geoscience and Remote Sensing, 54(10), 6035-6047.
17. **Aksoy, M.**, Johnson, J. T., Misra, S., Colliander, A., & O'Dwyer, I. (2015). L-band Radio-Frequency Interference Observations During the SMAP Validation Experiment 2012. IEEE Transactions on Geoscience and Remote Sensing, 54(3), 1323-1335.
18. Tan, S., **Aksoy, M.**, Brogioni, M., Macelloni, G., Durand, M., Jezek, K. C., Wang, T-L., Tsang, L., Johnson, J. T., Drinkwater M. R., & Brucker, L. (2015). Physical Models of Layered Polar Firn Brightness Temperatures from 0.5 to 2 GHz. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 8(7), 3681-3691.
19. Jezek, K. C., Johnson, J. T., Drinkwater, M. R., Macelloni, G., Tsang, L., **Aksoy, M.**, & Durand, M. (2014). Radiometric Approach for Estimating Relative Changes in Intraglacier Average Temperature. IEEE Transactions on Geoscience and Remote Sensing, 53(1), 134-143.
20. Piepmeier, J. R., Johnson, J. T., Mohammed, P. N., Bradley, D., Ruf, C., **Aksoy, M.**, Garcia, R., Hudson, D., Miles, L., & Wong, M. (2013). Radio-frequency Interference Mitigation for the Soil Moisture Active Passive Microwave Radiometer. IEEE Transactions on Geoscience and Remote Sensing, 52(1), 761-775.
21. **Aksoy, M.**, & Johnson, J. T. (2013). A Comparative Analysis of Low-level Radio Frequency Interference in SMOS and Aquarius Microwave Radiometer Measurements. IEEE Transactions on Geoscience and Remote Sensing, 51(10), 4983-4992.

22. **Aksoy, M.**, & Johnson, J. T. (2012). A Study of SMOS RFI over North America. IEEE Geoscience and Remote Sensing Letters, 10(3), 515-519.

Refereed Conference Papers

1. Kar, R.**, Aksoy, M.**, & Apudo, L. (2025, August). A Study of Ice Dielectric Constant versus Temperature and Frequency. In IGARSS 2025-2025 IEEE International Geoscience and Remote Sensing Symposium (Accepted). IEEE.
2. **Aksoy, M.**, Nazar, I. M., & Apudo, L. (2025, August). Deep Learning Based Radio Frequency Interference Detection in Multi-Channel Microwave Radiometers. In IGARSS 2025-2025 IEEE International Geoscience and Remote Sensing Symposium (Accepted). IEEE.
3. Apudo, L., Bradburn, J., & **Aksoy, M.** (2025, August). Current Status of ACCURACy: Adaptive Calibration of CubeSat Radiometer Constellations. In IGARSS 2025-2025 IEEE International Geoscience and Remote Sensing Symposium (Accepted). IEEE.
4. Bradburn, J., **Aksoy, M.**, & Apudo, L. (2025, August). Evaluating a Convolutional Neural Network Calibration Model with Laboratory Data. In IGARSS 2025-2025 IEEE International Geoscience and Remote Sensing Symposium (Accepted). IEEE.
5. Bradburn, J. W. & **Aksoy, M.** (2024, July). Minimizing Calibrated Measurement Uncertainties Using Convolutional Neural Networks. In IGARSS 2024-2024 IEEE International Geoscience and Remote Sensing Symposium (pp. 6268-6271). IEEE.
6. Nazar, I. M. & **Aksoy, M.** (2024, July). A One-Class Bayesian Algorithm for Radio Frequency Interference Detection in Microwave Radiometry. In IGARSS 2024-2024 IEEE International Geoscience and Remote Sensing Symposium (pp. 763-766). IEEE.
7. **Aksoy, M.** (2024, July). Remote Sensing of the Lunar Regolith: A Study of the Apollo 15 Site via Wideband Microwave Radiometry. In IGARSS 2024-2024 IEEE International Geoscience and Remote Sensing Symposium (pp. 6088-6091). IEEE.
8. Kar. R., & **Aksoy, M.** (2024, January). Revisiting the Water Permittivity: 0-50 GHz Measurements at Temperatures up to 50 ºC. In 2024 United States National Committee of URSI National Radio Science Meeting (USNC-URSI NRSM) (pp. 316-317). IEEE.
9. **Aksoy, M.**, Hollibaugh Baker, D. M., Piepmeier, J. R., & De Amici G. (2023, July). L- to X-Band Passive Microwave Remote Sensing of the Lunar Regolith. In IGARSS 2023-2023 IEEE International Geoscience and Remote Sensing Symposium (pp. 4151-4153). IEEE.
10. Bradburn, J. W., **Aksoy, M.**, & Racette. P. E. (2023, July). Reducing Instrument Power Using Neural Network Calibration. In IGARSS 2023-2023 IEEE International Geoscience and Remote Sensing Symposium (pp. 4392-4394). IEEE.
11. Bradburn, J. W., **Aksoy, M.**, & Racette. P. E. (2023, January). Enabling Low-power Radiometers with Machine Learning Calibration. In 2023 United States National Committee of URSI National Radio Science Meeting (USNC-URSI NRSM) (pp. 224-225). IEEE.
12. **Aksoy, M.**, & Bradburn, J. W. (2022, July). A Novel Calibration Framework for CubeSat Radiometer Constellations. In IGARSS 2022-2022 IEEE International Geoscience and Remote Sensing Symposium (pp. 4292-4295). IEEE.
13. **Aksoy, M.**, & Nazar, I. M. (2022, July). A Multi-Dimensional Radio Frequency Interference Detection Algorithm for Microwave Radiometry. In IGARSS 2022-2022 IEEE International Geoscience and Remote Sensing Symposium (pp. 5278-5281). IEEE.

14. Kar, R.**, Aksoy, M.**, & Kaurejo, D. (2022, July). Retrieving Physical Properties of the Antarctic Firn via Spaceborne Microwave Radiometry. In IGARSS 2022-2022 IEEE International Geoscience and Remote Sensing Symposium (pp. 3975-3978). IEEE.
15. Kaurejo, D.**, Aksoy, M.**, & Kar, R. (2022, July). Analysis of Polar Firn Density and Grain Size Models Using Available Data. In IGARSS 2022-2022 IEEE International Geoscience and Remote Sensing Symposium (pp. 3987-3990). IEEE.
16. Bradburn, J. W., **Aksoy, M.,** Racette, P. E., McClanahan, T., & Loftin, S. (2022, July). Enabling Low-Power Radiometers with Machine Learning Calibration. In IGARSS 2022-2022 IEEE International Geoscience and Remote Sensing Symposium (pp. 7218-7221). IEEE.
17. Nazar, I. M., & **Aksoy, M.** (2022, May). Radio Frequency Interference Detection in Microwave Radiometry: A Novel Feature-Based Statistical Approach. In 2022 3rd URSI Atlantic and Asia Pacific Radio Science Meeting (AT-AP-RASC) (pp. 1-4). IEEE.
18. Kar, R., **Aksoy, M.,** & Kaurejo, D. (2022, May). Multi-Frequency Microwave Radiometry for Retrieving Antarctic Firn Subsurface Temperatures. In 2022 3rd URSI Atlantic and Asia Pacific Radio Science Meeting (AT-AP-RASC) (pp. 1-4). IEEE.
19. Bradburn, J. W., & **Aksoy, M.** (2022, January). ACCURACy: Adaptive Calibration of Cubesat Radiometer Constellations. In 2022 United States National Committee of URSI National Radio Science Meeting (USNC-URSI NRSM) (pp. 26-27). IEEE.
20. Bradburn, J. W., **Aksoy, M.,** Racette, P. E., McClanahan, T., & Loftin, S. (2022, January). Enabling Low-power Radiometers with Machine Learning Calibration. In 2022 United States National Committee of URSI National Radio Science Meeting (USNC-URSI NRSM) (pp. 24-25). IEEE.
21. Kar. R., **Aksoy, M.,** & Kaurejo, D. (2022, January). Antarctic Firn Characterization through Wideband Microwave Radiometry. In 2022 United States National Committee of URSI National Radio Science Meeting (USNC-URSI NRSM) (pp. 246-247). IEEE.
22. Nazar, I. M., & **Aksoy, M.** (2022, January). Radio Frequency Interference Detection in Microwave Radiometry Using Bayesian Detection. In 2022 United States National Committee of URSI National Radio Science Meeting (USNC-URSI NRSM) (pp. 249-250). IEEE.
23. **Aksoy, M.** (2021) Detection of Water Ice in the Lunar Regolith via Microwave Radiometry. In 2021 XXXIVth General Assembly and Scientific Symposium of the International Union of Radio Science (URSI GASS) (pp. 1-4). IEEE.
24. Nazar, I. M., & **Aksoy, M.** (2021). Radio Frequency Interference Detection in Microwave Radiometry Using Density Based Spatial Clustering. In 2021 XXXIVth General Assembly and Scientific Symposium of the International Union of Radio Science (URSI GASS) (pp. 1-4). IEEE.
25. Bradburn, J., Ashley, H., & **Aksoy, M.** (2021, July). ACCURACy: A Novel Approach to Calibrate CubeSat Radiometer Constellations. In IGARSS 2021-2021 IEEE International Geoscience and Remote Sensing Symposium (pp. 996-999). IEEE.
26. Kar, R., **Aksoy, M.**, Devadason, J., & Atrey, P. (2021, July). Potential of the Global Precipitation Measurement Constellation for Characterizing the Polar Firn. In IGARSS 2021-2021 IEEE International Geoscience and Remote Sensing Symposium (pp. 5607-5610). IEEE.
27. Bradburn, J. W., **Aksoy, M.**, & Ashley, H. R. (2021, January). ACCURACy: Adaptive Calibration of CUbesat RAdiometer Constellations. In 2021 United States National Committee of URSI National Radio Science Meeting (USNC-URSI NRSM) (pp. 96-97). IEEE.

28. **Aksoy, M.**, & Bradburn, J. W. (2020, October). Accuracy: Adaptive Calibration of Cubesat Radiometer Constellations. In IGARSS 2020-2020 IEEE International Geoscience and Remote Sensing Symposium (pp. 6357-6360). IEEE.
29. **Aksoy, M.**, Kar, R., Sugumar, P., & Atrey, P. (2020, September). Multi-Frequency Passive Remote Sensing of Ice Sheets from L-Band to W-Band. In IGARSS 2020-2020 IEEE International Geoscience and Remote Sensing Symposium (pp. 2995-2998). IEEE.
30. Nazar, I. M., & **Aksoy, M.** (2020) Radio Frequency Interference Detection in Microwave Radiometry Using Support Vector Machines. Proceedings of the XXXIIIrd URSI General Assembly in Rome (virtual).
31. **Aksoy, M.**, Walter, I., Hollibaugh Baker, D. M., & Piepmeier, J. R. (2020). Impact of Water Ice Presence in Lunar Regolith on Surface Brightness Temperatures from 1 to 10 GHz. LPI Contributions, 2241, 5125.
32. **Aksoy, M.**, & Rajabi, H. (2019, July). Characteristics of Radio Frequency Interference in the Protected Portion of L-Band. In IGARSS 2019-2019 IEEE International Geoscience and Remote Sensing Symposium (pp. 4539-4542). IEEE.
33. **Aksoy, M.**, Racette, P. E., & Bradburn, J. W. (2019, July). Analysis of Non-Stationary Radiometer Gain Via Ensemble Detection. In IGARSS 2019-2019 IEEE International Geoscience and Remote Sensing Symposium (pp. 8893-8896). IEEE.
34. **Aksoy, M.** (2018, July). Evolution of the radio frequency interference environment faced by earth observing microwave radiometers in C and X bands over Europe. In IGARSS 2018-2018 IEEE International Geoscience and Remote Sensing Symposium (pp. 1226-1229). IEEE.
35. **Aksoy, M.** (2018, July). Retrieval of Near-Surface Ice Sheet Properties Using the Global Precipitation Measurement (GPM) Radiometer Constellation. In IGARSS 2018-2018 IEEE International Geoscience and Remote Sensing Symposium (pp. 5161-5164). IEEE.
36. **Aksoy, M.**, & Racette, P. E. (2018, March). Tracking Radiometer Calibration Stability Using Three-Point Onboard Calibration. In 2018 IEEE 15th Specialist Meeting on Microwave Radiometry and Remote Sensing of the Environment (MicroRad) (pp. 1-4). IEEE.
37. **Aksoy, M.**, & Racette, P. E. (2017, July). Tracking calibration stability in climate monitoring microwave radiometers using onboard 3-point calibration. In 2017 IEEE International Geoscience and Remote Sensing Symposium (IGARSS) (pp. 2118-2120). IEEE.
38. Johnson, J. T., Mohammed, P. N., Piepmeier, J. R., Bringer, A., & **Aksoy, M.** (2016, July). Soil Moisture Active Passive (SMAP) microwave radiometer radio-frequency interference (RFI) mitigation: Algorithm updates and performance assessment. In 2016 IEEE International Geoscience and Remote Sensing Symposium (IGARSS) (pp. 123-124). IEEE.
39. Johnson, J. T., Jezek, K. C., **Aksoy, M.**, Bringer, A., Yardim, C., Andrews, M., ... & Duan, Y. (2016, July). The Ultra-wideband Software-Defined Radiometer (UWBRAD) for ice sheet internal temperature sensing: Results from recent observations. In 2016 IEEE International Geoscience and Remote Sensing Symposium (Igarss) (pp. 7085-7087). IEEE.
40. Duan, Y., Durand, M., Jezek, K., Yardim, C., Bringer, A., **Aksoy, M.**, & Johnson, J. (2016, July). Testing the feasibility of a Bayesian retrieval of Greenland ice sheet internal temperature from Ultra-Wideband Software-Defined Microwave Radiometer (UWBRAD) measurements. In 2016 IEEE International Geoscience and Remote Sensing Symposium (IGARSS) (pp. 7092-7093). IEEE.

41. **Aksoy, M.**, Johnson, J. T., & Misra, S. (2014, July). Radio frequency interference observations using an L-Band direct sampling receiver during the SMAPVEX12 airborne campaign. In 2014 IEEE Geoscience and Remote Sensing Symposium (pp. 219-222). IEEE.
42. **Aksoy, M.**, Johnson, J. T., Jezek, K. C., Durand, M., Drinkwater, M., Macelloni, G., & Tsang, L. (2014, July). An examination of multi-frequency microwave radiometry for probing subsurface ice sheet temperature. In 2014 IEEE Geoscience and Remote Sensing Symposium (pp. 3614-3617). IEEE.
43. Macelloni, G., Brogioni, M., **Aksoy, M.**, Johnson, J. T., Jezek, K. C., & Drinkwater, M. R. (2014, July). Understanding SMOS data in Antarctica. In 2014 IEEE Geoscience and Remote Sensing Symposium (pp. 3606-3609). IEEE.
44. Bradley, D., Morris, J. M., Adali, T., Johnson, J. T., & **Aksoy, M.** (2014, March). On the detection of RFI using the complex signal kurtosis in microwave radiometry. In 2014 13th Specialist Meeting on Microwave Radiometry and Remote Sensing of the Environment (MicroRad) (pp. 33-38). IEEE.
45. Misra, S., Johnson, J., **Aksoy, M.**, Peng, J., Bradley, D., O'Dwyer, I., ... & Gaier, T. (2013, July). SMAP RFI mitigation algorithm performance characterization using airborne high-rate direct-sampled SMAPVEX 2012 data. In 2013 IEEE International Geoscience and Remote Sensing Symposium-IGARSS (pp. 41-44). IEEE.
46. **Aksoy, M.**, Johnson, J., Misra, S., & O'Dwyer, I. (2013, January). RFI characterization for SMAP using L-band direct sampled data obtained during the SMAPVEX12 airborne campaign. In 2013 US National Committee of URSI National Radio Science Meeting (USNC-URSI NRSM) (pp. 1-1). IEEE.
47. Misra, S., Johnson, J., **Aksoy, M.**, Bradley, D., Li, H., Mederios, J., ... & O'Dwyer, I. (2013, January). Performance characterization of the SMAP RFI mitigation algorithm using direct-sampled SMAPVEX 2012 data. In 2013 US National Committee of URSI National Radio Science Meeting (USNC-URSI NRSM) (pp. 1-1). IEEE.
48. **Aksoy, M.**, Park, J., & Johnson, J. T. (2011, August). Joint analysis of radio frequency interference from SMOS measurements and from airborne observations. In 2011 XXXth URSI General Assembly and Scientific Symposium (pp. 1-4). IEEE.
49. Johnson, J. T., & **Aksoy, M.** (2011, July). Studies of radio frequency interference in SMOS observations. In 2011 IEEE International Geoscience and Remote Sensing Symposium (pp. 4210-4212). IEEE.

Other Refereed Articles

1. Bradburn J., & **Aksoy, M.** (2022). ACCURACy: Adaptive Calibration of CubeSat Radiometer Constellations. GSICS Quarterly: Winter Issue 2022, Vol. 15 No 4, 2022, doi: 10.25923/1yfk-a604.

PATENTS (Inventors in red are students advised by Dr. Aksoy)

1. **Aksoy, M.**, & Bradburn, J. "Methods, program products, and systems for improved operation of radiometers based on calculated calibration uncertainties." U.S. Patent 12163843, 2024.

GRANT FUNDING (Total: ~$3.6 million, Dr. Aksoy is the Sole Investigator: ~$2.5 million)

Federal

1. Title: NOAA-Passive Radiometer Interference Management for Earth-Observing Systems (N-PRIME)
   Project PI: Sidharth Misra from NASA Jet Propulsion Laboratory (Mustafa Aksoy is a Co-PI and

UAlbany Lead)
Source of Support: National Oceanic and Atmospheric Administration
Total Budget: ~$1,133,333 (Mustafa Aksoy's Portion is ~$61,000)
Duration: Mar 1, 2025 – Aug 31, 2026

2. Title: CAREER: Enabling the Next Generation Wideband Microwave Radiometers for the Remote Sensing of the Cryosphere
Project PI: Mustafa Aksoy (Sole Investigator)
Source of Support: NSF Faculty Early Career Development Program (CAREER)
Total Budget: $499,680
Duration: Aug 15, 2022 – Aug 14, 2027

3. Title: Enabling Low-power Smart Sensors with Machine Learning Calibration
Project PI: Mustafa Aksoy (Sole Investigator), John W. Bradburn (Student Researcher)
Source of Support: NASA Space Technology Graduate Research Opportunities Program
Total Budget: $320,000 ($80,000/year, up to 4 years)
Duration: Aug 2, 2021 – Aug 1, 2025

4. Title: Characterization of Lunar Regolith and Bedrock Using Wideband Microwave Radiometry
Project PI: Mustafa Aksoy (Sole Investigator)
Source of Support: NASA Lunar Data Analysis Program
Total Budget: $79,767
Duration: Nov 25, 2019 – Nov 24, 2022

5. Title: ACCURACy: Adaptive Calibration of CUbesat RAdiometer Constellations
Project PI: Mustafa Aksoy (Sole Investigator)
Source of Support: NASA Space Technology Mission Directorate Early Career Faculty Program
Total Budget: $446,179
Duration: Oct 15, 2019 – Oct 14, 2024

6. Title: Characterization of Antarctic Firn by Multi-Frequency Passive Remote Sensing from Space
Project PI: Mustafa Aksoy (Sole Investigator)
Source of Support: NSF Antarctic Research Program
Total Budget: $337,081
Duration: Apr 15, 2019 – Mar 31, 2023

7. Title: Ensemble Detector: A Novel Tool for Analysis of Non-Stationary Processes
Project PI: Mustafa Aksoy (Sole Investigator)
Source of Support: NASA Unsolicited Proposal
Total Budget: $55,481
Duration: Apr 20, 2018 – Apr 19, 2020

Foundations and Other External Sponsors

1. Title: Study of the Greenland Ice Sheet Using Wideband Microwave Radiometry
Project PI: Mustafa Aksoy (Sole Investigator)
Source of Support: ORAU Ralph E. Powe Junior Faculty Enhancement Award
Total Budget: $10,000 ($5,000 ORAU + $5,000 University at Albany Match)
Duration: June 2019 – February 2021

2. Xilinx University Donation Program, $2,495, Secured a donation of Xilinx Zynq-7000 SoC ZC706 Evaluation Kit for the Department of Electrical and Computer Engineering at University at Albany, January 2020.

3. IEEE Geoscience and Remote Sensing Society Travel Grant, $300, July 2017.

4. The U.S. National Committee for the International Union of Radio Science (USNC-URSI) Travel Fellowship Grant, $600, January 2013.
5. The U.S. National Committee for the International Union of Radio Science (USNC-URSI) Travel Fellowship Grant, $600, January 2012.
6. The U.S. National Committee for the International Union of Radio Science (USNC-URSI) Travel Fellowship Grant, $600, January 2011.

University at Albany, SUNY

1. Title: Microwave Remote Sensing Laboratory Discretionary Research Funding
   Project PI: Mustafa Aksoy (Sole Investigator)
   Source of Support: University at Albany, State University of New York
   Total Budget: $503,000
   Duration: Sep 2025 – Aug 2028
2. Title: Electrical Characterization of the Lunar Regolith for Future Lunar Remote Sensing Missions
   Project PI: Mustafa Aksoy (Sole Investigator)
   Source of Support: The Minerva Center Innovation Funding for Research & Creative Endeavors
   Total Budget: $3,150
   Duration: Jan 2025 – May 2025
3. Title: Engineering Research Center for Atmospheric and Environmental Intelligent Systems Project
   Project PI: Siwei Lyu from the University at Albany (Mustafa Aksoy was a Co-PI)
   Source of Support: SUNY Center-Scale Proposal Planning and Development Grant
   Total Budget: $50,000
   Duration: Apr 2018 – Jul 2019
4. Title: Microwave Remote Sensing Laboratory Start-Up Funding
   Project PI: Mustafa Aksoy (Sole Investigator)
   Source of Support: University at Albany, State University of New York
   Total Budget: $225,000
   Duration: Sep 2017 – Aug 2020

CONFERENCE PRESENTATIONS (Presenters in red are students advised by Dr. Aksoy)

1. Misra, S.; Ogut, M.; Pradhan, O.; Mohamed, A.; Piepmeier, J.; Mohammed, P.; Peng, J.; Andrews, M.; **Aksoy, M.**; Oliva, R., "NOAA-Passive Radiometer Interference Management for Earth-Observing Systems (N-PRIME)," abstract presented at the 105th AMS Annual Meeting, January 2025, New Orleans, LA.
2. Kar, R.; Landolt, S.D.; **Aksoy, M.**, "Analysis of In-situ Precipitation Measurement across Four sites near the Ross Ice Shelf of Antarctica for Identification of Snowfall Events," abstract presented at the 105th AMS Annual Meeting, January 2025, New Orleans, LA.
3. Bradburn, J.; **Aksoy, M.**, "Evaluating a Convolutional Neural Network Calibration Algorithm Using a 500 GHz Radiometer," abstract presented at URSI National Radio Science Meeting, Jan 2025, Boulder, CO.
4. Kar, R.; **Aksoy, M.**, "Revisiting the Complex Permittivity of Pure Ice versus Frequency and Temperature," abstract presented at the 17th Specialist Meeting on Microwave Radiometry and Remote Sensing of the Environment, April 2024, Alexandria, VA.
5. **Aksoy, M.**; Nazar, I. M., "Radio Frequency Interference Detection and Mitigation in Passive Microwave Radiometry using One-Class Machine Learning Algorithms," abstract presented at the 17th

Specialist Meeting on Microwave Radiometry and Remote Sensing of the Environment, April 2024, Alexandria, VA.

6. Bradburn, J.; Racette, P.; **Aksoy, M.**, "Evaluating the Performance of a Convolutional Neural Network for Calibrating Radiometers," abstract presented at the 17th Specialist Meeting on Microwave Radiometry and Remote Sensing of the Environment, April 2024, Alexandria, VA.
7. Zheleva, M.; Anderson, C. R.; Johnson, J. T.; **Aksoy, M.**, "Radio Dynamic Zones: Motivations, Challenges and Opportunities to Catalyze Spectrum Coexistence," paper presented at the 2024 IEEE International Conference on Communications: Communications Magazine Presentations (IEEE ICC 2024), June 2024, Denver, CO.
8. Bradburn, J.; **Aksoy, M.**; Racette, P., "Reducing Instrument Power Using Machine Learning Calibration" abstract presented at the XXXVth URSI General Assembly and Scientific Symposium (URSI GASS 2023), August 2023, Sapporo, Japan.
9. Kar, R.; **Aksoy, M.**, "Remote Sensing of the Antarctic Firn via Year-Long Wideband Spaceborne Microwave Radiometry," abstract presented at the 2023 IEEE International Geoscience and Remote Sensing Symposium (IGARSS), July 2023, Pasadena, CA.
10. Nazar, I. M.; **Aksoy, M.**, "Radio Frequency Interference Detection in Microwave Radiometry Using Multi-Dimensional Semi Supervised Learning," abstract presented at the 2023 IEEE International Geoscience and Remote Sensing Symposium (IGARSS), July 2023, Pasadena, CA.
11. Kar, R.; **Aksoy, M.**; Kaurejo, D., "Retrieval of Antarctic Firn Properties Using Multi-Frequency Microwave Radiometry," abstract presented at URSI National Radio Science Meeting, Jan 2023, Boulder, CO.
12. Bradburn, J.; **Aksoy, M.**, "Adaptive Calibration of Constellations of CubeSat Radiometers (ACCURACy)," abstract presented at the Characterization and Radiometric Calibration for Remote Sensing (CALCON) annual meeting, 2022.
13. Kar, R.; **Aksoy, M.**; Kaurejo, D., "Retrieval of Antarctic Firn Properties through Multi-Frequency Microwave Radiometry," abstract presented at the 2022 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, July 2022, Boulder, CO.
14. Bradburn, J.; **Aksoy, M.**, Racette, P., "Enabling Low-power Radiometers with Machine Learning Calibration" abstract presented at the 3rd URSI Atlantic / Asia-Pacific Radio Science Meeting (URSI AT-AP-RASC 2022), 2022.
15. Kaurejo, D.; Kar, R.; **Aksoy, M.**, "Characterization of Antarctic Firn through Passive Microwave Remote Sensing," presented at the University at Albany, 19th Annual Student Conference, Apr 2022.
16. Nazar, I. M.; **Aksoy, M.**, "Novel Approaches in Radio Frequency Interference Detection for Microwave Radiometry," abstract presented at The RFI 2022 Workshop, Feb 2022, Reading, United Kingdom.
17. Bradburn, J.; Ashley, H.; **Aksoy, M.**, "ACCURACy: Adaptive Calibration of Cubesat Radiometer Constellations," abstract presented at the Characterization and Radiometric Calibration for Remote Sensing (CALCON) annual meeting, 2021.
18. Nazar, I. M.; **Aksoy, M.**, "Detection of Radio Frequency Interference in Microwave Radiometry using a Supervised Classification Method," abstract presented at URSI National Radio Science Meeting, Jan 2021, Boulder, CO.
19. Kar, R.; **Aksoy, M.**; Devadason, J. A.; Atrey, P., "Potential of the Global Precipitation Measurement Constellation for Characterizing the Polar Firn," abstract presented at URSI National Radio Science Meeting, Jan 2021, Boulder, CO.

20. Coakley, K. J.; Splett, J.; Walker, D.; **Aksoy, M.**; Racette, P., "Microwave radiometer instability due to infrequent calibration," abstract presented at the Characterization and Radiometric Calibration for Remote Sensing (CALCON) annual meeting, 2020.
21. **Aksoy, M.**; Atrey, P.; Sugumar, P.; Bradburn J., "Passive Microwave Response of the Antarctic and Greenland Ice Sheets," abstract presented at the 16th Specialist Meeting on Microwave Radiometry and Remote Sensing of the Environment, 2020.
22. Bradburn, J.; **Aksoy, M.**; Racette, P., "Microwave Radiometer Gain Characterization via Ensemble Analysis," abstract presented at the 16th Specialist Meeting on Microwave Radiometry and Remote Sensing of the Environment, 2020.
23. **Aksoy, M.**; Walter, I.; Baker, D. H.; Piepmeier, J. R., "Characterization of Lunar Regolith via Passive Remote Sensing in Microwave Spectrum from 1 to 10 GHz," abstract presented at the 51st Lunar and Planetary Science Conference, 2020.
24. Duan, Y.; Durand, M. T.; Jezek, K. C.; Yardim, C.; Bringer, A.; **Aksoy, M.**; Johnson, J. T., "Feasibility of Estimating Ice Sheet Internal Temperatures Using Ultra-Wideband Radiometric Measurements," abstract presented at the American Geophysical Union Fall Meeting 2019, December 2019, San Francisco, CA.
25. Duan, Y.; Durand, M T.; Jezek, K C.; Yardim, C.; Bringer, A.; **Aksoy, M.**; Johnson, J T., "A Bayesian Retrieval of Greenland Ice Sheet Internal Temperature from Ultra-wideband Software-defined Microwave Radiometer (UWBRAD) Measurements," abstract presented at the American Geophysical Union Fall Meeting 2018, December 2018, Washington, DC.
26. **Aksoy, M.**, "Wideband Microwave Radiometry for Remote Sensing of Lunar Regolith and Bedrock," abstract presented at the American Geophysical Union Fall Meeting 2018, December 2018, Washington, DC.
27. **Aksoy, M.**; Racette, P.E., "Tracking Radiometer Calibration Stability Using Three-Point Onboard Calibration," abstract presented at the 15th Specialist Meeting on Microwave Radiometry and Remote Sensing of the Environment, March 2018, Cambridge, MA.
28. **Aksoy, M.**; Racette, P.E., "Ensemble Detection Analysis for Characterizing Non-Stationary Processes USNC-URSI National Radio Science Meeting," abstract presented at URSI National Radio Science Meeting, Jan 2018, Boulder, CO.
29. **Aksoy, M.**; Racette, P.E., "Ensemble Detection Analysis in Space-borne Doppler Measurements USNC-URSI National Radio Science Meeting," abstract presented at URSI National Radio Science Meeting, Jan 2018, Boulder, CO.
30. Duan, Y.; Durand, M T.; Jezek, K C.; Yardim, C.; Bringer, A.; **Aksoy, M.**; Johnson, J T., "A Bayesian Retrieval of Greenland Ice Sheet Internal Temperature from Ultra-wideband Software-defined Microwave Radiometer (UWBRAD) Measurements," abstract presented at 2017 Fall Meeting, AGU, New Orleans, Louisiana, 11-15 Dec.
31. **Aksoy, M.**; Racette, P., "Ensemble Detection Analysis for Characterizing Non-Stationary Processes" abstract presented at the XXXIIth URSI General Assembly and Scientific Symposium (URSI GASS 2017), August 2017, Montreal, Canada.
32. **Aksoy, M.**; Racette, P.; Li, L., "Ensemble Detection Analysis in Space-borne Doppler Measurements" abstract presented at XXXIIth URSI General Assembly and Scientific Symposium (URSI GASS 2017), August 2017, Montreal, Canada.
33. Duan, Y.; Durand, M T.; Jezek, K C.; Yardim, C.; Bringer, A.; **Aksoy, M.**; Johnson, J T., "A Bayesian Retrieval of Greenland Ice Sheet Internal Temperature from Ultra-wideband Software-defined

Microwave Radiometer (UWBRAD) Measurements," abstract presented at 2016 Fall Meeting, AGU, San Francisco, California, 11-15 Dec.

34. Duan, Y.; Durand, M T.; Jezek, K C.; Yardim, C.; Bringer, A.; **Aksoy, M.**; Johnson, J T., "A Bayesian Retrieval of Greenland Ice Sheet Internal Temperature from Ultra-wideband Software-defined Microwave Radiometer (UWBRAD) Measurements," abstract presented at 2015 Fall Meeting, AGU, San Francisco, Calif., 14-18 Dec.
35. Bringer, A.; Johnson, J.; Jezek, K. C.; Durand, M.; Duan, Y.; **Aksoy, M.**; Macelloni, G.; Brogioni, M.; Brucker, L.; Tan, S.; Drinkwater, M.; Tsang, L., "Ultra-wideband Radiometry for Internal Ice Sheet Temperature Measurements: Modeling and Experiments," abstract presented at 2015 Fall Meeting, AGU, San Francisco, Calif., 14-18 Dec.
36. Mohammed, P.; Piepmeier, J. R.; Johnson, J. T.; **Aksoy, M.**; Bringer, A., "Soil Moisture Active Passive (SMAP) Microwave Radiometer Radio-Frequency Interference (RFI) Mitigation: Initial On-Orbit Results," abstract presented at the 6th Soil Moisture Active Passive Calibration and Validation Workshop, September 2015, Columbia, MD.
37. Jezek, K.; Johnson, J.T.; Durand, M.; **Aksoy, M.**; Tsang, L.; Wang, T.; Tan. S.; Macelloni, G.; Brogioni, M.; Drinkwater, M., "Ice Sheet Thermometry Using Wideband Radiometry," abstract presented at 2014 American Geophysical Union's Fall Meeting, December 2014, San Francisco, CA.
38. **Aksoy, M.**; Johnson, J.T., "The Ultrawideband Software-Defined Microwave Radiometer," abstract presented at 2014 Earth Science Technology Forum, October 2014, Leesburg, VA.
39. **Aksoy, M.**; Johnson, J.T.; Piepmeier, J.; Mohammed, P., "A Study of Radio Frequency Interference Detection for the SMAP Radiometer," abstract presented at the 13th Specialist Meeting on Microwave Radiometry and Remote Sensing of the Environment, March 2014, Pasadena, CA.
40. **Aksoy, M.**; Johnson, J.T.; Jezek, K., "Remote Sensing of Ice Sheet Subsurface Temperatures," abstract presented at the 13th Specialist Meeting on Microwave Radiometry and Remote Sensing of the Environment, March 2014, Pasadena, CA.
41. Jezek, K.; Johnson, J.T.; **Aksoy, M.**, "Radiometric Approach for Estimating Relative Changes in Intra-Glacier Average Temperature," abstract presented at 2012 American Geophysical Union's Fall Meeting, December 2012, San Francisco, CA.
42. Johnson, J.T.; **Aksoy, M.**, "A Study of Radio Frequency Interference for Current and Future L Band Microwave Radiometry Missions," abstract presented at the 2012 IEEE International Geoscience and Remote Sensing Symposium (IGARSS), July 2012, Munich, Germany.
43. **Aksoy, M.**; Johnson, J.T., "Radio Frequency Interference Analysis of L-Band Microwave Radiometry Missions," abstract presented at URSI National Radio Science Meeting, Jan 2012, Boulder, CO.
44. **Aksoy, M.**; Johnson, J.T., "Statistical Analysis of SMOS Radio Frequency Interference," abstract presented at URSI National Radio Science Meeting, Jan 2011, Boulder, CO.

OTHER PRESENTATIONS & TALKS

1. **Aksoy, M.**, "My NSF CAREER Journey," University at Albany, Division for Research & Economic Development (May 2024). Invited Talk.
2. **Aksoy, M.**, "Passive Microwave Remote Sensing: Frequency Allocations and Spectrum Issues," University at Albany, Department of Computer Science (April 2024). Guest Lecture.
3. **Aksoy, M.**, "Adaptive Calibration of CubeSat Radiometer Constellations (ACCURACy)," NASA Langley Research Center (September 2022). Invited Talk.

4. **Aksoy, M.**, "Microwave Radiometry to Observe Earth and Planetary Surfaces," University at Albany, Department of Atmospheric and Environmental Sciences / Atmospheric Sciences Research Center Joint Colloquium (November 2021). Invited Talk.
5. **Aksoy, M.**, "Adaptive Calibration of CubeSat Radiometer Constellations (ACCURACy)," NASA Langley Research Center (October 2021). Invited Talk.
6. **Aksoy, M.**; Johnson J. T., "Microwave Radiometry for Earth Observations: Science Goals, Instrument Design, and Spectrum Access," National Radio Dynamic Zones Workshop. (March 2021). Invited talk.
7. **Aksoy, M.**, "A New Age of Discovery: This Time from Space," University at Albany, Division for Research. (November 2020). Invited talk.
8. **Aksoy, M.**, "Adaptive Calibration of CubeSat Radiometer Constellations (ACCURACy)," NASA Langley Research Center (September 2020). Invited Talk.
9. **Aksoy, M.**, "Microwave Radiometry for Earth and Space Observations," Union College - Electrical, Computer and Biomedical Engineering Department Seminars, Union College, Schenectady, NY. (January 2020). Invited Talk.
10. **Aksoy, M.**, "Recent Studies in Passive Microwave Remote Sensing," University at Albany Physics Department, University at Albany, SUNY, Albany, NY. (October 2018). Invited Talk.

MEDIA CONTRIBUTIONS

1. **Aksoy, M.**, "CubeSats, the tiniest of satellites, are changing the way we explore the solar system," SpaceDaily.com, October 2024.
2. **Aksoy, M.**, "CubeSats, the tiniest of satellites, are changing the way we explore the solar system," The Conversation, September 2024.
3. **Aksoy, M.**, "Sensing Opportunities in Space," University at Albany Magazine, Spring 2024.
4. **Aksoy, M.**, "A New Age of Discovery," The Academic Minute, February 2021.

TEACHING & SUPERVISION & MENTORING

Courses Taught (All at the University at Albany)

IECE/ICEN 310 – Engineering Electromagnetics	Spring 2025, Fall 2024, Fall 2023, Fall 2022, Fall 2021, Fall 2020, Fall 2019, Spring 2019, Fall 2018
IECE 411/511 – Microwave Engineering	Fall 2024, Spring 2023, Spring 2020
IECE 412/512 – Antenna Engineering	Spring 2024, Spring 2021
ICEN 280/IECE 202 – Introduction to Circuits	Summer 2024, Spring 2022, Spring 2018
ICEN 140 – Introduction to Engineering Design	Fall 2017
TUNI 150 – Honors Topics: Remote Sensing of Earth and Space	Spring 2025, Spring 2024, Spring 2023, Fall 2022, Spring 2022, Spring 2019

Ph.D. Students Supervision & Mentoring (All at the University at Albany)

1. Imara Nazar (Fall 2020 – Spring 2024, Graduated, Research Topic: Radio Frequency Interference Detection and Mitigation in Microwave Radiometry, Dr. Aksoy is the Doctoral Advisor)
2. John W. Bradburn (Spring 2020 – Present, Passed Doctoral Candidacy Exam: Summer 2024, Research Topic: Calibration of Microwave Radiometers, Dr. Aksoy is the Doctoral Advisor)
3. Rahul Kar (Spring 2020 – Present, Passed Doctoral Candidacy Exam: Summer 2023, Research Topic: Microwave Passive Remote Sensing of the Cryosphere, Dr. Aksoy is the Doctoral Advisor)
4. Lennox Apudo (Spring 2024 – Present, Research Topic: Calibration of CubeSat Sensors, Dr. Aksoy is the Doctoral Advisor)

Master's Students Supervision & Mentoring (All at the University at Albany)

1. Jerusha Ashlin Devadason (Fall 2020 – Spring 2021, Graduated, Project Title: Verification of Radiative Transfer Models Developed for Ice Sheets, Dr. Aksoy was the Research Advisor)
2. Falon Treis (Fall 2020 – Spring 2021, Project Title: Microwave Remote Sensing of the Moon, Falon was a MS student in Geographic Information Science, Dr. Aksoy was the Research Advisor)
3. Prethiga Sugumar (Fall 2019, Project Title: Simulation of Surface Microwave Emissions from the Antarctic Ice Sheet, Dr. Aksoy was the Research Advisor)
4. John W. Bradburn (Summer 2019 – Fall 2019, Transferred to the Ph.D. program, Research Topic: Calibration of Microwave Radiometers, Dr. Aksoy was the Research Advisor)
5. Hamid Rajabi (Summer 2018 – Fall 2019, Graduated, Project title: RFI Detection and Mitigation in Microwave Radiometry, Dr. Aksoy was the Research Advisor)

Undergraduate Students Supervision & Mentoring (All at the University at Albany)

1. Lauren Aldrin Bernard (Spring 2025, Project title: Electrical Characterization of the Lunar Regolith for Future Lunar Remote Sensing Missions, Dr. Aksoy is the Research Advisor)
2. Varvara Vukolov (Summer 2023, Project title: ACCURACy: Adaptive Calibration of CUbesat RAdiometer Constellations, Dr. Aksoy was the Research Advisor)
3. Angela Totaro (Spring 2023, Project title: ACCURACy: Adaptive Calibration of CUbesat RAdiometer Constellations, Dr. Aksoy was the Research Advisor)
4. Kathryn M. Rooney (Spring 2023, Project title: Characterization of Antarctic Firn by Multi-Frequency Passive Remote Sensing from Space, Dr. Aksoy was the Research Advisor)
5. Harshitha Kona (Spring 2023, Project title: Characterization of Antarctic Firn by Multi-Frequency Passive Remote Sensing from Space, Dr. Aksoy was the Research Advisor)
6. Dua Kaurejo (Summer 2021 – Summer 2022, Project title: Characterization of Antarctic Firn by Multi-Frequency Passive Remote Sensing from Space, Dr. Aksoy was the Research Advisor)

7. Dylan Vanallen (Summer 2021, Project title: ACCURACy: Adaptive Calibration of CUbesat RAdiometer Constellations, Dr. Aksoy was the Research Advisor)
8. Henry Ashley (Summer 2020 – Spring 2021, Project title: ACCURACy: Adaptive Calibration of CUbesat RAdiometer Constellations, Henry was a Mathematics/Physics major, Dr. Aksoy was the Research Advisor)
9. Dennis Lee (Spring 2020, Project title: Microwave Remote Sensing of the Lunar Regolith, Dr. Aksoy was the Research Advisor)
10. Pranjal Atrey (Summer 2019 – Spring 2020, Project title: Characterization of Antarctic Firn by Multi-Frequency Passive Remote Sensing from Space, Dr. Aksoy was the Research Advisor)

Honors & Awards Students Received

John Bradburn

- 2023 National Radio Science Meeting Student Travel Grant
- 2022 National Radio Science Meeting Student Travel Grant
- 2021 NASA Space Technology Graduate Research Opportunities Fellowship
- Student Travel Support to attend the 16th Specialist Meeting on Microwave Radiometry and Remote Sensing of the Environment, 2020

Imara Nazar

- 2023 IEEE Geoscience and Remote Sensing Society Travel Grant to attend the 2023 IEEE International Geoscience and Remote Sensing Symposium
- 2022 New York University Tandon School of Engineering Faculty First Look Fellowship
- 4th Place in the International Union of Radio Science 2022 Atlantic and Asia Pacific Radio Science Meeting Student Paper Competition
- 2022 National Radio Science Meeting Student Travel Grant

Rahul Kar

- 2024 NSF NCAR, Advanced Study Program, Graduate Student (GVP) Fellowship
- 2024 National Radio Science Meeting Student Travel Grant
- 2023 IEEE Geoscience and Remote Sensing Society Travel Grant to attend the 2023 IEEE International Geoscience and Remote Sensing Symposium
- 2022 International Union of Radio Science Young Scientist Award
- 2022 National Radio Science Meeting Student Travel Grant

Dua Kaurejo

- 2021-2022 Presidential Award for Undergraduate Research at the University at Albany
- University at Albany Center for Undergraduate Research and Creative Engagement Fall 2021 Scholarship

Pranjal Atrey

- 2019-2020 Presidential Award for Undergraduate Research at the University at Albany

SERVICE

Department Service

University at Albany, Department of Electrical and Computer Engineering

- Undergraduate Studies Committee, Member: 2017 – Present, Chair: 2020 – Present
- ABET Accreditation Committee, Member: 2020 – Present
- Department Strategic Planning Committee, Member: 2024 – Present
- Faculty Search Committee, Member: 2020, 2021, 2022, 2023
- Departmental Seminars, Organizer: 2019 – 2022
- IECE 490/491 Design Lab I/II, Stakeholder for the CubeSat Design Project: 2019 – 2022
- Graduate Studies Committee, Member: 2018 – 2020

College Service

University at Albany, College of Nanotechnology, Science, and Engineering

- Academic Programs Committee, Member: 2024 – Present

University Service

University at Albany, State University of New York

- University Senate, Undergraduate Academic Council Member: 2024 - Present
- SUNY Research Seed Grant Program, Reviewer: 2024.
- SUNY Chancellor's Distinguished Ph.D. Graduate Dissertation Awards, Reviewer for the University at Albany Nominations: 2023
- Center for Undergraduate Research and Creative Engagement, Funding Reviewer: 2022, 2023
- Division for Research & Economic Development Grant Development Associate Search Committee, Member: 2023
- College of Engineering and Applied Sciences Dean Search Committee, Member: 2023

Professional Service

- Topic Editor (2020-Present) and Reviewer Board Member (2019-Present):
  - MDPI Remote Sensing
- Reviewer (2017-Present):
  - IEEE Transactions on Geoscience and Remote Sensing
  - IEEE Geoscience and Remote Sensing Letters
  - IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing
  - IEEE Sensors
  - MDPI Remote Sensing
  - IEEE International Geoscience and Remote Sensing Symposia (IGARSS)
  - Specialist Meetings on Microwave Radiometry and Remote Sensing of the Environment (MicroRad)
  - NSF Grant Funding Programs:

        - Office of Polar Programs
    - NASA Grant Funding Programs:
        - Korea Pathfinder Lunar Orbiter (KPLO) Participating Scientist Program
        - MUREP Earth System Science Research Program (MUREP ESSR)
        - NASA Space Technology Graduate Research Opportunities Program
    - Swiss National Science Foundation (SNSF) Grant Funding Programs

- Panelist (2017-Present):
    - NASA Grant Funding Programs:
        - Making Earth System Data Records for Use in Research Environments (MEaSUREs) Program
        - Maturation of Instruments for Solar System Exploration (MatISSE) Program
        - Development and Advancement of Lunar Instrumentation Program (DALI) Program
        - Planetary Instrument Concepts for the Advancement of Solar System Observations Program (PICASSO) Program
        - Advanced Information Systems Technology (AIST) Program
        - Earth Science Technology Office Instrument Incubator Program (IIP)

- Organizing Committee:
    - NRDZ Partnership and Workshop Series: Catalyzing Coexistence via the National Radio Dynamic Zone, 2024.
    - National Radio Dynamic Zones Partnership Workshop #2, 2021.

PROFESSIONAL AFFILIATIONS

Memberships

The Institute of Electrical and Electronics Engineers (IEEE) – Senior Member
The IEEE Geoscience and Remote Sensing Society (GRSS) – Senior Member
The American Geophysical Union (AGU)

PROFESSIONAL DEVELOPMENT ACTIVITIES

- University at Albany – Center for the Advancement of Teaching, Learning, and Online Education (CATLOE) Course Design Academy, 2025.
- NSF I-Corps Program, 2022
- ABET Basics of Program Assessment Workshop, 2021
- NSF CAREER Proposal Writing Workshop, organized by the Division for Research at the University at Albany, 2018
- Proposal Writing Seminar Course, organized by the Division for Research at the University at Albany, 2017