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Dejan S. Filipovic is Hudson Moore Jr. Endowed Chair with the Department of Electrical, Computer, and Energy Engineering at University of Colorado Boulder. He received the Diploma Engineering degree in electrical engineering from the University of Nis, Serbia in 1994, and the M.S.E.E. and PhD degrees from the University of Michigan, Ann Arbor in 1999 and 2002, respectively. From 1994 to 1997, he was a research assistant at the University of Nis. He became an assistant professor in electrical and computer engineering the University of Colorado in 2002 and was promoted to associate and full professor in 2009 and 2015, respectively. His broader research interests are in applied electromagnetics including antenna theory and design with emphasis on frequency independent and wideband antennas; development of passive millimeter-wave components, systems, and electronic warfare front-ends; low-cost fabrication of RF systems; simultaneous transmit and receive; and multi-physics, multi-scale modeling. His research projects have been funded by the Department of Defense including DARPA, ONR, and NRL, National Science Foundation, and industry including Lockheed Martin, Northrop Grumman, BAE Systems, L3 Harris, CMI, First RF, etc. Prof. Filipovic received the Nikola Tesla award for outstanding diploma thesis and as a student the best paper award at the 2002 IEEE Antennas and Propagation Symposium. His students have been constantly placed in the finals of the various student paper competitions and have won several times including best paper awards at various conferences including IEEE APS/URSI, Antenna Application Symposium, ASIAEM, and GOMACTech. Prof. Filipovic was a two-time recipient of the University of Colorado Provost's Faculty Achievement Award (2008 and 2011) and ECEN Department Holland's Teaching Award (2013). He has graduated twenty eight PhD students and eight MSc thesis students, and currently advises eight PhD students, one MS students, and three research associates. Prof. Filipovic has co-authored four book chapters on frequency independent antennas, one book chapter on STAR antennas, and many peer reviewed journal and conference papers. He has served as Associate Editor for the IEEE Transactions on Antennas and Propagation, and Vice-Chair of the 2022 IEEE AP-S/URSI conference. Prof. Filipovic is IEEE Fellow.

**EDUCATION**

Ph.D. in Electrical Engineering, June 2002, University of Michigan, Ann Arbor. Thesis title: *Multi-functional Slot Spiral Antennas for Airborne and Automotive Applications*. Advisor: Prof. John Volakis

M.S.E.E., June 1999, University of Michigan, Ann Arbor, Michigan. Research topic: *Periodic Boundary Conditions for Hierarchical Finite Elements.* Advisor: Prof. John Volakis

Dipl. Eng. in Electrical Engineering, June 1994, University of Nis, Yugoslavia. Thesis title: *Design and Realization of a Planar Spiral Antenna*. Advisor: Prof. Bratislav Milovanovic

**EMPLOYMENT**

- *Full Professor*, University of Colorado in Boulder, August 2015-present
- *Associate Professor*, University of Colorado in Boulder, August 2009-August 2015
- *Assistant Professor*, University of Colorado in Boulder, August 2002 – August 2009
- *Graduate Student Research Assistant*, University of Michigan in Ann Arbor, April 1997-July 2002
- *Research Assistant*, University of Nis, Serbia, June 1994 – May 1997

## PUBLICATIONS

### Peer Reviewed Book Chapters

[1] P. VPKumar, C. Hernandez, and **D. S. Filipovic**, *Full-duplex Antennas,* in 1st Edition of In-Band Full-Duplex Technologies and Applications, Artech House, 2021.

[2] **D. S. Filipovic**, M. A. Elmansouri, *Frequency Independent Antennas*, in 5th Edition of Antenna Engineering Handbook, McGraw Hill, 2019.

[3] **D. S. Filipovic**, T. P. Cencich, *Frequency Independent Antennas*, Ch. 13 in 4th Edition of Antenna Engineering Handbook, pp.13.1-13.67, McGraw Hill, 2007.

[4] **D. S. Filipovic**, T. P. Cencich and M. W. Nurnberger, *Frequency Independent Antennas*, Encyclopedia of RF and Microwave Engineering, Ed. K. Chang, Vol. 2., pp. 1674-1690, Wiley, 2005.

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### Published Journal Papers

[1] S. Yen, Lj. Boskovic, and **D.S. Filipovic**, *An HF-Band Linear Retrodirective Array With Scale Model RCS Measurements*, IEEE Transactions on Antennas and Propagation, Vol. 72, No. 7, July 2024.

[2] D-C. Son, M. Elmansouri, Lj. Boskovic, and **D.S. Filipovic**, *36-90 GHz Modular Lens-Corrected Dual-Polarized Horn with Cavity*, IEEE Transactions on Antennas and Propagation, Vol. 72, No. 6, June, 2024.

[3] J. Platt, Lj. Boskovic, and **D.S. Filipovic**, *Wideband Biconical Antenna with Embedded Band-Notch Resonator*, IEEE Transactions on Antennas and Propagation, Vol. 72, No. 3, Mar., 2024.

[4] D-C. Son, M. Elmansouri, Lj. Boskovic, and **D.S. Filipovic**, *Spline-Based Aspheric Dielectric Lens-Corrected Quad-Ridge Horn Antenna*, IEEE Antennas and Wireless Propagation Letters, Vol. 23, No. 2, Feb., 2024.

[5] G. Friedrichs, M. Elmansouri, and **D.S. Filipovic**, *Wideband Machine-Learning-Based Amplitude-Only Direction Finding with Spiral Antennas*, IEEE Transactions on Antennas and Propagation, Vol. 71, No. 12, 2023.

[6] A. Samaiyar, M. Elmansouri, and **D.S. Filipovic**, *Shared-Aperture Reflectarrays and Antenna Arrays for In-Band Full-Duplex Systems*, IEEE Transactions on Antennas and Propagation, Vol. 71, No. 11, Nov. 2023.

[7] T. Prince, M. Elmansouri, and **D.S. Filipovic**, *Cylindrical Luneburg Lens Antenna Systems for Amplitude-Only Direction-Finding Applications*, IEEE Transactions on Antennas and Propagation, Vol. 71, No. 10, 2023.

[8] G. Friedrichs, T. Prince, M. Elmansouri, and **D.S. Filipovic**, *Watson-Watt Direction Finding with Transfer Learning-Based Calibration*, IEEE Antennas and Wireless Propagation Letters, Vol. 22, No. 6, 2023.

[9] G. Friedrichs, M. Elmansouri, and **D.S. Filipovic**, *Angle-of-Arrival Sensing Using a Machine Learning Enhanced Amplitude-Only System*, IEEE Sensors, Vol. 23, No.4, 2023.

[10] Lj. Boskovic, J. Cazden, and **D.S. Filipovic**, *Design and Characterization of an All-Metal 3-D Printed Air-Dielectric Coaxial Line*, IEEE Microwave and Wireless Components Letters, Vol. 32 No. 7, 2022.

[11] C. Andrews, Lj. Boskovic, and **D.S. Filipovic,** *Characterization of Flat Radomes for 18-45 GHz High-Power Horn Antennas,* IEEE Transactions on Antennas and Propagation, Vol. 70 No. 3, 2022.

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[13] M. Elmansouri, G. Friedrichs, Lj. Boskovic, and **D.S. Filipovic**, *An X-Band Through Ka-Kand Thinned All-Metal Vivaldi Phased Array*, IEEE Transactions on Antennas and Propagation, Vol, 69, No. 11, 2021.
[14] C. Mulero Hernandez, Lj. Boskovic, M. Elmansouri, M. Ignatenko, and **D.S. Filipovic**, *Fixed and Steerable Beam Dual-Polarized Lens Antenna With High Tx to Rx Isolation*, IEEE Transactions on Antennas and Propagation, Vol, 69 No. 11, 2021.
[15] M. Elmansouri, Lj. Boskovic, and **D.S. Filipovic**, *Compact Wideband Dual-Polarized In-Band Full-Duplex Antenna Subsystem*, IEEE Transactions on Antennas and Propagation, Vol. 69 No. 11, 2021
[16] S. Yen, LJ. Boskovic, and **D.S. Filipovic**, *Co-Circularly Polarized Van Atta Array Enabled by Quasi-Monostatic STAR Antennas*, IEEE Transactions on Antennas and Propagation, Vol. 69 No. 11, 2021.
[17] C. Andrews, and **D.S. Filipovic**, *Mechanical Reinforcement Technique for Flat Radomes at Millimeter-Wave Frequencies*, IEEE Transactions on Antennas and Propagation Letters, Vol. 20 No. 7, 2021.
[18] D. Erricolo, **D.S. Filipovic**, K. Haneda, and Z. Zhang, *Guest Editorial Special Issue on Antennas and Propagation Aspects of In-Band Full-Duplex Applications*, IEEE Transactions on Antennas and Propagation, Vol. 69 No. 11, 2021.
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[22] P. VPKumar, M. Elmansouri, Lj. Boskovic, M. Ignatenko, and **D.S. Filipovic**, *Wideband Quasi-Monostatic Simultaneous Transmit and Receive Reflector Antenna*, IEEE Transactions on Antennas and Propagation Vol. 68, No. 4, pp. 2630-2637, Apr. 2020.
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[25] A. Samaiyar, A. H. Abdelrahman, Lj. Boskovic, and **D.S. Filipovic**, *Extreme Offset-Fed Reflectarray Antenna for Compact Deployable Platforms*, IEEE Antennas & Wireless Propagation Letters, Vol. 18, No. 6, pp. 1139 – 1143, June 2019.
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**Peer Reviewed Conference Papers Published in Conference Proceedings**

North of 250 papers; for detailed list please contact Prof. Filipovic.

**Short Courses, Tutorials, and Selected Invited Talks**

- C. Wallish, **D.S. Filipovic**, *3D Printed Waveguide Simulators for Rapid Multi-Scan Verification of Phased Arrays,* Invited Talk, 2024 MITRE Workshop on Additive Manufacturing for Antennas, McClean, May 2024.
- S. Yen, **D.S. Filipovic**, *Antenna Technologies for In-band Full-duplex Phased Arrays,* 2024 IEEE Phased Array Systems Technologies, Boston, MA, Oct., 2024 (part of short course with K. Kolodziej and Z. Popovic)
- **D. S. Filipovic**, M. Elmansouri, and L. Boskovic, *Full-Duplex Communications: Antenna Story,* TELSIKS 2021, (Plenary Talk).
- **D.S. Filipovic**, *Wideband Antenna Systems*, 2019 International Microwave Symposium, Invited Talk for Short Course of Full-Duplex Systems, Boston, MA, June 2019.
- **D.S. Filipovic**, *Additive Manufacturing for Wideband Millimeter Wave Decoys*, Invited Talk at the 2019 MITRE Additive Manufacturing Workshop, Washington, DC, May 2019.

- **D.S. Filipovic**, *Antenna Technologies for Simultaneous Transmit and Receive*, Invited Seminar at the Colorado School of Mines, Golden, CO, Mar. 2019.
- **D.S. Filipovic**, *Antenna Technologies for Achieving Spectrum Dominance – Part 4*, Invited Seminar at the Lockheed Martin Space Systems, CO, Jan. 2019.
- **D.S. Filipovic**, *Antenna Technologies for Achieving Spectrum Dominance*, Denver Chapter of AOC, Invited Talk, Oct. 2018.
- E. Etellisi, M. Elmansouri, and **D.S. Filipovic**, *Antenna Systems for Simultaneous Transmit and Receive (STAR) Applications,* Invited Talk at the 50th International Symposium on Microelectronics in Raleigh, NC, Oct. 2017.
- **D.S. Filipovic**, *Simultaneous Transmit and Receive – Do Antennas Matter?,* AMTA, Rocky Mountain Node Invited Talk, Feb. 2016
- **D.S. Filipovic,** *Frequency Independent Antennas: Over a Half Century Journey of Bandwidth Unlimited Dreams,* 2015 Applied Computational Electromagnetics Society Conference, Plenary Talk, Wilmington, VA, Mar. 2015.
- **D.S. Filipovic**, *Antenna Technologies for Spectrum Sensing And Control from UHF Through W-Band*, Featured Presentation, 2014 Antenna Systems Conference, Las Vegas, NV, Nov. 2014.
- **D.S. Filipovic**, *Antenna Technologies for Wideband Millimeter-wave EA and ESM Systems,* 50th Association of Old Crews (AOC) Conference, Invited Talk, Washington, DC, Oct. 2013.
- **D.S. Filipovic**, *Electronic Attack with Frequency Independent Antennas,* 50th Association of Old Crews (AOC) Conference, Invited Talk, Washington, DC, Oct. 2013.
- **D.S. Filipovic**, *Frequency Independent Antennas – Perceptions and Reality of Engineering Thereof,* IEEE APS/URSI Conference, Invited Talk, Orlando, FL, July 2013.
- **D.S. Filipovic**, *Microwave and Millimeter Wave Front-End Subsystems for Wideband Direction Finding and Towed Decoys,* GOMACTech Conference, Invited Talk, Las Vegas, NV, Mar. 2012.
- **D.S. Filipovic**, *Wideband Antennas for Electronic Warfare*, Military Antenna Conference, Invited Talk, Washington DC, Sept. 2011.
- **D.S. Filipovic**, *Antennas – on Academic Highway*, 2010 IEEE Phased Array Conf., Recruiting Event for High School, Undergraduate and Graduate Students, Waltham, Oct. 2010.
- **D.S. Filipovic**, *UWB Antennas for VHF to THz Electronic Warfare*, 2010 Electronic Warfare Conference, Invited Talk, Washington DC, Mar. 2010.
- **D.S. Filipovic**, K. Vanhille, *Monolithic Rectangular Coaxial Lines, Components and Systems for Commercial and Defense Applications*, Half-Day Tutorial, IASTED, Baltimore, MD, 2008.
- **D.S. Filipovic**, C. Nichols, *Microcoaxial Lines: Theory, Design and CEM Lab*, Full-Day Short Course with Laboratory Component, IEEE IMS, Honolulu, HI, 2007.

**FUNDING HISTORY**

**Received Research Grants and Contracts**

[1] **S2 Corporation**, *Wideband MMW Antennas,* 1/25-12/25, Principal Investigator. (211k, 100)

[2] **ONR**, *Enabling Antenna Technologies for Ultrawideband Electronic Support,* 2/24-1/27, Principal Investigator. (956k, 100%)

[3] **ONR**, *Enabling Technologies and Novel Apertures for Electronic Support and Surveillance from HF to W-Band,* 12/22-12/25, Principal Investigator. (1,180k, 100%)

[4] **ONR**, *Wideband Electrically Small Antennas and Array Derivatives Thereof at HF and Beyond,* 6/21-5/24, Principal Investigator. (1,354k, 100%)

[5] **L3Harris**, *Antenna and Array Research (Phase 4 and 5),* Duration, 1/22-2/24. Principal Investigator (750k, 100%)

[6] **Lockheed Martin Space Systems**, *3D Printing Transmission Line Alternatives to Replace PolyStrata and Foam Microwave Devices, Duration,* 9/21-8/22, Phase 2. Principal Investigator. (200k, 100%)

[7] **ONR**, *Enabling Technologies and Novel Apertures for Electronic Support and Surveillance from HF to W-Band*, 6/21-5/24, Principal Investigator. (1,354k, 100%)
[8] **S2 Corp./DARPA**, *Antennas for wideband EM SS and DF*, Duration 12/20-2/24, Principal Investigator (850k, 100%)
[9] **Lockheed Martin RMS**, *Dual Polarized Wideband Horn-Phase 2*, Duration 12/20-2/22. Principal Investigator. (210k, 100%)
[10] **Lockheed Martin Space Systems**, *3D Printing Transmission Line Alternatives to Replace PolyStrata and Foam Microwave Devices, Duration*, 9/20-8/21, Phase 1. Principal Investigator. (200k, 100%)
[11] **Lockheed Martin RMS**, *Dual Polarized Wideband Horn – Phase 1*, Duration 4/20-11/20. Principal Investigator. (75k, 100%)
[12] **LGS/CACI**, *Tightly Coupled Antenna Arrays – phase 2*, Duration 1/20-12/20. Principal Investigator. (57k, 100%)
[13] **L3-Communications**, *Millimeter Wave Phased Array Aperture (Phase 3)*, Duration, 12/19-12/20. Principal Investigator (297k, 100%)
[14] **Custom Microwave Inc.**, *Ku-Band Microstrip Patch Array*, Duration, 5/20-2/20. Principal Investigator (65k, 100%)
[15] **L3-Communications**, *High-power Spiral (Phase 2)*, Duration, 9/18-11/19. Principal Investigator (197k, 100%)
[16] **LGS/CACI**, *Tightly Coupled Antenna Arrays – phase 1*, Duration 1/19-12/19. Principal Investigator. (50k, 100%)
[17] **Nortrhop Grumman**, *Ku-Band Microstrip Patch Array*, Duration, 9/18-12/18. Principal Investigator (65k, 100%)
[18] **L-3 Randtron**, *Multi-arm, Multi-mode Frequency Independent Antennas*, Duration, 9/18-8/19. Principal Investigator (96k, 100%)
[19] **Lockheed Martin**, *X-band STAR Phased Array*, Duration, 10/18-11/19. Principal Investigator. (130k, 100%)
[20] **Leidos/NRL,** *18-40GHz Antenna*, Duration 5/18-5/19, Principal Investigator. (272k, 100%)
[21] **S2 Corp./NSC**, *Antennas for Wideband Electromagnetic Spectrum Situational Awareness*, Duration 10/17 – 9/20, Principal Investigator. (893k, 100%)
[22] **Leidos/NRL,** *MEPS Demonstrator*, Duration 9/17-12/17, Principal Investigator. (25k, 100%)
[23] **Lockheed Martin**, *STAR Super-cell for Phased Array*, Duration, 8/17-8/18. Principal Investigator. (100k, 100%)
[24] **ONR**, *High Directivity STAR Apertures with Fixed and Agile Beams at Millimeter Waves*, 8/17-8/20, Principal Investigator. (870k, 100%)
[25] **Leidos/NRL**, *4-40GHz Antenna System*, Duration, 5/17-4/18, Principal Investigator. (500k, 100%)
[26] **ARO**, *Full-Duplex Antenna Study*, Duration, 5/17-2/18, Principal Investigator. (100k, 100%)
[27] **Leidos/NRL,** *Wide Bandwidth MMW Antennas*, Duration 9/16-2/17, Principal Investigator. (272k, 100%)
[28] **LGS**, *700-2700MHz Angle of Arrival*, Duration 5/16-2/17. Principal Investigator. (48k, 100%)
[29] **First RF**, Compact Direction Finder Antenna, 10/16-2/17, Principal Investigator. (40k, 100%)
[30] **ONR**, *Circulator in Aperture (CIA)*, Duration 3/15-2/18. Principal Investigator. (1,340k 100%)
[31] **ONR**, *Flexible RF System for Space Constrained Decoys*, Duration 3/15-2/18. Principal Investigator, Prof. Z. Popovic is co-PI. TriQuint is sub to CU. (1,196.4k ~55% share)
[32] **Lockheed Martin**, *STAR Super-cell*, Duration, 4/16-11/16. Principal Investigator. (70k, 100%)
[33] **S2 Corporation**, *20-40GHz DF Antenna*, Duration 12/15-4-16. Principal Investigator. (45k, 100%)
[34] **LGS**, *700-2700MHz Dual-mode Spiral Antenna*, Duration 1/15-7/15. Principal Investigator. (95k, 100%)

[35] **BAE Systems**, *Full Spectrum Staring ES Receiver with Instantaneous DF*, Duration 1/16-6/18. Principal Investigator. (Selected for Funding; 600k 100%)

[36] **NRL**, *SPEAR – Signal Processing Electronic Attack RFIC*, Duration 7/15-6/18. Principal Investigator. (1,41k 100%)

[37] **Leidos/NRL** *MEPS Demonstrator*, Duration 7/15-2/17, Principal Investigator. (400k 100%)

[38] **NRL**, *An 18-45 GHz Decoy for Defense against Millimeter Wave Guided Anti-Ship Missiles*, Duration 3/16-2/18, Principal Investigator. (993k 100%)

[39] **ONR**, *High-Power Subhyperband Antennas and Arrays*, Duration 6/13-6/16. Principal Investigator. (699.4k 100%)

[40] **ONR**, *Low Profile HF Antennas for Vehicles on the Move,* Duration 6/13-8/16. Principal Investigator. (906.8k 100%)

[41] **ONR**, *Enabling Technologies for High-Power Wideband Millimeter-wave Space-Constrained Platforms,* Duration 8/11-12/14. Principal Investigator. (691.8k 100%)

[42] **ONR**, *Concealed Electronic Attack Concept,* Duration 1/12-6/14. Principal Investigator. (326.7k, 100%)

[43] **NRL**, *Dual-Wideband Millimeter Wave Antenna Development*, Phase 2, 11/10-5/11. Principal Investigator. (25k, 100%)

[44] **ONR**, *Integrated Millimeter-Wave Direction Finding Sub-Systems and Dual-Polarized Antennas*, Duration 10/10-4/14. Principal Investigator. (1,043.4k 85% share, 15% to CU's subcontract – Nuvotronics)

[45] **ONR**, *Multifunctional Arrays and Frequency Independent Antennas (MAFIA)*, Duration 9/10-9/13. Principal Investigator. (1,156k 83% share, 17% to CU's subcontract – Applied EM)

[46] **NRL**, *Dual-Wideband Millimeter Wave Antenna Development*, 3/10-10/10. Principal Investigator. (50k, 100%)

[47] **DURIP**, *Comprehensive Antenna Testing*, Duration 4/09-9/10. Principal Investigator. (655.1k, 100%)

[48] **DARPA/iMINT**, *Electromagnetic Modeling and Metrology of Nanowires and Related Devices with Application to Microwave Interconnects, Sensors, Antennas and Near-Field Microscopy,* Duration 5/09-4/10. Principal Investigator. (50k, 100%)

[49] **NRL**, *Planar Millimeter Wave Antenna-Diplexer Development*, 6/09-9/09. Principal Investigator. (12k, 100%)

[50] **ONR**, *Antennas from VHF to THz*, Duration 10/07-11/10. Principal investigator. (871.4k, 77% share, 23% to CU's subcontract-Nuvotronics)

[51] **NSF**, EMT/NANO: *Broadcast Optical Interconnects for Global Communication in Many-Core Chip-Multiprocessor*, Duration 9/08-9/11, Co- Principal Investigator (PI is Prof. A. Mickelson, Co-PIs Prof. Park, Prof. Vachharajani, Prof. Sheng). (1,050k, 20% share)

[52] **Lockheed Martin**: *Effect of Lens and Cavity Loading on the Spiral's Phase Center Variation*, Duration: 9/08-12/09. Principal investigator. (20k, 100%)

[53] **DARPA-MTO 3D-MERFS Program**, Subcontract to BAE Systems, *Analysis and Design of 3D RF Multilayer Interconnects*, Phase III, Duration 8/07– 12/08, Principal Investigator (team members: BAE Systems, Nashua NH, (lead), Rohm and Haas, Blacksburg VA). (174k, 100%)

[54] **DARPA-TRUST Program**, Subcontract to BAE Systems, prime is Raytheon, Phase I, Duration 1/1/08-12/31/08, Co-Principal Investigator (PI is Prof. Popovic, Collaborator is Prof. Anderson). (400k, 33% share)

[55] **DARPA-MTO DMT Program**, Subcontract to Rohm and Haas, Phase I, Duration 9/07-9/08, Co-Principal Investigator (PI is Prof. Popovic, team members: BAE Systems, Rohm and Haas). (250k, 5% share)

[56] **Lockheed Martin**, Denver CO, *Antenna Modeling*, Duration 8/07-11/07, Principal Investigator. (11k, 100%)

[57] **DARPA-MTO 3D-MERFS Program**, Subcontract to BAE Systems, *Analysis and Design of 3D RF Multilayer Interconnects*, Phase II and IIb, Duration 10/05– 7/07, Principal Investigator (Co-PI was Prof. Popovic; team members: BAE Systems, Nashua NH (lead), Rohm and Haas, Blacksburg VA). (421k, 85% share)

[58] **NSF**, *Analytical and Numerical Modeling of Double Negative Materials with Application to Antenna Design*, Duration 10/05-10/09, Co-Principal Investigator (PI is Prof. Kuester, and Co-PI is Prof. Piket-May). (270k, 15% share)

[59] **Navy SBIR**, with Applied EM, Hampton VA, *An Integrated Antenna Set for Software Radios*, Phase II, Duration 10/05-10/07. Principal Investigator. (100k, 100%)

[60] **DARPA-MTO 3D-MERFS Program**, Subcontract to BAE Systems, *Analysis and Design of 3D RF Multilayer Interconnects*, Phase I, Duration 5/04 – 10/05, Principal Investigator (Co-PI was Prof. Popovic; team members: BAE Systems, Nashua NH, (lead), Rohm and Haas, Blacksburg VA). (250k, 80% share)

[61] **Lockheed Martin**, Denver, *Wideband Antenna Modeling*, Duration 11/05-12/05. Principal Investigator. (10k, 100%)

[62] **Motorola** (through CAMPMode), Plantation FL, *Modeling of MEMS Resonators*, Phase II and III, Duration 5/03-5/05. Principal Investigator. (96k, 100%)

[63] **Lockheed Martin**, Denver CO, *Two Arm Multimode Spiral*, Duration 1/04-12/04. Principal Investigator. (50k, 100%)

[64] **Navy SBIR**, with Applied EM, Hampton VA, *An Integrated Antenna Set for Software Radios*, Phase I, Duration 11/03 - 4/04. Principal Investigator. (15k, 100%)

[65] **Lockheed Martin**, Denver CO, *Low Profile Broadband Multimode Spiral*, Duration 1/03-12/03. Principal Investigator. (50k, 100%)

**Gifts and Services**

- **CMI**, Longmont, CO, 30k gift to Antenna Research Group, Nov. 2020.
- **CMI**, Longmont, CO, 30k gift to Antenna Research Group, Dec. 2019.
- **NavSys Corporation**, Colorado Springs, CO, 17k for delivery of GPS antennas, 2018.
- **NavAir**, San Diego, CA, 24k for delivery of high- and low-power antennas for Vigilant Hummer 3, 2018.
- **First RF Corporation**, Boulder CO, through University of Colorado Foundation– 20k for supporting activities in the Antenna Research Group, July 2008.
- **First RF Corporation**, Boulder CO, through University of Colorado Foundation– 20k for supporting activities in the Antenna Research Group, August 2005.

**ACADEMIC AWARDS AND HONORS**

- **D.S. Filipovic**, Holland Teaching Award, 2022
- G. Friedrichs, (student), 3rd place NSRM Student Paper Competition, 2022.
- G. Friedrichs, (student), 2nd place ACES Student Paper Competition, 2021.
- G. Friedrichs, (student), NSF Graduate Fellowship, 2020.
- **D.S. Filipovic**, Fellow of IEEE, elected in January 2019.
- P. Valale Prasannakumar, (student), Second Place - Student Paper Competition (171 papers submitted) at the 2018 IEEE Antennas and Propagation Symposium, Boston, MA, 2018.
- R. Pack, (student), First Place, Les Palkuti Best Student Poster at the 2018 GomacTech Conference, Miami, FL, 2018
- **D.S. Filipovic**, 2017 Outstanding Performance, Dept. ECEE, University of Colorado, May 2018.
- **D.S. Filipovic**, *Hudson Moore, Jr. Endowed Chair,* University of Colorado, January 2017.
- A. Samaiyar (student), First Place - Student Paper Competition at the 2016 Antenna Application Symposium, Monticello, IL, Sept. 2016.

- M. Notaros (UG student), First Place – IEEE Region 5 Student Paper Competition, April 2016.
- **D.S. Filipovic**, 2015 Outstanding Research Award, Dept. ECEN, 2015.
- **D.S. Filipovic**, *Charles Victor Schelke Endowed Professor*, University of Colorado, August 2015-December 2016.
- J. Ha (student), First Place – Student Paper Competition at the ASIAEM Symposium, Korea, 2015.
- N. Jastram (student), First Place - Student Paper Competition (149 papers submitted) at the 2014 IEEE Antennas and Propagation Symposium, Memphis, TN, 2014.
- M. Elmansouri (student), Second Place - Student Paper Competition at the 2013 IEEE Phased Array Conference, Boston, MA, Oct. 2013.
- N. Jastram (student), First Place - Student Paper Competition at the 2013 Antenna Application Symposium, Monticello, IL, Sept. 2013.
- **D.S. Filipovic**, *Holland's Teaching Award,* Department of Electrical, Computer, and Energy Engineering, University of Colorado at Boulder, Spring 2013.
- M. Elmansouri (student), Third Place - Student Paper Competition at the 2012 IEEE International Conference on UWB, Honolulu, HW, Sept. 2012.
- **D.S. Filipovic**, *Provost's Faculty Achievement Award*, University of Colorado at Boulder, 9/1/2011.
- M. Radway (student), First Place - Student Paper Competition at the 2011 Antenna Application Symposium, Monticello, IL, 2011.
- J. Mruk (student), First Place – Best Poster Paper at the 2010 GomacTech Conference, Reno, 3/2010.
- **D.S. Filipovic**, *Provost's Faculty Achievement Award*, University of Colorado at Boulder, 7/24/2008.
- **D.S. Filipovic**, *DARPA MTO Recognition for Outstanding Technical Contributions*, 1/16/06.
- M. Buck (student), Winner of the FEKO competition 2006.
- N. Stutzke (student), First Place - Student Paper Competition at the 2004 Antenna Application Symposium, Monticello, IL, 2004.
- **D. S. Filipovic**, J. Volakis, First Place – Student Paper Competition (150 papers submitted) at the 2002 IEEE Antennas and Propagation Symposium, San Antonio, Tx, 2002.
- **D. S. Filipovic**, Nikola Tesla Award, Serbian Academy of Arts and Sciences – Nikola Tesla Foundation, Best Graduation Thesis in Serbia, 1994.
- **D.S. Filipovic**, Serbian Government Fellowship for Young Talents in Eng. and Science, 1994-96.

**GRADUATE STUDENT ADVISING**

**Graduated Students (with a thesis dissertation)**

1. Theo Prince, Aug. 2024, Doctor of Philosophy, *Millimeter-Wave Lens and Reflector Antennas for Broadband Applications*. Employed by DOD, Denver, CO.
2. Dong-Chan Son, May 2024, Doctor of Philosophy, Thesis Title: *Wideband, Highly Directional Antennas with Fixed and Steerable Patterns*. Employed by Apple, Cupertino, CA.
3. Songyi Yen, Aug. 2023, Doctor of Philosophy, Thesis Title: *Unconventional Arrays for HF and Other Applications*. Employed by University of Colorado, Boulder, CO.
4. Gaeron Friedrichs, Jan. 2023, Doctor of Philosophy, Thesis Title: *Machine Learning Enhanced Antenna Systems*. Employed by University of Maryland, College Park, MD.
5. Jake Cazden, May 2022, Doctor of Philosophy, Thesis Title: *Antenna Systems for Wideband Direction Finding and Spectrum Sensing*. Employed by CMI, Longmont, CO.
6. Conrad Andrews, Sept. 2021, Doctor of Philosophy, Thesis Title: *Wideband Phased Arrays with High EIRP*. Employed by CACI, Westminster, CO.
7. Aman Samaiyar, July. 2021, Doctor of Philosophy, Thesis Title: *Planar Array Apertures for In-Band Full-Duplex Systems*. Employed by ANSYS Corp, Boulder CO.
8. Carlos Mulero, July. 2021, Doctor of Philosophy, Thesis Title: *Lens Based High Directivity STAR Systems*. Employed by ANSYS Corp, Boulder CO.

9. Elie Tiang Germain, Apr. 2019, Doctor of Philosophy, Thesis Title: *Simultaneous Transmit and Receive (STAR) Antennas for Geo-Satellites and Shared-Antenna Platforms*. Employed by Lockheed Martin Corp, Denver CO.
10. Prathap Valale Prasanakumar, May 2019, Doctor of Philosophy, Thesis Title: *Wideband Bi-static and Monostatic STAR Antenna Systems*. Employed by Facebook, CA.
11. Sara Manafi, Nov. 2018, Doctor of Philosophy, Thesis Title: *Enabling Ridge Waveguide Technology for Wideband Millimeter-wave Decoys*. Employed by ANSYS Corp., Boulder CO
12. Riley Pack, Nov. 2018, Doctor of Philosophy, Thesis Title: *Wideband Dual-Polarized Digital Direction of Arrival Sensors*. Employed by CACI Corp., Westminster, CO
13. Ehab Etellisi, May 2018, Doctor of Philosophy, Thesis Title: *Wideband Monostatic Co-Channel Simultaneous Transmit and Receive (C-STAR) Antenna and Array Systems*. Employed by Blue Canyon, Inc. Boulder, CO.
14. Saurabh Sanghai, May 2018, Doctor of Philosophy, Thesis Title: *Low-Profile, High-Power and Wideband Antennas for Diverse Military Platforms*. Employed by BlueFlux, CO.
15. David Lopez, Nov 2016, Doctor of Philosophy, Thesis Title: *Low-Profile Multiband and Flush-Mountable Wideband Antennas for HF/VHF and K/Ka Band Applications*. Employed by Apple, Cupertino, CA.
16. Jaegeun Ha, May 2016, Doctor of Philosophy, Thesis Title: *High-power Wiedeband Antennas for EW Systems*. Employed by Lucent Research Labs, NJ.
17. Nathan Jastram, November 2014, Doctor of Philosophy, Thesis Title: *Passive Front-ends for Wideband Millimeter Wave Electronic Attack Warfare*. Employed by Lockheed Martin, CO.
18. Rohit Sammeta, July 2014, Doctor of Philosophy, Thesis Title: *Low-profile Antennas for Wideband Transmit Applications in HF/UHF Bands*. Employed by Amazon, San Jose, CA.
19. Mohamed Ali Elmansouri, May 2013, Doctor of Philosophy, Thesis Title: *Joint Time/Frequency Analysis and Design of Spiral Antennas and Arrays for UWB Applications*. Employed by UCB as Post-doctoral Research Associate.
20. Joseph Mruk, December 2011, Doctor of Philosophy, Thesis Title: *Wideband Monolithically Integrated Front-End Subsystems and Components*. Employed by First RF Corp, Boulder, CO.
21. Hongyu Zhou, November 2011, Doctor of Philosophy, Thesis Title: *Wideband Microwave, Millimeter-wave, and Light-Wave Antennas*. Employed by Oculus, CA.
22. Matthew Radway, August 2011, Doctor of Philosophy, Thesis Title: *Mode Theory of Multi-Armed Spiral Antennas and Its Application to Electronic Warfare Antennas* (now with JPL, Pasadena, CA)
23. Neil Kefauver, April 2011, Doctor of Philosophy, Thesis Title: *Multi-Polarized Spiral Antennas for RF Sensing*, Employed by Lockheed Martin, Denver, CO.
24. Kichul Kim, December 2010, Doctor of Philosophy, Thesis Title: *Characterization of Carbon Nanotubes and Nanowires and Their Application* (now with for Defense Development, Korea).
25. James McDonald, April 2010, Doctor of Philosophy, Thesis Title: *UWB Dipole-like Antennas and Arrays*, University of Colorado, April 2010. Employed by First RF Corp, Boulder, CO.
26. Yuya Saito, November 2008, Doctor of Philosophy, Thesis Title: *Analysis and Design of Monolithic Coaxial Lines for Minimum Coupling and Integration in Various Passive Devices and Networks*, University of Colorado, November 2008. Employed by ITT Japan.
27. Milan Lukic, October 2007, Doctor of Philosophy, Thesis Title: *Modeling and Design of Microfabricated Rectangular Coaxial Lines and Antennas*, University of Colorado, October 2007. Employed by Google, IL.
28. Michael Buck, April 2007, Doctor of Philosophy, Thesis Title: *Multifunctional, Multipolarized Spiral and Sinuous Antennas*, University of Colorado, April 2007 (now with Ball Aerospace, CO).
29. Keneth Vanhille, April 2007, Doctor of Philosophy, Thesis Title: *Design and Characterization of Microfabricated Three-Dimensional Millimeter-Wave Components*, University of Colorado, April 2007. (Thesis co-advisor. Principal Advisor was Prof. Zoya Popovic). Employed by Sandia, NN.

30. Yongjae Lee, July 2006, Doctor of Philosophy, Thesis Title: *Design of RF Circuits with Embedded Multi-Physics Models of MEMS Devc*, University of Colorado, July 2006 (now with Cobham, PA).
31. G. Altman, MSc Thesis Title: *Deployable Electrically Small Folded Cylindrical Helix HF Antenna and Drone Based Metrology System*, University of Colorado, Dec. 2024. Employed by Employed by University of Maryland, College Park, MD.
32. Pisani, Isaiah, MSc Thesis Title: *Radially Symmetric Antennas and Passive Components Made Monolithic via Additive Manufacturing*, University of Colorado, May 2018. Employed by Univ. of Colorado, CO.
33. Boskovic, Ljubodrag, MSc Thesis Title: *Design of Passive Millimeter-Wave Components for Additive Manufacturing*, University of Colorado, Apr. 2021. Employed by Univ. of Colorado, CO.
34. Bradley, Allan, MSc Thesis Title: *Isolation Enhancement for Cylindrical Structure Millimeter-Wave Repeaters*, University of Colorado, May 2018. Employed by Lockheed Martin, CO.
35. Brian Simakauskas, MSc Thesis Title: *Phase Center Stabilization in a Horn Antenna and its Application in a Luneburg Lens Feed Array,* University of Colorado, Dec. 2015. Employed by MIT Lincoln Lab, MA.
36. Timothy Samson, MSc Thesis Title: *Characterization of Alternative Mounting of Vehicular Antenna Systems Near Real Grounds*, University of Colorado, Dec. 2014. Employed by Lockheed Martin, CO.
37. Arian Lalezari, MSc Thesis Title: *Exploitation of Body Interaction Effects for the Enhancement of a Body-Borne Radio Geolocation System*, University of Colorado, Dec. 2008. Employed by First RF, CO.
38. Lars Grimsrud, MSc Thesis Title: *Low-Loss L-band Fixed Beam Circular Array*, University of Colorado, Dec. 2008. Employed by First RF, CO.
39. Nathan Stutzke, MSc Thesis Title: *Slot Spiral Antennas for Single and Multimode Applications*, University of Colorado, May 2005. Employed by Ball Aerospace, CO.

**Current Doctor of Philosophy Students**

1. Collin Wallish, Research Topic: Wideband Microwave Sensors
2. Jori Plat, Research Topic: Additively Manufactured Components for Next Gen Wideband EW
3. Benjamin Cross, Research Topic: MMW Electronic Support Components and Systems
4. Isaiah Pisani, Research Topic: TBD
5. Joseph Abroquah, Research Topic: Miniaturization of Wideband Log-Periodic Antennas
6. Aadesh Neil, Research Topic: Impact of Rough See on HF Sensor Performance

**Current Masters of Science Students**

7. Jacob Abramow, Research Topic: HF Contiguous Diplexers

**Advised Undergraduate and Graduate Students**

1. David Mathews, summer 04
2. Katie Noble, Fall 05 / Spring 06 (NSF DNG grant)
3. James Gorman, Fall 06 / Spring 07 (NSF DNG grant)
4. Nathan Sutton, Fall 07 / Spring 08(NSF DNG grant)
5. Maxwell Perez, Fall 10 / Fall 12 (ONR)
6. Matthew Arendall, Fall 14 / Fall 15 (ONR)
7. Richard Smith, Summer 15, Fall 16 (ONR)
8. Bradley Allen, Summer 14, Fall 16 (ONR)
9. Milica Notaros, Summer 15 / Summer 17 (ONR)
10. Sean McKee, Fall 2017 / Fall 2018 (ONR)
11. Merarys Caquias, MS, Fall 2017/Fall 2019 (ONR)
12. Jingyi Yen, Summer 2021
13. Richard Chen, Summer 2021
14. G. Burden, Summer 24 - ongoing

15. D. Allen, Summer 24 – ongoing
16. E. Wawrzynek, Summer 24 - ongoing

**Post-Doctoral Research Fellows, Professional Research Associates, and Visitors**

1. Mr. Ljubodrag Boskovic, Chief Mechanical Engineer, Oct. 2016-ongoing
2. Dr. Songyi Yen, Sept. 2023 – ongoing
3. Dr. Mohamed Elmansouri, Senior Research Fellow, Jun. 2013-Apr. 2024.
4. Dr. Amrita Ball, Aug. 2021 – Dec. 2022
5. Dr. Haq Nawaz, Jan. 2022 – Jan. 2023
6. Dr. Prathap VPKumar, June 2019 – Nov. 2019
7. Dr. Ehab Etellisi, June 2018-Aug. 2019
8. Prof. Jose Manuel Fernandez, Jan. 2018 - June 2018, Fulbright Visiting Scholar
9. Dr. Jaegeun Ha, June 2016-Mar. 2018
10. Dr. Nathan Jastram, Jan. 2015-Mar. 2018
11. Dr. Muhannad Al-Tarifi, Sep. 2013-Aug. 2018
12. Dr. Maxim Ignatenko, Mar. 2012 – Jan. 2019
13. Dr. Ahmed Abdelrahman, Nov 2016-Dec. 2017
14. Dr. Nahid Rahman, Aug 2016-Nov 2017
15. Dr. Gregor Lasser (with Prof. Z. Popovic), June 2015-Oct 2017
16. Dr. Matthew Radway, Aug. 2011 – Aug. 2013
17. Dr. ChangHoi Ahn, Sep. 2012 – Assoc. Prof., Yeungnam Univ., Visiting Scholar
18. Dr. Shulabh Gupta, Mar. 2012 – Sep. 2012
19. Dr. Bongsik Jeong, Assoc. Prof., Dong-A University, Korea, May 08 / Feb. 09, Visiting Scholar
20. Dr. Manseok Uhm, Post-Doc, Summer 07 / Summer 08, Visiting Scholar

## TEACHING

### Undergraduate Teaching

- *ECEN 1100, Exploring ECE:* Fall 20,21
- *ECEN 2420, Wireless Electronics for Communications:* Spring 13, 14, 15
- *ECEN3400, Electromagnetic Fields and Waves:* Fall 06, 08; 20; Spring 06, 10, 17, 20
- *ECEN3410, Electromagnetic Fields and Transmission*: Spring 04, 12, 13, 21, 22, 24

### Graduate Teaching

- *ECEN5134, Electromagnetic Radiation and Antennas*: Fall 02, 03, 05, 07, 09, 11, 14, 15, 17, 19, Spring 22, 23, 24
- *ECEN5154, Computational Electromagnetic*s: Spring 03, 05, 07, 09, 20, 22; Fall 12, 15, 16
- *ECEN5004, Advanced Antennas 1 - Advanced Antenna Modeling*: Fall 04
- *ECEN5004, Advanced Antennas 2 - Advanced Antennas and Antenna Systems,* Fall 21
- *ECEN5004, Advanced Antennas 3 - Phased Arrays*: Spring 25
- *ECEN510*4, *CAD for Passive Microwave Circuits*: Fall 03, 05, 08, 14, 22, 23; Spring 12

## PROFESSIONAL SERVICE

### Internal

- Member of FLRC, CEAS, Fall 2024 – ongoing.
- Member of the PUEC Promotion to Full Committee for Prof. M. Piket-May, Fall 2024.
- Member of the PUEC T&P Committee for Prof. S-W. Huang, Fall 2024.
- Member of the Executive Committee, Fall 2022 / Fall 2024.
- Chair of the 5 year Review Committee for Prof. Piket-May, Spring 2023.
- Member of the Faculty Salary Grievance Committee, Fall 2023.
- Member of the Tenure and Promotion Committee for Prof. Combes, Spring/Summer 2023.
- Chair of RF Search Committee, Fall 21 / Spring 22.

- Member of the FSR3 Committee, Fall 21 / Ongoing.
- Chair of the CU/CMU partnership Instructor Search Committee, Spring 2021.
- Chair of the Faculty Oversight Search Committee, Fall 2020-Spring 2021.
- Member of the Dean Search Committee, Spring 2021.
- Faculty Mentor for Shu-Wei Huang, Fall 2021 – Ongoing.
- Faculty Mentor for Cody Scarborough, Fall 2022 – Ongoing.
- Chair of the 5 year Review Committee for Prof. Gasiewski, Spring 2021.
- Chair of the CU/CMU partnership Instructor Search Committee, Fall 2020.
- Member of the College wide IRT evaluation committee, Spring 2020.
- Member of the Tenure and Promotion Committee for Prof. T. Barton, Fall 2020.
- Member of the Search Committee for ECEE Dept., Fall 2019-Spring 2020.
- Member of the Search Committee for CEAS Dean, Spring 2020.
- Chair of the Promotion Committee for Prof. D. Psychogiou, 2019.
- Member of the Promotion Committee for Prof. T. Barton, 2019.
- Member of the National Security Working Group (NSWG), Fall 2017-present
- Graduate Director: Fall 2015 – Fall 2017
- Associate Chair for Graduate Studies: Fall 2015 – Spring 2017
- Ex-officio Member of the Executive Committee: Fall 2015 – Fall 2017
- Member of the Graduate Educational Council: Fall 2015 – present
- Member of the College-Wide Best Graduation Thesis Committee: 2015, 2016
- Member of the Department-wide Search Committee: Fall 2014-Spring 2015
- Dean's FIET committee member: Fall 2014-Fall 2017
- Member of the Executive Committee: 2012 – Spring 2015
- Member of the Graduate Studies Committee: 2003 - present
- Member of the Provost's Faculty Achievement Award Committee 2012
- Freshman academic advisor: Fall 2005 - present
- Member of the Executive Committee: 2007-2009
- Member of the Undergraduate Curriculum Committee: 2004 – 2007
- Member of the Search Committee – Fall 2004 - Spring 2005
- Member of the Freshman Recruiting Committee – Fall 2006
- Member of the ABET Evaluation Committee for ECEN3400- Fall 2004
- Chaired or co-chaired preliminary exams in electromagnetics 02-14, 18
- Member of the CAMPMode 2002-2004
- Member of dissertation committees for more than 50 students

**External**

- Vice-Chair, IEEE APS Committee on Antennas, Fall 2024-ongoing.
- Vice-General Chair, IEEE APS/URSI, Denver, 2022.
- Financial Chair, IEEE APS/URSI, Denver, 2022.
- Associate Editor, IEEE TAP, Sept. 2016 – present.
- Guest Editor "Antennas for Full-duplex Applications", IEEE TAP, 2020/21.
- Track Chair and TPC, 2020 IEEE APS/URSI, Montreal, CA, 2020.
- Technical Program Committee, 2019 IEEE APS/URSI, Atlanta, GA, 2019.
- External reviewer for tenure cases, 2019, 2020, 2021.
- Technical Program Committee, Student Paper Competition Chair, 2019 ACES, Miami, FL
- IEEE APS Membership Committee, May 2018 – present
- Technical Program Committee, Exhibition and Sponsorship Chair, 2018 ACES, Denver, CO

- Technical Program Committee, Awards Chair, 2018 GSMM, Boulder, CO
- Vice TPC-Chair 2017 IEEE APS/URSI
- Member of the 2011, 2015, 2016, 2017, 2018 IEEE APS/URSI Technical Program Committee
- Member of the 2014 IEEE Benjamin Franklin Symposium on Microwave and Antenna Sub-Systems Technical Program Committee
- Member of the 2013 AMTA Technical Program Committee
- Student Paper Coordinator 2011 IEEE APS/URSI, Spokane WA
- Student Day Coordinator 2011 AMTA, Denver, CO
- Past member of the editorial board for the International Journal of RF and Microwave Computer Aided Engineering
- Past Associate Editor for the International Journal of Antennas and Propagation
- Past Guest Editor for the Special Issue on UWB Antennas for the Int. Journal of Antennas and Propagat.
- Past Member of the Editorial Board for the IASTED Conference on Antennas, Radar and Wave Propagation
- Organized special session: Antennas for Wireless Comms, URSI Meeting, Boulder, CO 2005
- Session chair at IEEE APS/URSI Symposiums, EuCAP, AAS, ACES, IEEE IMOC, URSI, etc.
- Reviewer for IEEE Transactions Antennas and Propagation, IEEE Antennas Wireless Propagation Letters, IEEE Microwave Wireless Components Letters, IEEE Transactions Nanotechnology, IEEE Transaction Microwave Theory Techniques, International Journal RF and Microwave Computer Aided Engineering, various government agencies