Jorge Luis Salazar-Cerreno, Ph.D.

William H. Barkov Presidential Associate Professor
School of Electrical & Computer Engineering
Gallogly College of Engineering, The University of Oklahoma
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Education

June 2012 — **Ph.D., - University of Massachusetts, Amherst, MA**
Phased-array antennas and weather radar systems.
Thesis title: *The feasibility of low-cost, dual-polarized, phase-tilt antenna arrays for dense radar networks.*
Advisors: Dr. David McLaughlin and Dr. David Pozar

December 2002 — **M.Sc., Electrical Engineering,- University of Puerto Rico. Mayagüez, PR**
Ultra-wide-band antenna design
Thesis title: *Sensor development for cross-swell radar tomography for detection of underground dense non-aqueous phase liquid contaminants*
Advisor: Dr. Rafael Rodriguez

July 1994 — **B.Sc., Electronic Engineering, University Antenor Orrego, Trujillo, Perú.**
Control & Telecommunications.

April 1999 — **ABA., Business Management & Planning, Universidad del Pacifico, Lima, Perú.**
Specialization Program in Strategic Management of International Business

September 1995 — **AS., Instituto Nacional de Investigación y Capacitación de Telecomunicaciones, Lima, Perú.**
Specialization Program in Wireless and Digital Communications.

Honors and Awards

Nov. 2022 — **Honorary Doctorate Degree from the Private University Antenor Orrego, Trujillo, Peru.**

April 2022 — **2022 OU Outstanding Faculty Award of the year.**

May 2022 — **2022 OU Annual Award for Excellence in Research Grants.**

October 2021 — **2021 First Paper Award on Antenna Measurements and Applications.**

March 2021 — **2021 OU Annual Award for Excellence in Research Grants.**

May 2021 — **2021 Recognition for the Exceptional Reviewer Performance of IEEE Antenna and Propagation Society.**

March 2020 — **2020 OU Annual Award for Excellence in Research Grants.**

April 2019 — **Awarded a William H. Barkow Presidential Professorship.**

2015 – 2022 — **College of Engineering Dissertation awards of 5 Ph.D. students.**

Fall 2015 — **First place Conference Paper Competitions on AMS2015 and PAST2016 conferences.**

Grants and Contracts

Research Grants and Expenditures

From 2014 to 2022, the cumulative research grants is $48.8M and $5M in research expenditures.

Expenditures 2020-2021: $ 996,888.0, **OU Ranking:**23, **ECE Ranking:** 3
Expenditures 2019-2020: $1,125,010, **OU Ranking:**18, **ECE Ranking:** 3
Expenditures 2018-2019: $1,122,910, **OU Ranking:**14, **ECE Ranking:** 2
Expenditures 2017-2018: $ 915,272,0 **OU Ranking:**22, **ECE Ranking:** 3
Expenditures 2016-2017: $ 427,986.0 **OU Ranking:**52, **ECE Ranking:** 4
Expenditures 2015-2016: $ 461,652.0 **OU Ranking:**48, **ECE Ranking:** 6

Proposals in preparation:

J. Salazar (PI: 24%), R. Palmer, D. Bodine, J. McDaniel, C. Homeyer, B.L. Cheong, D. Schvartzman, M. Yeary, T. Yu, J. Kelley, J. Redemann, G. McFarquar, P.Kirstetter . **Award Amount: $15,977,526** . **Period:** 10/24/2023 - 08/31/2028. **Sponsor:** National Science Fundation (NSF), **Project Title:** Mid-scale RI-1 (M1:IP): Dual-Doppler 3D Mobile Ka-band Rapid-Scanning Volume Imaging Radar for Earth System Science

J. Salazar (33.3%), X. Wu, and Y. Hong . **Award Amount: $1,250,000** . **Period:** 09/01/2023 - 08/31/2024. **Sponsor:** U.S. Department of Energy US-DOE„ **Project Title:** Integrated methane Monitoring Platform Design

J. Salazar (40%), C. Fulton, B.L. Cheong, T.Yu, and R. Palmer. **Award Amount: $1,200,00** . **Period:** 8/01/2022 - 7/31/2027. **Proposal No:** 19-0759 , **Sponsor:** National Center for Atmospheric Research (NCAR) , **Project Title:** APAR In-situ Calibration, Pulse Compression, and Waveform Design Studies .

Grants & Contracts:

J. Salazar (100%), **Award Amount: $87,684. Period:** 08/30/2022 - 5/31/2023. **Award No:** A23-0081-001, **Sponsor:** Brookhaven National Laboratory (BNL), U.S. Department of Energy US-DOE, **Project Title:** X-band Array Antenna Development and Radar Back-end System Integration.

J. Salazar (100%), **Award Amount: $83,470. Period:** 08/01/2022 - 12/31/2023. **Award No:** A23-0066-001 , **Sponsor:** State of Oklahoma, Department of Transportation, OK-TRAN, **Project Title:** Smart and Efficient Road Awareness E-ink Dynamic Sign for Enhancing Safety Driving in Oklahoma.

J. Salazar (70%), D.Schvartzman **Award Amount: $40,000. Period:** 01/31/2022 - 12/31/2022. **Award No:** A22-0269-001 , **Sponsor:** U. S. Department of Transportation, Federal Highway Administration, DOT-FHA **Project Title:** A Radar-Based Warning System and Stakeholder-Focused Outreach for Enhancing Safe Driving on Icy Roads.

C. Fulton, M. Yeary, **J. Salazar (5%)**, R. Palmer, H. Sigmarsson **Award Amount: $75,000. Period:** 12/15/2018 - 12/14/2022. **Award No:** A19-0207-007 , **Sponsor:** U.S. Department of Defense, Army Research Lab. DOD-ARL **Project Title:** Development and Demonstration of Robust Calibration Algorithms and Methods for Digital Arrays for Next Generation Weather Radar Capabilities.

Grants and Contracts (continued)

J. Salazar (PI:100%) Award Amount: $10,270. Period: 07/15/20 - 08/31/20. **Award No:** A21-0203-001 , **Sponsor:** University of Buffalo, **Project Title:** Testing and Characterization of mm-Wave Leaky Wave Antenna Arrays.

C. Fulton, M. Yeary, **J. Salazar (5%)**, R. Palmer, H. Sigmarsson **Award Amount: $147,500. Period:** 12/15/2018 - 12/14/2022. **Award No:** A19-0207-006 , **Sponsor:** U.S. Department of Defense, Army Research Lab. DOD-ARL **Project Title:** Development and Demonstration of Robust Calibration Algorithms and Methods for Digital Arrays for Next Generation Weather Radar Capabilities.

Robert Palmer, Caleb Fulton, **J. Salazar (10%)**, Hjalti Sigmarsson, Mark Yeary, Tian You Yu, Boon Leng Cheong, David Bodine, and Guifu Zhang. **Award Amount: $2,000,911. Period:** 07/01/2020 - 06/30/2023. **Proposal No:** 20-0892, **Sponsor:** U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration | DOC-NOAA, **Project Title:** Exploitation of the Horus All-Digital Polarimetric Phased Array Weather Radar.

J. Salazar (PI:80%), Z. Qammar. **Award Amount: $49,994. Period:** 02/14/20 - 02/13/21. **Award No:** A14-0055, **Sponsor:** State of Oklahoma, Department of Transportation | OK-TRAN, **Project Title:** RF Wireless Sensor Development for Smart Roads.

M. Yeary, R. Palmer, C. Fulton, **J. Salazar (10%)**, N. Goodman, H. Sigmarsson, J. McDaniel, J. Ruyle, and J. Metcalf. **Award Amount: $7,405,000. Period:** 09/24/2020 - 09/23/2023. **Award No:** A-21-0174-001, **Sponsor:** U.S. Department of Defense, Office of Naval Research | DOD-ONR, **Project Title:** Near-field Scanner and Projects for Advanced Digital Radar.

J. Salazar (PI:70%), C. Fulton and N. Aboserwal. **Award Amount: $172,412. Period:** 02/21/19 - 07/30/20. **Award No:** A19-0233-001, **Sponsor:** National Center for Atmospheric Research (NCAR), **Project Title:** Mutual Coupling for Self-calibration of the EOL LRU Phased Array Radar.

J. Salazar (PI:80%), C. Fulton. **Award Amount: $315,175. Period:** 01/15/19 - 07/31/19. **Award No:** A19-0213-001, **Sponsor:** METAWAVE, **Project Title:** RF Characterization and Calibration of a Smart mm-Wave Active Array Antenna.

C. Fulton, M. Yeary, **J. Salazar (Co-PI:5%)**, R. Palmer and H.Sigmarsson **Award Amount: $150,886. Period:** 12/15/18 - 12/22/22. **Award No:** A19-0207-001, **Sponsor:** U.S. Department of Defense, Army Research Lab (DOD-ARL), **Project Title:** Development and Demonstration of Robust Calibration Algorithms and Methods for Digital Arrays for Next Generation Weather Radar Capabilities.

Y. Zhang, **J. Salazar (Co-PI:50%)**, **Award Amount: $50,000. Period:** 12/07/18 - 12/06/19. **Award No:** A19-0194-001, **Sponsor:** Agile RF Systems LLC, **Project Title:** Fundamental Trade Analysis for Simultaneous Multi-Mission (SMM) Radar.

M.Yeary, R. Palmer, C. Fulton, **J. Salazar (Co-PI:17%)**, H.Sigmarsson, and N. Goodman **Award Amount: $5,471,125. Period:** 09/30/18 - 09/29/20. **Award No:** A19-0123-001, **Sponsor:** U.S. Department of Defense, Office of Naval Research (DOD-ONR), **Project Title:** All-Digital Polarimetric Phased Array Radar Mobile Testbed.

Grants and Contracts (continued)

J. Salazar (PI:100%), **Award Amount: $45,013. Period:** 08/02/18 - 08/31/18. **Award No:** A19-0044-001, **Sponsor:** University Corporation for Atmospheric Research (UCAR), **Project Title:** APAR LRU Calibration and Antenna Calibration.

J. Salazar (PI:50%), N. Aboserwal **Award Amount: $10,270. Period:** 06/26/18 - 08/31/18. **Award No:** A19-0026-001 , **Sponsor:** NASA-Jet Propulsion Laboratory, California Institute of Technology (CALTECH), **Project Title:** A Radome for the JPL W-Band Comet-Jet Doppler Radar.

R. Palmer, C. Fulton, H.Sigmarsson, **J. Salazar (Co-PI:22%)**, G. Zhang, B.L. Cheong. and T. Yu **Award Amount: $590,789. Period:** 06/01/18 - 05/31/19. **Award No:** A18-0282-004, **Sponsor:** U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration (DOC-NOA), **Project Title:** Spectrum Efficient National Surveillance Radar (SENSR) ARRC R&D Activities .

R. Palmer, C. Fulton, H.Sigmarsson, **J. Salazar (Co-PI:22%)**, G. Zhang, B.L. Cheong. and T. Yu **Award Amount: $759,655. Period:** 06/01/18 - 05/31/19. **Award No:** A18-0282-003, **Sponsor:** U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration (DOC-NOA), **Project Title:** Spectrum Efficient National Surveillance Radar (SENSR) ARRC R&D Activities .

R. Palmer, C. Fulton, H.Sigmarsson, **J. Salazar (Co-PI:22%)**, G. Zhang, B.L. Cheong. and T. Yu **Award Amount: $759,655. Period:** 06/01/18 - 05/31/19. **Award No:** A18-0282-003, **Sponsor:** U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration (DOC-NOA), **Project Title:** Spectrum Efficient National Surveillance Radar (SENSR) ARRC R&D Activities .

R. Palmer, C. Fulton, H.Sigmarsson, **J. Salazar (Co-PI:22%)**, G. Zhang, B.L. Cheong. and T. Yu **Award Amount: $1,329,500. Period:** 06/01/18 - 05/31/19. **Award No:** A18-0282-002, **Sponsor:** U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration (DOC-NOA), **Project Title:** Spectrum Efficient National Surveillance Radar (SENSR) ARRC R&D Activities .

R. Palmer, C. Fulton, H.Sigmarsson, **J. Salazar (Co-PI:22%)**, G. Zhang, B.L. Cheong. and T. Yu **Award Amount: $1,329,500. Period:** 06/01/18 - 05/31/19. **Award No:** A18-0282-002, **Sponsor:** U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration (DOC-NOA), **Project Title:** Spectrum Efficient National Surveillance Radar (SENSR) ARRC R&D Activities .

R. Palmer, C. Fulton, H.Sigmarsson, **J. Salazar (Co-PI:22%)**, G. Zhang, B.L. Cheong. and T. Yu **Award Amount: $332,776. Period:** 06/01/2018 - 5/31/2019. **Award No:** A18-0282-002, **Sponsor:** U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration (DOC-NOA), **Project Title:** Spectrum Efficient National Surveillance Radar (SENSR) ARRC R&D Activities .

N. Goodman, J. Ruyle, H.Sigmarsson, M.Yeary, **J. Salazar (Co-PI:10%)**, C. Fulton, and R. Palmer **Award Amount: $3,531,820. Period:** 02/01/2018 - 1/31/2020. **Award No:** A18-0170-001, **Sponsor:** U.S. Department of Defense, Office of Naval Research (DOD-ONR), **Project Title:** Technologies for Next-Generation Conformal and Reconfigurable Radar Systems.

J. Salazar (PI:50%), B.L. Cheong, **Award Amount:** $119,587. **Period:** 01/01/2018-03/31/2018. **Award No:** A18-0165-001 , **Sponsor:** Instituto Geofisico del Peru (IGP), **Project Title:** Deployment of Novel Solid-state Polarimetric Weather Radar for Hydrology in Lima Peru.

Grants and Contracts (continued)

R. Palmer, C. Fulton, **J. Salazar (Co-PI:25%)**, and H.Sigmarsson, **Award Amount: $2,840,142. Period:** 06/01/2017-05/31/2018. **Award No:** A17-0282-001, **Sponsor:** U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration (DOC-NOA), **Project Title:** Spectrum Efficient National Surveillance Radar (SENSR) - Development of the All-Digital Horus Demonstrator.

R. Palmer, G. Zhang, Y, Zhang, C. Fulton, **J. Salazar (Co-PI:15%)**, B.L. Cheong, H.Sigmarsson, M. Yeary and T. Yu **Award Amount: $1,158,067. Period:** 06/01/2017 - 5/31/2018. **Award No:** A17-0281-001, **Sponsor:** U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration (DOC-NOA), **Project Title:** Spectrum Efficient National Surveillance Radar (SENSR) ARRC Risk Reduction Activities.

Salazar (PI:80%), N. Aboserwal, and R. Palmer, **Award Amount: $130,247. Period:** 03/01/2017 - 2/28/2018. **Award No:** A17-0223-001 , **Sponsor:** NANOWAVE Technologies Inc., **Project Title:** Shared Aperture Array Antenna for Multiband Radar Applications.

R. Palmer, B.L. Cheong, C. Fulton, **J. Salazar (Co-PI:11.1%)**, H.Sigmarsson, M. Yeary, T. Yu, G. Zhang, and Y. Zhang **Award Amount: $259,894. Period:** 10/01/2016-9/30/2021. **Award No:** A17-0144-002, **Sponsor:** U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration (DOC-NOA), **Project Title:** ARRC Demonstrator Development Activities for the MPAR Program: CPPAR and Horus.

R. Palmer, B.L. Cheong, C. Fulton, **J. Salazar (Co-PI:11%)**, H.Sigmarsson, M. Yeary, T. Yu, G. Zhang, and Y. Zhang **Award Amount: $2,082,666. Period:** 10/01/2016 - 9/30/2021. **Award No:** A17-0144-001, **Sponsor:** U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration (DOC-NOA), **Project Title:** ARRC Demonstrator Development Activities for the MPAR Program: CPPAR and Horus.

P. Chillson, **J. Salazar (Co-PI:25%)**, R. Huck, A.L'Afflitto **Award Amount: $117,980. Period:** 10/01/2016 - 9/30/2018. **Award No:** A17-0026-001, **Sponsor:** U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration (DOC-NOA), **Project Title:** Three-dimensional Profiling of the Severe Weather Environment.

R. Palmer, C. Fulton, **J. Salazar (Co-PI:18%)**, M. Yeary, B.L. Cheong, T. Yu, G. Zhang, Y. Zhang, and H.Sigmarsson **Award Amount: $2,510,000**. **Period:** 07/01/2015-06/30/2016. **Award No:** A16-0147-002, **Sponsor:** U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration (DOC-NOA), **Project Title:** ARRC R&D Activities for the Multi-Mission Phased Array Radar Program.

T.Yu, **J. Salazar (Co-PI:18%)**, B.L. Cheong, C. Fulton, H.Bluestein, R. Palmer, M. Biggerstaff, M. Yeary, X. Wang **Award Amount: $285,343. Period:** 08/15/2015 - 7/31/2020. **Award No:** A16-0048-002, **Sponsor:** National Science Foundation (NSF), **Project Title:** MRI: Development of C-band Mobile Polarimetric Imaging Radar.

T.Yu, **J. Salazar (Co-PI:18%)**, B.L. Cheong, C. Fulton, H.Bluestein, R. Palmer, M. Biggerstaff, M. Yeary, X. Wang **Award Amount: $1,823,775. Period:** 08/15/2015 - 7/31/2020. **Award No:** A16-0048-002, **Sponsor:** National Science Foundation (NSF), **Project Title:** MRI: Development of C-band Mobile Polarimetric Imaging Radar.

Grants and Contracts (continued)

R. Palmer, **J. Salazar (Co-PI:14%)**, B.L. Cheong, C. Fulton, M. Yeary, T. Yu, and Y. Zhang. **Award Amount: $1,650,000. Period:** 07/01/2014 - 6/30/2015. **Award No:** A15-0060-001 , **Sponsor:** U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration (DOC-NOA), **Project Title:** Advancing the Multi-mission Phased Array Radar (MPAR) Program.

Grants before OU:

W. C. Lee, **J. Salazar**, and E. Loew **Award Amount: $157,000. Period:** 08/01/2012 - 7/11/2014. **Sponsor:** Earth Observing Laboratory (EOL) at the National Center for Atmospheric Reserach (NCAR), **Project Title:** Dual-Polarized and 2D C-band e-scan Airborne Phased Array Radar LRU Prototype.

J. Salazar, R. Medina, and E. Knapp. **Award Amount: $87,000. Period:** 01/01/2007 - 06/11/2012. **Sponsor:** Collaborative Adaptive Sensing for the Atmosphere (CASA-ERC), **Project Title:** Low-cost 1-D e-scan Dual-Polarized X-band Phased-Tilt Active Phased Array Antenna.

Mentoring, Advising & Teaching

Graduated 5 Ph.D. students, 6 M.S. students and I mentored 2 post-doctoral fellows and 13 undergraduate research students in the last 7 years. Currently, I have 3 Ph.D. students and 6 M.S. students, all focused in microwave/millimeter-wave engineering, specifically in high-performance dual-polarized antennas and arrays, phased array radars, metrology and calibration, broadband antennas, and digital beamforming. Former students contributing at NASA/JPL, Apple, Raytheon, Boeing, APL, KBRwyle, EPIRUS, CommScope, MathWorks, Metawave, and various other companies. More information can be found in the website for the **Phased Array Antenna Research and Development Group (PAARD)** https://www.ou-arrc-paard.com/

ARRC Fellow Postdoctoral & Research associate (2):

2014 – 2021 **Dr. N. Aboserwal**, Ph.D., ARRC Research associate, currently at EPIRUS

2018 – 2021 **Dr. Z. Qamar**, ARRC Fellow Postdoctoral, currently at CommScope.

ARRC & ECE Ph.D Alumni (7):

2015 – 2022 **Antonio Segales**, ECE, Ph.D., The University of Oklahoma.

2018 – 2022 **Nim Ccoillo**, ECE, Ph.D., The University of Oklahoma.

2015 – 2021 **Jose Diaz**, Ph.D., currently at the Apply Physics Lab. (APL)

2017 – 2021 **Arturo Umeyama** , Ph.D., currently at the NASA Jet Propulsion Lab. (JPL)

2015 – 2020 **Rodrigo Lebron** , Ph.D., currently at APPLE

Javier Ortiz, Ph.D., currently at the Raytheon Technologies

A. Mancinni, Ph.D., currently at the NASA Jet Propulsion Lab. (JPL)

ARRC & ECE M.S. Alumni (6):

2017 – 2018 **MS. Alexander Stringer**, Electronic/Software Engineer at the Department of the Air Force.

2015 – 2019 **Thomas Brachtenbach**, ECE, MS.,The University of Oklahoma.

2019 – 2020 **Kevin Costien**, ECE, MS., The University of Oklahoma.

2016 – 2020 **Rodrigo Lebron**, ECE, Ph.D., The University of Oklahoma.

Mentoring, Advising & Teaching (continued)

2017 – 2018 **Joel Love**, ECE, MS., Currently at Wyle Laboratories (now KBRwyle).
2015 – 2018 **MS. Simon Duthoit**, Currently at RF System Engineer at NSI-MI.

Current ARRC & ECE Ph.D. Students (2):

2020 – 2024 **Jorge Alva**, ECE, Ph.D., The University of Oklahoma.
2019 – 2023 **Seyd Jehangir**, ECE, Ph.D., The University of Oklahoma.

Current ARRC & ECE M.S. Students (6):

2021 – 2023 **Marcelo Moreno**, ECE, MS., The University of Oklahoma.
Sergio Rodriguez, ECE, MS., The University of Oklahoma.
Felipe Moncada, ECE, MS., The University of Oklahoma.
Mariel Avalos, ECE, MS., The University of Oklahoma.
Alexis Oblitas, ECE, MS., The University of Oklahoma.
2022 – 2023 **Elizabeth Joyce**, ECE, MS., The University of Oklahoma.
2021 – 2023 **Khuda Burdi**, ECE, MS., The University of Oklahoma.

ARRC & ECE Undergraduate Students Alumni (13):

2020 – 2022 **Elizabeth Joyce**, ECE, BS., The University of Oklahoma.
Khuda Burdi, ECE, BS., The University of Oklahoma.
2020 – 2020 **Alexis Oblitas**, ECE, BS., Universidad Peruana de Ciencias Aplicadas (UPC).
Reece J. Reinke, , ECS, BS.,The University of Oklahoma.
Jesus Roque, ECE, BS.,The University of Oklahoma.
2017 – 2017 **Ethan Coffey**, ECE, BS.,The University of Oklahoma.
2016 – 2018 **David Hayes**, ECE, BS., The University of Oklahoma.
K. Costein, ECE, BS., The University of Oklahoma.
Thomas Brachtenbach, ECE, BS., The University of Oklahoma.
Brent Wolf, ME, BS., The University of Oklahoma.
2016 – 2017 **William Doyle**, ECE, BS., The University of Oklahoma.
2016 – 2016 **Jose Galvez**, ECE, BS., Universidad La Catolica, Lima-Peru.
Robert Bains, ME, BS., Rice University.

Teaching

Fall 2022
- **Research Doctoral Dissertation (ECE 6980-012), enrollment: 3.**
- **Research Master Thesis (ECE 5980-012), enrollment: 1**
- **Special Studies on Adv. Antenna Design (ECE 5990-012), enrollment: 2.**
- **Phased Array Antennas ((ECE 5973-003), enrollment: 11/12.**

Spring 2022
- **Research Doctoral Dissertation (ECE 6980-012), enrollment: 3.**
- **Honors Research (ECE 3980-012), enrollment: 1.**
- **Electromagnetic Fields I (ECE 3613-900), enrollment: 50/71.**

Teaching (continued)

Fall 2021
- Research Doctoral Dissertation (ECE 6980-012), enrollment: 3.
- Special Studies on Adv. Antenna Design (ECE 5990-012), enrollment: 1.

Spring 2021
- Research Doctoral Dissertation (ECE 6980-012), enrollment: 2.
- Special Studies on Adv. Antenna Design (ECE 5990-012), enrollment: 1.
- Electromagnetic Fields I (ECE 3613-900), enrollment: 38/80.

Fall 2020
- Research Doctoral Dissertation (ECE 6980-012), enrollment: 3.
- Special Studies on Adv. Antenna Design (ECE 5990-012), enrollment: 1.
- Phased Array Antennas ((ECE 5973-003), enrollment: 05/12.

Spring 2020
- Research Doctoral Dissertation (ECE 6980-012), enrollment: 4.
- Research Master Thesis (ECE 5980-012), enrollment: 2
- Special Studies on Adv. Antenna Design (ECE 5990-012), enrollment: 2.
- Electromagnetic Fields I (ECE 3613-900), enrollment: 45/80.

Fall 2019
- Special Studies on Antenna Design (ECE 4990-012), enrollment: 3.
- Research Master Thesis (ECE 5980-012), enrollment: 2.
- Research Doctoral Dissertation (ECE 6980-012), enrollment: 4.
- Phased Array Antennas ((ECE 5973-003), enrollment: 08/12.

Spring 2019
- Research Doctoral Dissertation (ECE 6980-012), enrollment: 4.
- Research Master Thesis (ECE 5980-012), enrollment: 3
- Research in ECE/Independent studies (ECE 6950-012), enrollment: 1.
- Special Studies on Adv. Antenna Design (ECE 5990-012), enrollment: 1.

Fall 2018
- Special Studies on Antenna Design (ECE 4990-012), enrollment: 2.
- Research Master Thesis (ECE 5980-012), enrollment: 1.
- Research Doctoral Dissertation (ECE 6980-012), enrollment: 4.
- Phased Array Antennas ((ECE 5973-003), enrollment: 04/12.

Spring 2018
- Research in ECE (ECE 6950-012), enrollment: 1.
- Research Master Thesis (ECE 5980-012), enrollment: 1
- Research Doctoral Dissertation (ECE 6980-012), enrollment: 5.
- Special Studies on Adv. Antenna Design (ECE 5990-012), enrollment: 1.
- Electrical Circuit II (ECE 3723-001), enrollment: 78/80.

Fall 2017
- Special Studies on Antenna Design (ECE 4990-012), enrollment: 1.
- Research in ECE/Independent studies (ECE 6950-012), enrollment: 1.
- Research Master Thesis (ECE 5980-012), enrollment: 1.
- Research Doctoral Dissertation (ECE 6980-012), enrollment: 4.
- Phased Array Antennas ((ECE 5973-003), enrollment: 07/12.

Teaching (continued)

Spring 2017
- **Special Studies/Independent study (ECE 5950-012), enrollment: 1.**
- **Research in ECE/Independent studies (ECE 6950-012), enrollment: 4.**
- **Research Doctoral Dissertation (ECE 6980-012), enrollment: 3.**
- **Special Studies on Adv. Antenna Design (ECE 4990-012), enrollment: 2.**
- **Electrical Circuit II (ECE 3723-001), enrollment: 62/66.**

Spring 2016
- **Research Doctoral Dissertation (ECE 6980-012), enrollment: 1.**
- **Special Studies on Adv. Antenna Design (ECE 5990-012), enrollment: 4.**
- **Electrical Circuit II (ECE 3723-001), enrollment: 63/70.**

Fall 2015
- **Special Studies on Adv. Antenna Design (ECE 5990-012), enrollment: 5.**

Patents & Invention Disclosures

Patents:

Inventors: J. Salazar (MI), Title: Dual-polarized Radiating Patch. **Patent No:** US9520655B2. **Status:** Issued on Dec. 13, 2016

Inventors: J. Salazar (MI), D. Schmidt, C. Fulton, R. Palmer, R. Lebron, A. Mancini, S. Duthoit, M. McCord, J. Meier, and R. Kelley. **Title:** Radio Frequency Scanner. **Patent No:** US 10,879,608. **Status:** Date of Patent. 29, 2020.

Inventors: J. Salazar (MI), B.L. Cheong and A Mancini. **Title:** Apparatus and Method for Wet Radome Characterization and Radar Calibration. **International Patent No:** US WO 2018/195542 A1. **Status:** Published on October. 25, 2018.

Invention Disclosures:

Inventors: J. Salazar (MI), C. Fulton, P. Chillson, and S. Duthoit. **Title:** An In-situ Unmanned Aircraft for Antenna Characterization, Radome Inspection and Radar Calibration. **Invention Disclosure No:** 2017-052. **Status:** Submitted to OU on April. 2, 2017.

Inventors: J. Salazar (MI), R. Lebron, and Z. Qamar. **Title:** A Novel Multipurpose Millimeter Wave RF Scanner for Antenna and Array Characterization. **Invention Disclosure No:** 2019-043. **Status:** Submitted to OU on March, 8, 2019.

Inventors: J. Salazar (MI), Z. Qamar^{+}, M. Zamman*, and R. Palmer^{+}. "Road Smart Sensor for Autonomous Vehicle and Safety Transportation." **Invention Disclosure No:** 2021-016. Submitted to OU on Aug. 21st. 2020.

Inventors: J. Salazar (MI), N. Aboserwal^{+}, Z. Qamar^{+}, "An Ultra-compact X-Band Dual-Polarized Slotted Waveguide Array Unit Cell for Large e-Scanning Radar Systems." **Invention Disclosure No:** 2021-15. Submitted to OU on Aug. 20st. 2020.

Service & Professional Affiliations

OU service:

2018 – 2019 — **Graduate Faculty Appeals Panel Member at The University of Oklahoma**, Nominated by the Graduate College for service on the academic appeals panel for the 2018-19 academic year.

2016 – 2019 — **Chair of the ARRC Distinguished Lecture Radar Seminar (DLRS) series.** This committee selects speakers, request financial support, promote seminars, and works with the ARRC staff members to ensure an effective seminar in radar science and radar engineering technology.

External service:

2020 – Present — **Associate Editor of the Design and Demonstration of System and Test-Bed, a section of the journal Frontiers in Communications and Networks**

2018 – Present — **CIMMS Fellow associate**, my role is promote and perform research and collaboration between CIMMS, NOAA, and OU in the area of phased array radars.

2017 – Present — **Member of IEEE Antennas and Propagation Standing and Educational Committee**, my role in this committee in reviewing grant proposals and design contest proposals.

Journal reviewer service:

2020-present — **IEEE Open Journal of Antennas and Propagation**

2019-present — **IEEE The Multidisciplinary Open Access Journal**

2018-present — **Bulletin of the American Meteorological Society (BAMS)**

IEEE Antennas and Wireless Propagation Letters (AWPL).

2016-present — **Radio Science.**

2015-present — **John Wiley and Sons.**

2014-present — **IEEE Transactions on Antennas and Propagation (TAP) .**

IEEE Transactions on Geoscience and Remote Sensing (TGARS).

IET Microwaves, Antennas and Propagation (IET).

2012-present — **AMS Atmospheric Oceanic Technology Journal (AMS-JTECH).**

Affiliations

2014-present — **Advanced Radar Research Center (ARRC), The University of Oklahoma.**

2018-present — **Center for Autonomous Sensing and Sampling (CASS), The University of Oklahoma.**

2014-2016 — **Adjunct Professor at the University of Puerto Rico Mayaguez (UPRM).**

2013-2014 — **Research Scientist Affiliate at Colorado State University (CSU).**

Memberships

2016-present — **IEEE Aerospace and Electronics Systems Society (AESS).**

2014-present — **IEEE Senior Member.**

2012-present — **Atmospheric Meteorology Society (AMS).**

Antenna Measurement Techniques Association (AMTA).

Service & Professional Affiliations (continued)

2002-present — **IEEE Antenna and Propagation Society (APS).**

2001-present — **Tau Beta Pi honor society.**

1992-1994 — **ROTARY/Rotaract Club (California), Trujillo, Perú.**

Miscellaneous

2019 — **Chair of short course title Fundamentals and New Trends of Dual-Polarized Phased Array Antennas for Weather Radar Applications, IEEE Radar Conference at Oklahoma City, OK**

2018 — **Chair of short course title New Trends in Phased Array Antennas and Calibration, IEEE Radar Conference at Oklahoma City, OK**

Chair of short course title New Trends in Phased Array Antennas and Calibration, IEEE Radar Conference at Oklahoma City, OK

2017 — **Co-Chair of session titled Phased Array Weather Radar at the 38 conference on Radar Meteorology at Norman, OK.**

2016 — **Co-Chair a special session titled Dual-Polarization Weather Radar Arrays, at the 2016 IEEE Phased Array Systems and Technology Symposium.**

2015 — **Chair of short course title Phased Short Course on Dual-Polarized Phased Array Antennas for Weather Radars, 2015 AMS Radar Conference at Norman, OK.**

2013-2014 — **Member of Earth Observation Laboratory (EOL-NCAR) diversity committee.**

2014 — **Co-Chair on session: 503: Complex Materials and Non-Foster Circuits for Antenna Radiation, Scattering and Measurement, 2014 APS/URSI conference**

2013 — **Co-chair on emerging technology and future directions session, 2013 AMS radar conference**

2011-2012 — **Senator of graduate school student (GSS), University of Massachusetts.**

2012 — **Member of the graduate dean search committee, University of Massachusetts.**

2008–2012 — **Executive member of Collaborative Adaptive Sensing for the Atmosphere (CASA-ERC)**

2008–2010 — **Chair of student leadership council of Collaborative Adaptive Sensing for the Atmosphere (CASA-ERC), University of Massachusetts.**

2001–2002 — **President of ECE graduate student's association AEGIEC, Mayaguez, PR.**

Invited Talks & Short courses

Invited Presentation:

Nov. 22, 2022 — **Nuevas Tendencias en Antenas y Sensores para Aplicaciones de Sistemas de Comunicaciones y Radares.** , Invited Keynote talk for the 2022 Congreso Internacional de Ingeneria, IEEE and Universidad Privada Antenor Orrego de Trujillo, , Perù.

Sept. 16, 2022 — **Design Aspects of Multifunction Phased Array Radars and Future Research Directions.** , Invited Keynote talk for the 2022 Johns Hopkins University Applied Physics Laboratory (APL)

Invited Talks & Short courses (continued)

Oct. 10, 2022 — **An Overview of Spectrum Sensing and Evolution of New Technology on Radar and Communication Systems**, Invited Keynote talk for the 2022 Congreso Internacional de Investigación UVM, Mexico, October 6th. 2022

Dec 10, 2019 — **Nuevas tendencias en Antenas y Sensores para aplicaciones de Sistemas de Comunicaciones y Radares.** , Invited Keynote talk for the 2019 Workshop de Antenas, Microondas and Sensores, IEEE and Universidad Catòlica San Pablo, Arequipa, Perù.

Oct 18, 2019 — **New Trends in Antenna Array Architectures for Multifunction Phased Radar System.** , Invited Talk for Fall 2019 ECE Seminar Lecture Series, University of Massachusetts Amherst (UMASS), Amherst, MA, US.

Aug 15, 2019 — **New Trends of Dual-Polarized Active Phased Array Antenna Technology**, Invited Talk, Ball Aerospace Seminar Lecture Series, Ball Aerospace, Westminster, CO, US.

Aug 14, 2019 — **Mutual Coupling Calibration for Airborne Phased Array Radar (APAR)**, Invited Talk for EOL Seminar Lecture Series, National Center for Atmospheric Reserach (NCAR), Boulder, CO, US.

Aug 7, 2019 — **Phased Array Antenna and Research Development - Overview**, Invited Talk, Dr. Zoya Popovic Seminar Lecture Series, University of Colorado (CU), Boulder, CO, US.

June 12, 2019 — **PAARD/ARRC RF Capabilities and Research Activities in Active Phased Array Antennas Including mm-Wave Applications** , Invited talk for 2019 Metawave seminar series, Carlsbad, California, US.

June 02, 2019 — **New Trends in Antenna Array Architectures for Multifunction Phased Radar System**, Invited talk for the JPL-NASA 2019 seminar series.

March 06, 2019 — **A Low-Cost Ka-Band Imaging Phased Array Antenna for 5G Massive MIMO System**, Invited talk to The International Workshop on Antenna Technology (2019 iWAT)

May 24, 2018 — **Re-configurable Multi-band Shared-Aperture Antenna for Multi-function Phased-Array Radar System**, NASA Communication and Intelligent System Division, NASA Glenn Research Center, Ohio OH.

Aug. 2, 2018 — **New Trends on Front-end Active Array Technology for Multi-function Phased-Array Radar System**, invited talk at The Antenna Research Group (ARG) at the University of Colorado Boulder (CU), Boulder, CO.

Nov. 21, 2018 — **Front-end Active Array Technology for Multi-function Phased-Array Radar Systems**, invited talk at The Antenna group at the U.S. Navy Research Laboratory, VA.

Nov. 19, 2018 — **Front-end Active Array Technology for Multi-function Phased-Array Radar Systems**, invited talk at The Antenna group at the U.S. Airforce Research Laboratory (AFRL), VA.

May 31, 2017 — **State of the Art Platforms for Modern Multi-function Phased Array Weather Radars**, Invited talk at the Earth Observing Laboratory (EOL) 2017 Engineering and Scientist Seminar. National Center for Atmospheric Research (NCAR), Boulder CO.

May 08, 2014 — **Airborne Atmospheric Radar Using Phased Array Antenna Technology**, Invited talk at the 2014 ECE seminar series at the University of Puerto Rico Mayaguez (UPRM), Mayaguez, PR.

Invited Talks & Short courses (continued)

- **Special Design Considerations and Trade-offs for an Airborne Atmospheric Radar Using Phased Array Antenna Technology**, Invited talk at The University of Oklahoma, Norman, OK.

May 09, 2014
- **Special Design Considerations and Trade-offs for an Airborne Atmospheric Radar Using Phased Array Antenna Technology**, Invited talk The National Severe Storm Laboratory (NSSL), Norman, OK.

Dec. 06, 2013
- **Technical Design Trade-offs for Dual-Polarized Active Phased Array Radars for Atmospheric Research**, Invited talk at FirstRF seminar series, Boulder, CO.

Feb. 06, 2013
- **A Drop Size Distribution (DSD) Based Model for Evaluating the Performance of Wet Radomes for Dual-Polarized Radars**, Invited talk at the Earth Observing Laboratory (EOL) Engineering and Scientist Seminar. National Center for Atmospheric Research (NCAR), Boulder CO.

July 01, 2008
- **CASA phased array radar system for weather meteorological applications**, Invited talk at the 2008 IEEE INTERCON, Trujillo, Peru.

Invited Short Courses:

2022
- **Digital Phased Arrays: Calibration, UAVs, and related PAST Science** , 2022 IEEE International Symposium on Phased Array Systems and Technology, 11–14 October 2022. Waltham Boston, Waltham, Massachusetts, USA.

2019
- **Fundamentals and New Trends of Dual-Polarized Phased Array Antennas for Weather Radar Applications**, 2019 AMS Radar Conference at Tokio, Japan.

2018
- **New Trends in Phased Array Antennas and Calibration**, 2018 IEEE Radar Conference at Oklahoma City, OK.

2015
- **Dual-Polarized Phased Array Antennas for Weather Radars**, 2015 AMS Radar Conference at Norman, OK.

Employment History

8 years of experience in the telecommunications industry, 13 years of RF research experience, and 6 years of teaching experience in higher education

2015 – 2019
- **Assistant Professor,** School of Electrical and Computer Engineering, The University of Oklahoma, Norman, OK.

2014 – 2015
- **Research Scientist,** Advanced Radar Research Center (ARRC), The University of Oklahoma, Norman, OK.

2012 – 2014
- **ASP Postdoctoral Fellow,** National Center for Atmospheric Research (NCAR), Boulder, CO.

2006 – 2012
- **Research Assistant,** University of Massachusetts, Amherst, MA.

2003 – 2004
- **RF Consultant,** Invision Engineering Corp., Mayagüez, PR.

2002 – 2003
- **ECE Lecturer,** University of Puerto Rico, Mayagüez, PR.
- **ECE Lecturer,** University of Puerto Rico, Aguadilla, PR.

2000 – 2002
- **Research Assistant,** University of Puerto Rico, Mayagüez, PR.

1996 – 2002
- **Project Manager & RF Engineer,** Telefónica Móviles del Perú/Movista, Lima, Perú.

1994 – 1995
- **Lecturer,** SISE Instituto Superior, Lima, Perú

1993 – 1994
- **Electronic Engineer,** Sistemas de Seguridad S.A., Trujillo, Perú.

Publications

Journal Papers Published

(+) PAARD member (Graduate student or postdoc), (*) OU Faculty, (−) External collaborator.
Number of papers originated with Dr. Salazar's team: 25
Number of papers originated with Other Faculty: 3

[1] R. Palmer*, D. Bodine*, P. Kollias−, D. Schvartzman*, D.Zrnic−, P. Kirstetter*, G. Zhang*, T. Yu*, M. Kumjian−, B.Cheong*, S. Collis−, S. Frasier−, C.Fulton*, K.Hondl−, J. Kurdzo−, J, Ushio−, A. Rowe*, **J.L. Salazar-Cerreno**+, S. Torres−, M. Weber−, M. Yeary*, "A Primer on Phased Array Radar Technology for the Atmospheric Sciences," *Bulletin of the American Meteorological Society*. [Download]

[2] P. Kollias− –, R. Palmer*, D. Bodine*, T. Adachi−, H.Blustein−, J. Cho−, G. Griffin−, C. Houser−, J. Kumjian−, P.E. Kirstetter−, **J.L. Salazar-Cerreno**+, "Cience Applications of Phased Array Radars," *Bulletin of the American Meteorological Society*. [Download]

[3] A. Segales+, P. Chilson− –, **J.L. Salazar-Cerreno**+, "Considerations for improving data quality of thermo-hygrometer sensors on board unmanned aerial systems for planetary boundary layer research". *Atmospheric Measurement Techniques*. [Download]

[4] M. Weber−, K. Hondl−, N. Yussouf−, Y. Jung−, D. Stratman−, B. Putnam−, X. Wang−, T. Schuur−, C. Kuster−, Y. Wen−, J.Sun−, J. Keeler−, Z. Ying−, J. Cho−, J. Kurzdo−, J. Torres−, C. Curtis−, D. Schvartzman*, J. Boettcher−, F Nasi−, H. Thomas−, D. Zrnić−, D. Mirković−, C. Fulton*, **J.L. Salazar-Cerreno**+, G. Zhang+, R. Palmer*, M. Yeary*, K. Cooley−, K.Istok−, M. Vincent−. (2021). "Towards the Next Generation Operational Meteorological Radar, Bulletin of the American Meteorological", *Bulletin of the American Meteorological Society* [Download]

[5] A. Umeyama+, **J.L. Salazar-Cerreno** and C. Fulton*. "UAV-Based FF Antenna Pattern Measurement Method for Polarimetric Weather Radars: Simulation and Error," *IEEE The Multidisciplinary Open Access Journal* (**Paper accepted, Sept.17.2020** Access-2020-05264, expected date for publication: Oct. 2022). [Download]

[6] A. Umeyama+, **J.L. Salazar-Cerreno** and C. Fulton*. "UAV-based Antenna Measurements for Polarimetric Weather Radars: Probe Analysis," *IEEE The Multidisciplinary Open Access Journal* [Download]

[7] S. Jehangir+, Z. Qamar+, N. Aboserwal+, **J.L. Salazar-Cerreno**, "Application of the Mixing Theory in the Design of a High performance RF Substrate for Microwave and mm-Wave Systems," *IEEE The Multidisciplinary Open Access Journal*. [Download]

[8] Z. Qamar+, and **J.L. Salazar-Cerreno** and N. Aboserwal+ , "An Ultra-Wide-band Radome for High-Performance and Dual-Polarized Applications," *IEEE The Multidisciplinary Open Access Journal* [Download]

[9] N. Aboserwal+ and **J.L. Salazar-Cerreno** and Z. Qamar+ , "Design of Ultra-compact X-Band Dual-Polarized Slotted Waveguide Array Antenna for Large Electronically Scanning," *IEEE The Multidisciplinary Open Access Journal* [Download]

[10] **J.L. Salazar-Cerreno** and Z. Qamar+ and N. Aboserwal+ and T. Brachkanbac+ and K. Constien+ "A Multipurpose mm-Wave RF Scanner System for Antenna Measurements, Active Antenna Array Calibration, Material Characterization, and Radome Testing," *IEEE Transactions on Instrumentation & Measurement* [Download]

[11] N. Ccoillo+, N. Aboserwal+, Z. Qamar+, and **J.L. Salazar-Cerreno** , "An Accurate Analytical Model for Proximity Coupled Microstrip Patch Antenna (PC-MSPA)," *IEEE The Multidisciplinary Open Access Journal* [Download]

[12] C. Fulton*, R. Palmer*, M.Yeary*, **J.L. Salazar-Cerreno**$^{+}$, H. Sigmarsson*, M. Weber^{-}, A. Hedden^{-}, "Horus: A Testbed for Fully Digital Phased Array Radars," *Microwave Journal*. 101, no. 6, 063106-063106-9 (2020). [Download]

[13] N. Aboserwal^{+}, N. R. Ccoillo Ramos^{+}, Z. Qamar^{+} and **J.L. Salazar-Cerreno** "An Accurate Analytical Model to Calculate the Impedance Bandwidth of a Proximity Coupled Microstrip Patch Antenna (PC-MSPA)," *in IEEE Access*, vol.8, pp.41784-41793, 2020, doi: 10.1109/ACCESS.2020.2976750. (2020) [Download]

[14] R. Lebròn^{+}, P. Tsai^{-}, J. Emmet^{-} and **J.L. Salazar-Cerreno** "Validation and Testing of Initial and In-situ Mutual Coupling Base Calibration of a Dual-polarized Active Phased Array Antenna," *in IEEE Access*, vol.8, pp.41784-41793, 2020, doi: 10.1109/ACCESS.2020.2976750. (2020) [Download]

[15] J. Ortiz^{+}, **J. L. Salazar-Cerreno**, R. Lebron^{+}, J. Diaz^{+}, N. Aboserwal^{+}, and L. Jeon^{-} "Low-Cost CMOS Active Array Solution for Highly-Dense X-band Weather Radar Network," *IEEE Transactions on Antennas and Propagation*, 2020, doi: 0.1109/TAP.2019.2947135 (2020) [Download]

[16] Z. Qamar^{+}, N. Aboserwal^{+} and **J. L. Salazar-Cerreno** "An Accurate Method for Designing, Characterizing and Testing a Multi-layer Radome for mm-Wave Applications," *in IEEE Access*, doi: 10.1109/ACCESS.2020.2970544. (2020) [Download]

[17] **J. L. Salazar-Cerreno**, Z. Qamar^{+}, S. Saeedi^{+}, B. Weng*, H. S. Sigmarsson* "Frequency Agile Microstrip Patch Antenna Using an Anisotropic Artificial Dielectric Layer (AADL): Modeling and Design," *in IEEE Access*, (2020) doi: 10.1109/ACCESS.2019.2962160 [Download]

[8] A. Mancini^{+}, R. M. Lebrón^{+}, and **J. L. Salazar-Cerreno** "The Impact of a Wet *S*-Band Radome on Dual-Polarized Phased-Array Radar System Performance," *IEEE Transactions on Antennas and Propagation*, 2019, doi: 10.1109/TAP.2018.2876733 [Download]

[19] Chilson, Phillip B*., Bell, Tyler M*., Brewster, Keith A.*, Britto Hupsel de Azevedo, Gustavo*., Carr, Frederick H*., Carson, Kenneth^{-}., Doyle, William^{+}., Fiebrich, Christopher A*., Greene, Brian R^{+}., Grimsley, James L^{-}., Kanneganti, Sai Teja., and Martin, Joshua., Moore, Andrew., Palmer, Robert D*., Pillar-Little, Elizabeth A^{-}., **Salazar-Cerreno, Jorge L.**., Segales, Antonio R^{+}., Weber, Mark E*., Yeary, Mark* and Droegemeier Kelvin K^{-}.,"Moving towards a Network of Autonomous UAS Atmospheric Profiling Stations for Observations in the Earth's Lower Atmosphere: The 3D Mesonet Concept" *Sensors*, 2019, doi: 10.3390/s19122720 [Download]

[20] J. D. Díaz^{+}, **J. L. Salazar-Cerreno**, J. A. Ortiz^{+}, N. A. Aboserwal^{+}, R. M. Lebrón^{+}, C. Fulton* and R. D. Palmer*. "A Cross-Stacked Radiating Antenna With Enhanced Scanning Performance for Digital Beamforming Multifunction Phased-Array Radars," *IEEE Transactions on Antennas and Propagation*, 2019, doi: 10.1109/TAP.2018.2862252 [Download]

[21] N. A. Aboserwal^{+}, **J. L. Salazar**, J. A. Ortiz^{+}, J. D. Díaz^{+}, C. Fulton* and R. D. Palmer*, "Source Current Polarization Impact on the Cross-Polarization Definition of Practical Antenna Elements: Theory and Applications," in *IEEE Transactions on Antennas and Propagation*, vol. 66, no. 9, pp. 4391-4406, Sept. 2018, doi: 10.1109/TAP.2018.2845945. [Download]

[22] Mancini, Alessio^{+}., **Salazar-Cerreno, J. L.**., Lebrón, Rodrigo M^{+}. and Cheong, Boon Leng*, "A Novel Instrument for Real-Time Measurement of Attenuation of Weather Radar Radome Including Its Outer Surface. Part I: The Concept", *Journal of Atmospheric and Oceanic Technology*, 2018, doi: 10.1175/JTECH-D-17-0083.1 [Download]

[23] Mancini, Alessio^{+}., **Salazar-Cerreno, J. L.**, Lebrón, Rodrigo M^{+}., and Cheong, Boon Leng*, "A Novel Instrument for Real-Time Measurement of Attenuation of Weather Radar Radome Including Its Outer Surface. Part II: Applications", *Journal of Atmospheric and Oceanic Technology*, 2018, doi: 1https://doi.org/10.1175/JTECH-D-17-0084.1 [Download]

[24] C. Fulton*, **J. L. Salazar-Cerreno**, Y. Zhang, G*. Zhang, R. Kelly,J⁻. Meier, M. McCord⁻, D. Schmidt⁻, A. D. Byrd⁺, L. M. Bhowmik⁺, S. Karimkashi⁻, D. S. Zrnic⁻, R. J. Doviak⁻, A. Zahrai⁻, M. Yeary* and R. D. Palmer*, "Cylindrical Polarimetric Phased Array Radar: Beamforming and Calibration for Weather Applications", *Journal of Atmospheric and Oceanic Technology*, 2017, doi: 1https://10.1109/TGRS.2017.2655023 [Download]

[25] **Salazar-Cerreño, Jorge L.**, Chandrasekar⁻, V., Trabal, Jorge M⁻., Siquera, Paul⁻., Medina, Rafael⁻., and Knapp, Eric⁻., and McLaughlin, David J⁻., "A Drop Size Distribution (DSD)-Based Model for Evaluating the Performance of Wet Radomes for Dual-Polarized Radars", *Journal of Atmospheric and Oceanic Technology*, 2014, doi: 10.1175/JTECH-D-13-00208.1 [Download]

[26] Vivekanandan, J⁻., Lee, W.-C⁻., Loew, E⁻., **Salazar, J. L.**, Grubišić⁻, V., Moore, J⁻., and Tsai, P⁻., "The Next Generation Airborne Polarimetric Doppler Weather Radar", *Geoscientific Instrumentation, Methods and Data Systems*, 2014, doi: 10.5194/gi-3-111-2014 [Download]

Journal Papers in Preparation

[27] **J.L. Salazar-Cerreno**, Z. Qamar⁺, A. Oblitas⁺, R. Reinkle⁺, Z. Musharraf*, "A Smart Road Sensor for Improving Safety in U.S. Transportation," *Frontiers in Communications and Networks* (Paper in preparation, expected date for publication: Dec. 2022).

[28] **J.L. Salazar-Cerreno**, and Z. Qamar⁺, "A mm-Wave Ultra High Performance Wetless Radome," *IEEE The Multidisciplinary Open Access Journal*, (Paper in preparation, expected date for publication: Dec. 2022).

[29] J. Ortiz⁺, **J.L. Salazar-Cerreno**, and N. Aboserwal⁺, "Impact of Edge Diffraction on Finite Phased Array Antennas," *IEEE The Multidisciplinary Open Access Journal*, (Paper in preparation, expected date for publication: Dec. 2022).

[30] **J.L. Salazar-Cerreno** and T. Yu* and C. Fulton* and J.Dìaz⁺, and M.McCord⁻, and R. Palmer* "A Polarimetric Atmospheric Image Phased Array Radar," *IEEE Transactions on Geoscience and Remote Sensing*, (Paper in preparation, expected date for publication: Dec. 2022).

[31] J. Ortiz⁺, N. Aboserwal⁺, and **J.L. Salazar-Cerreno**, "Modeling Cross-pol Radiation Pattern Based on Diffraction Theory," *IEEE The Multidisciplinary Open Access Journal*, (Paper in preparation, expected date for publication: Dec. 2022).

[32] **J.L. Salazar-Cerreno** , "A Unique Hands-on Educational Experience in Phased Array Antenna Class at The University of Oklahoma," *IEEE The Multidisciplinary Open Access Journal*, (Paper in preparation, expected date for publication: Dec. 2022).

[33] **J.L. Salazar-Cerreno**, "New State-of-the-art RF Instrumentation for Phased Radar Applications at The University of Oklahoma," *Microwave Journal*, (Paper in preparation, expected date for publication: Dec. 2022).

Conference Proceedings

1. Schvartzman, D., Díaz, J., Salazar-Cerreño, J., Yu, T.-Y., Palmer, R. & Mccord, M. (2022). A hybrid antenna pattern synthesis method for the polarimetric atmospheric imaging radar (PAIR). doi:10.1109/RadarConf2248738.2022.9764359

2. Ccoillo Ramos, N. R. & Salazar-Cerreno, J. L. (2022). A new impedance model for differentially-fed proximity-coupled microstrip patch antennas. In *2022 ieee texas symposium on wireless and microwave circuits and systems (wmcs)* (pp. 1–5). doi:10.1109/WMCS55582.2022.9866490

3. Jehangir, S. S. & Salazar-Cerreno, J. L. (2022a). Achieving near-constant beamwidth and symmetry in patterns of the pyramidal ridged horn antenna for uav-based in-situ characterization and measurement of phased array radars. In *2022 ieee texas symposium on wireless and microwave circuits and systems (wmcs)* (pp. 1–6). doi:10.1109/WMCS55582.2022.9866229

4. Jehangir, S. S. & Salazar-Cerreno, J. L. (2022b). The need for narrow beamwidth in ridged horn antennas for uav-based in-situ measurements of radars and communication systems. In *2022 ieee international symposium on antennas and propagation and usnc-ursi radio science meeting* (pp. 1–6). doi:https://2022apsursi.org/view_paper.php?PaperNum=2608#top

5. Salazar-Cerreno, J. L., Jehangir, S. S., Aboserwal, N., Segales, A. & Qamar, Z. (2021). An uav-based polarimetric antenna measurements for radar and communication systems from 3 ghz to 32 ghz. In *2021 ieee conference on antenna measurements applications (cama)* (pp. 55–60). doi:10.1109/CAMA49227.2021.9703660

6. Salazar-Cerreno, J. L., Qamar, Z. & Aboserwal, N. (2021). A multipurpose and reconfigurable mm-wave scanner system for accurate measurements of passive/active antenna array, array calibration, radome and material characterization. (pp. 555–559). doi:10.1109/CAMA49227.2021.9703579

7. Salazar-Cerreno, J. L., Qamar, Z., Aboserwal, N., Brachtenbach, T., Love, J. & Stringer, A. (2021). A new method for testing an isotropic and an-isotropic materials using three-probes based on free-space gaussian beam method. In *2021 ieee conference on antenna measurements applications (cama)* (pp. 214–217). doi:10.1109/CAMA49227.2021.9703659

8. Aboserwal, N., Qamar, Z. & Salazar-Cerreno, J. (2020). A Broadband Dual-Polarized Backed-Cavity Proximity-Coupled Microstrip Patch Antenna for Ka-Band Applications. In *2020 IEEE International Symposium on Antennas and Propagation, July 5-10, Montreal, Canada*.

9. Brachtenbach, T., Stringer, A., J.Love, Qamar, Z. & Salazar-Cerreno, J. (2020). A Novel Free-Space Gaussian Beam Method for the Characterization of Anisotropic Materials. In *2020 IEEE International Symposium on Antennas and Propagation, July 5-10, Montreal, Canada*.

10. N.Ccoillo, Aboserwal, N., Qamar, Z. & Salazar-Cerreno, J. (2020). Assessment of the Impedance Bandwith of a Proximity-Coupled Microstrip Patch Antenna. In *2020 IEEE International Symposium on Antennas and Propagation, July 5-10, Montreal, Canada*.

11. Oblitas, A., Qamar, Z., Ibanez, C. & Salazar-Cerreno, J. (2020). Modeling and Experimental Validation of an Effective Permittivity of Materials Using Artificial Dielectric Structures. In *2020 IEEE International Symposium on Antennas and Propagation, July 5-10, Montreal, Canada*.

12. Qamar, Z., Abboserwal, N. & Salazar-Cerreno, J. (2020). Design of Superstrate for Wide-Angle Impedance Matching in Microstrip Phased Array. In *2020 IEEE International Symposium on Antennas and Propagation, July 5-10, Montreal, Canada*.

13. Tsai, P., Lebron, R., J.Emmett, Karboski, A., Burghart, C., Salazar-Cerreno, J., … Ramson, J. (2020). Calibration and Weather Observation of a Dual-polarized Phased Array Line Replaceable Unit Radar Demonstrator. In *2020 IEEE Radar Conference (RadarConf20)*.

14 Ccoillo Ramos, N. R., Aboserwal, N., Qamar, Z. & Salazar-Cerreno, J. L. (2020). Assessment of the impedance bandwith of a proximity-coupled microstrip patch antenna. In *2020 ieee international symposium on antennas and propagation and north american radio science meeting* (pp. 153–154). doi:10.1109/IEEECONF35879.2020.9330497

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