

Chi-Chih Chen

Electrical and Computer Engineering Department ElectroScience Laboratory
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EDUCATION:

- B.S.** (1988) Electrical Engineering, National Taiwan University, Taipei, Taiwan, ROC
M.S. (1993) Electrical Engineering, The Ohio State University, Columbus, Ohio, USA
Ph.D. (1997) Electrical Engineering, The Ohio State University, Columbus, Ohio, USA

POSITIONS HELD:

- 2011~Pres** **Research Associate Professor**, The Ohio State University ECE Department
2019~2020 **Chief Science Officer**, Nikola Labs
2017~2019 **Chief Technology Officer**, Nikola Labs
2003~2011 **Research Scientist**, ElectroScience Laboratory, The Ohio State University ECE Department
1999~2003 **Senior Research Associate**, ElectroScience Laboratory, The Ohio State University ECE Department
1997~1999 **Postdoctoral Researcher**, ElectroScience Laboratory, OSU Electrical Engineering Dept.
1993~1997 **Graduate Research Associate** ElectroScience Laboratory, The Ohio State University ECE Department
1990~1991 **Teaching Assistant**, National Taiwan University Eletocritical Engineering Department

PROFESSIONAL HONORS and AWARDS:

1. **Fellow –** Institute of Electrical and Electronics Engineers (IEEE)
2. **Fellow –** Antenna Measurement Techniques Association (AMTA)
3. **Distinguished Achievement Award** (2016) – Antenna Measurement Techniques Association (AMTA)
4. **Outstanding Service Award** (2016) – Antenna Measurement Techniques Association (AMTA)
5. **Lumley Interdisciplinary Research Award (2016)**, The Ohio State University College of Engineering
6. **Inventors Award (2016)**, The Ohio State University College of Engineering
7. **Lumley Research Award (2015)**, The Ohio State University College of Engineering
8. **Lumley Research Award (2010)**, The Ohio State University College of Engineering
9. **Lumley Research Award (2005)**, The Ohio State University College of Engineering
10. **Outstanding Paper Award (2003)**, The Ohio State University ElectroScience Laboratory
11. **Outstanding Technical Report Award (2011)**, The Ohio State University ElectroScience Laboratory
12. **Outstanding Technical Report Award (2001)**, The Ohio State University ElectroScience Laboratory
13. **Outstanding Technical Report Award (1998)**, The Ohio State University ElectroScience Laboratory
14. **Outstanding Master Thesis (1993)**, The Ohio State University ElectroScience Laboratory

Student Paper Awards by Advisees

1. **3rd Place Student Paper Award**, 2016 Annual Symposium of the Antenna Measurement Techniques Association (AMTA): D. Belgiovane, C.-C. Chen, J.L. Garry, “A Radar Echo Emulator for the Evaluation of Automotive Radar Sensors”.
2. **The IET 2014 Premium Award for Best Paper in IET Microwaves, Antennas & Propagation**: Design of an efficient ambient WiFi energy harvesting system, U. Olgun, C.-C. Chen, J.L. Volakis, IET Microwaves, Antennas & Propagation, Volume 6, issue 11, August 2012, p. 1200 - 1206.
3. **1st Place Student Paper Award** at the 2010 IEEE International Symposium on Phased Arrays Systems & Technology, J.A. Kasemodel*, C.-C. Chen, J. L. Volakis, “Broadband planar wide-scan array employing tightly coupled elements and integrated balun,”
4. **3rd Place Award** in 2013 FEKO’s International Student Competition: “Characterization of Pedestrian Electromagnetic Scattering Features at 76–77 GHz”, M. Chen, C.-C. Chen
5. **2nd Place Student Paper Awards**, 2013 Antenna Applications Symposium: N.J. Smith, “Efficient Self Powered Aut-Tuned VHF Impedance Tuner For High Power Applications” N. J. Smith, C-C. Chen, J. L. and Volakis

6. **2nd Place Student Paper Award**, 2013 Annual Symposium of the Antenna Measurement Techniques Association (AMTA): “Implementation of a Novel Low-Cost Low-Profile Ku-Band Antenna Array for Single Beam Steering from Space,” N. Host, C.-C. Chen, J.L. Volakis, F. Miranda.
7. **1st Place Student Paper Award**, 2012 Annual Symposium of the Antenna Measurement Techniques Association (AMTA): M. Kuloglu and C.-C. Chen, “Ultrawideband Electromagnetic Polarization Filter (UWB-EMPF) Applications to Conventional Horn Antennas for Substantial Cross-Polarization Level Reduction”.
8. **3rd Place Student Paper Award**, 2012 Annual Symposium of the Antenna Measurement Techniques Association (AMTA): A. Svendson, I. Gupta, and C.-C. Chen, “Dual Band GPS Receiver Antenna for Small Cylindrical Platforms”.
9. **3rd Place Student Paper Award**, 2011 Annual Symposium of the Antenna Measurement Techniques Association (AMTA): N. Smith, C.-C. Chen, J. L. Volakis, “Frequency and Impedance Agile Real-Time Tuning Network for 200-400 MHz Antennas”.
10. **2nd Place Student Paper Award**, 2010 Annual Symposium of the Antenna Measurement Techniques Association (AMTA): .M. Kuloglu, R.J. Burkholder, C.-C. Chen, “A measurement technique for characterizing antennas with low cross polarization”.
11. **3rd Place Student Paper Award**, 2010 Annual Symposium of the Antenna Measurement Techniques Association (AMTA): U. Olgun, C.-C. Chen, J. L. Volakis, “Comparative analysis of rectenna array configurations for optimal power harvesting”.
12. **3rd Place Student Paper Award**, 2008 Annual Symposium of the Antenna Measurement Techniques Association (AMTA): J.A. Kasemodel and C.-C. Chen, “A Measurement Setup For Characterizing Antenna On An Infinite Ground Plane From 1 to 18 GHz,”
13. **1st Place Student Paper Award**, 2004 Annual Symposium of the Antenna Measurement Techniques Association (AMTA): M. Lee, C.-C. Chen and J.L. Volakis, “Antenna miniaturization using artificial transmission line”
14. **1st Place Student Paper Award**, 2003 Annual Symposium of the Antenna Measurement Techniques Association (AMTA): K.-H. Lee, C-C. Chen, R. Lee, “A Novel UWB dual-polarized tapered chamber feed design using FDTD method”.
15. **1st Place Student Paper Award**, 2002 Annual Symposium of the Antenna Measurement Techniques Association (AMTA): K.-H. Lee, C-C. Chen, R. Lee, and W.D. Burnside “ Numerical Analysis of A Novel Tapered Chamber Feed Antenna Design,”
16. **2nd Place Student Paper Award**, 2001 Annual Symposium of the Antenna Measurement Techniques Association (AMTA): Pablo A.Diez, C.-C. Chen and W.D. Bumside, “Two Novel, Ultra-Wide Bandwidth, Dual Linearly-Polarized Dielectric Antenna Designs”

PROFESSIONAL MEMBERSHIPS:

1. **Fellow –** Institute of Electrical and Electronics Engineers (IEEE)
2. **Fellow –** Antenna Measurement Techniques Association (AMTA)
3. **Member -** Sigma Xi Scientific Research Society
4. **Member –** Phi Kappa Phi

PROFESSIONAL ACTIVITIES:

OFFICES:

1. **Past President**, Antenna Measurement Techniques Association (AMTA) 2015
2. **Elected Board of Director (President)**, Antenna Measurement Techniques Association (AMTA) 2014
3. **Elected Board of Director (Technical Coordinator)**, Antenna Measurement Techniques Association (AMTA) 2013
4. **Elected Board of Director (Technical Coordinator)**, Antenna Measurement Techniques Association (AMTA) 2012
5. **Chairman (2003)**, IEEE Columbus Joint AP/MTT Chapter
6. **Vice Chairman (2002)**, IEEE Columbus Joint AP/MTT Chapter
7. **Treasurer (2001)**, IEEE Columbus Joint AP/MTT Chapter

COMMITTEE MEMBERSHIPS:

1. SAE Active Safety Roadside Concrete Divider Surrogate Task Force (2022)
2. SAE Active Safety Active Safety Roadside Object Surrogate Task Force (2021)

3. SAE Active Safety Bicyclist Test Target Task Force (2018)
4. SAE Active Safety Test Target Validation and Correlation Task Force (2015-2016)
5. SAE Active Safety Pedestrian Test Mannequin Task Force (2016)
6. **Technical Program Committee (2016):** European Conference on Antennas and Propagation (EuCAP)
7. **Technical Program Committee (2011-2016):** IEEE Intl Antennas and Propagation Symposium (APS/URSI)
8. **Technical Program Committee (2010-2016):** IEEE International Phase Array Symposium
9. **Technical Program Committee (2014-2016):** Antenna Measurement Techniques Association (AMTA)
10. **Scientific Committee (2012-2016):** IEEE International Geoscience & Remote Sensing Symposium
11. **Scientific Committee (2008-2016):** International Conference on Ground Penetrating Radar (GPR)
12. **International Advisory Committee (2008-2016):** International Conference on Ground Penetrating Radars
13. **Young Scientist Award Committee (2014,2016):** International Conference on Ground Penetrating Radar (GPR)
14. **Review Committee (2014-2015):** European Conference on Antennas and Propagation (EuCAP)
15. **Review Committee (2011-2016):** IEEE Intl. APS/URSI Meeting
16. **Review Committee:** 2011 SBMO/IEEE MTT-S International Microwave and Optoelectronics

CONFERENCE CHAIRS:

1. **Technical Chair** of 11th International Conference on GPR, Columbus, Ohio, 2006

SESSION CHAIRS:

1. 2016 Antenna Measurement Techniques Association (AMTA) annual symposium: **Range Design & Quiet Zone**
2. 2016 IEEE Phased Array Systems and Technology Symposium: **Antenna Design**
3. 2016 European Conference on Antennas and Propagation (EUCAP): **Antenna Design and Optimization, SAR and Material Measurements**
4. 2016 IEEE APS/URSI Symposium: **Vehicular Antennas and Applications, Antenna Arrays**
5. 2016 International GPR Conference: **GPR Application to Landmine Detection and Humanitarian Activities**
6. 2015 Antenna Measurement Techniques Association (AMTA) annual symposium:
7. 2015 IEEE APS/URSI Symposium: **MIMO for 5G and Beyond**
8. 2014 International GPR Conference: **Radar data processing and analysis**
9. 2014 EUCAP: **Slotted-Wave, Guided-Wave and Leaky-Wave Antennas**
10. 2013 IEEE APS/URSI Symposium: **Antenna Feeds and Matching, Antenna Design and Measurements**
11. 2012 IEEE APS/URSI Symposium: **Vehicular Antennas, Dual-Polarized and Circularly Polarized Antennas, Metamaterial Antennas and Applications**
12. 2012 IEEE IGARSS: **UWB Subsurface Discrimination from Magnetostatics to GPR**
13. 2012 International GPR Conference: **Novel GPR System and Antenna**
14. 2009 IEEE APS/URSI Symposium: **AMC Metamaterials and Applications**
15. 2008 International GPR Conference: **UXO Mine Detection, GPR for Aerospace**
16. 2006 International GPR Conference: **Ariel GPR**
17. 2004 International GPR Conference: **UXO and Landmine Detection**
18. 2002 International GPR Conference: **UXO and Landmine Detection**

JOURNAL PAPER REFEREE:

1. IEEE Communications Letters
2. IEEE Antennas and Wireless Propagation Letters
3. IEEE Geoscience and Remote Sensing Letters
4. IEEE Transactions on Electromagnetic Compatibility
5. IEEE Signal Processing Letters
6. IEEE Transaction on Microwave Theory and Techniques
7. IEEE Sensors Journal
8. IEEE Transactions on Geoscience and Remote Sensing
9. IEEE Transactions on Antennas and Propagation
10. Journal of Electromagnetic Waves and Applications

11. Journal of Geophysics
12. Journal American Society of Agriculture Engineering
13. Journal of Applied Geophysics
14. IET Electronic Letters
15. EURASIP Journal on Advances in Signal Processing
16. EURASIP Journal on Applied Signal Processing
17. IOP Journal on Geophysics and Engineering
18. IOP Journal on Measurement Science and Technology
19. IOP Journal on Wave in Random Media
20. Progress in Electromagnetics Research Journal

PATENTS:

1. RUF Christopher, Ryan P Miller, Timothy Butler, Andrew O'brien, Chi-Chih Chen, "Next Generation GNSS-R Receiver," Application No. 18129226, Oct.5, 2023
2. Rini Sherony, Stanley Yung-Ping Chien, Jun Lin, Abir Saha, Chi-Chih Chen, "Surrogate for Grass" Pending, App. No. 16/256412, January, 2019
3. John Locke, Chi-Chh Chen, Jiukun Che, "Low Profile Automotive Antenna System", **US 11,888,209**, January 30, 2024
4. John Locke, Chi-Chh Chen, Jiukun Che, "Low Profile Automotive Antenna System", **US 11,527,810 B2**, Dec.12, 2022
5. Rini Sherony, Stanley Yung-Ping Chien; Jun Lin, Abir Saha, Chi-Chih Chen, "Surrogate for Metal Guardrail" **US 10,689,818**, June 2020
6. Rini Sherony, Stanley Yung-Ping Chien; Jun Lin, Abir Saha, Yaobin Chen, Chi-Chih Chen, "Surrogate for Concrete Divider" **US 10,597,835**, March 2020
7. J Dvorsky, CC Chen, RK Tallos, JE Turner, BJ DeLong, R Somogye, "Systems and methods for machine condition monitoring powered by efficient harmonic harvester," **US 11,159,205**, 2021
8. Chi-Chih Chen, Roland K. Tallos, Can E. Koksal, Ness B. Shroff, "Systems Capable of Self-Harvesting Energy From Wireless Devices And Methods Of Using The Same", **US 9,985,461**, May 2018
9. Chen, Chi-Chih "Harmonic Harvester For Improved RF-To-Dc Rectifying Efficiency" US Patent **10,063,063**, August 2018
10. Stanley Yung-Ping Chien; Chi-Chih Chen; Rini Sherony; Hiroyuki Takahashi, Jason Brink, Qiang Yi, Domenic Belgiovane, "Apparatus and Device for Use in Automotive Testing" **US 9,846,106**, December 2017
11. Kris R. Jatana; Chi-Chih Chen, "Apparatus and Method for Obstruction Detection" Pending, App. No. 62/425335
12. Chen, Chi-Chih; Yetsir, Ersin; Volakis, John L., "Multiple-Input Multiple-Output Ultra-Wideband Antenna" **US 9,716,312**, July 2017
13. Chen, Chi-Chih; Chen, Ming, Liu, Chia-Wei, "A Compact Dual-Band GNSS Antenna Design" **US 9,425,516**, August 2016
14. Chen, Chi-Chih; Moon, H; Volakis, J.L. "Method of making an extremely low profile wideband antenna" **US 9,343,810**, May 2016
15. Chi-Chih Chen; Stanley Yung-Ping Chien; Rini Sherony; Hiroyuki Takahashim "Artificial Skin for Radar Mannequins", **US 9,263,800**, February 2016
16. Walton, Eric K.; Chen, Chi-Chih, "Vehicle obstacle warning radar" **US 7,295,154**, November 2007
17. Walton, Eric K.I Chen, Chi-Chih, "Vehicle obstacle warning radar" **US 6,806,826**, October 2004
18. Chen, Chi-Chih, "Lateral Wave Radar System for Forward Detection." US Patent App. 13/059,371 (abandoned)

19. Chen, Chi-Chih; Zhao, Jing; Volakis, John L., "**Ultra-Wideband Inverted Hat Antenna**" US Patent App. 12/696912 (abandoned)
20. Chen, Chi-Chih; Volakis, John L.; Zhou, Yijun, "**Compact GPS Antenna Element and Array with a Single Feed**" US Patent App. 12/137,502

SHORT COURSES TAUGHT:

1. C.-C. Chen, L.J. Foged, A.Elfrgani, "New Trends in Automotive Radar & Antenna Testing and Simulation", 2018 AMTA Symposium
2. C.-C. Chen "Ultra-Wideband Antenna Designs", IEEE APS/URSI Symposium, 2018
3. C.-C. Chen, "Ground Penetrating Radars Key Questions Answered", April, 2018.
4. C.-C. Chen, "**A Private Collection of Novel UWB Antenna Design and Measurement Technologies**" OSU ElectroScience Laboratory Short Course Series, August, 2017.
5. C.-C. Chen, "**Advanced UWB Antenna Designs and Optimizations**" OSU ElectroScience Laboratory Short Course Series, August, 2014.
6. C.-C. Chen, "**A Tutorial on Designing Wideband Tightly-Coupled Phased Arrays**" OSU ElectroScience Laboratory Short Course Series, August, 2013, 2014.
7. C.-C. Chen, "**Design and Operation of UWB Antennas**" OSU ElectroScience Laboratory Short Course Series, 2012-2013.
8. C.-C. Chen, "**Design and Operation of UWB Antennas**" Raytheon Company, Sudbury, MA, September, 2012.
9. C.-C. Chen, "**Ground Penetrating Radar Fundamentals**" OSU ElectroScience Laboratory Short Course Series, August, 2012.
10. C.-C. Chen, "**Ground Penetrating Radars**" International Workshop on Advanced Wireless Networking and RF Front-End Technologies, August, 2011.
11. J.L. Volakis, C.-C. Chen, "**Small Antennas Design and Miniaturization Techniques**" OSU ElectroScience Laboratory Short Course, 2010-2011.
12. J.L. Volakis, C.-C. Chen, Kubilay Sertel, "**Small Antennas Design and Miniaturization Techniques**" OSU ElectroScience Laboratory Short Course Series, June 2010.
13. 2010 IEEE APS/URSI Symposium: "**Miniaturization Methods for UWB and Multiband Antennas**", J.L. Volakis and C.-C. Chen
14. 2009 IEEE APS/URSI Symposium: "**Miniaturization Methods for UWB and Multiband Antennas**", J.L. Volakis and C.-C. Chen
15. 2008 IEEE APS/URSI Symposium: "**Miniaturization and Material Design Methods for UWB and Multiband Antennas**", J.L. Volakis, C.-C. Chen, Stavros Koulouridis, ZhiNing Chen
16. 2007 IEEE APS/URSI Symposium: "**Miniaturization and Material Design Methods for Antennas**", J.L. Volakis, C.-C. Chen, Stavros Koulouridis
17. Chi-Chih Chen, "**Antenna Miniaturization-Tricks and Limitation**" at SPAWAR, San Diego, May 2007.
18. 2006 IEEE APS/URSI Symposium: "**Miniaturization and Material Design Methods for Antennas**", J.L. Volakis, C.-C. Chen, Stavros Koulouridis
19. Chi-Chih Chen, "**GPR Antenna Designs**", 11th Intl Conference on Ground Penetrating Radar Short Course, June 2006.
20. Chi-Chih Chen, "**Small Antenna Designs and Limitations**," at Yuan-Ze University, Taiwan, June 2006.

PUBLICATIONS:

PhD Dissertation - "Design and Development of Ground Penetrating Radar Systems for The Detection And Classification of Unexploded Ordnances And Land Mines" Ph.D. Dissertation, The Ohio State University, August 1997.

Master Thesis - "Design and Applications of Two Low Frequency Guided Wave Electromagnetic Measurement Structures," M.S. Thesis, The Ohio State University, May 1993.

Authored and Co-Authors Books

1. J.L. Volakis, C.-C. Chen, and Kyohei Fujimoto, “**Small Antennas: Miniaturization Techniques and Applications**”, July, 2010, McGraw Hill.

Authored and Co-Authors Book Chapters

1. A. O'Brian, C.-C.Chen, I.J. Gupta, “**GNSS Receiver Antennas and Antenna Array Signal Processing**” Ch.26 in *Position Navigation & Timing Technologies in the 21st Century*, Wiley, January 2021. ISBN: 978-1-119-45849-4
2. Dimitris Psychoudakis, Chi-Chih Chen, Gil-Young Lee and John L. Volakis, “**An Epidermal Sensor Paradigm - Inner Layer Tissue Monitoring,**” Ch. 19 in *Handbook of Biomedical Telemetry*, Edited by K.S. Nikita, Wiley, February, 2014.
3. C.-C. Chen, Steven Gao, Moazam Maqsood “**Antennas for Global Navigation Satellite Systems (GNSS) Receivers**”, Chapter 14 of *Space Antenna Handbook*, Edited by William A. Imbriale, Steven Gao, Luigi Boccia, Wiley, May 2012.
4. C.-C. Chen, “**Ultrawide Bandwidth Antenna Design,**” in *Antenna Engineering Handbook*, 4th Edition, Edited by John L. Volakis, McGraw-Hill, June 2007.
5. C.-C. Chen and J.L. Volakis, “**Printed Spiral Antenna**” in *Printed Antennas for Wireless Communications*, Edited by Rod Waterhouse, John Wiley and Sons, 2007.
6. C.-C. Chen, “**Dielectric Antennas**”, in *Ground Penetrating Radar 2nd Edition*, Edited by David J. Daniels, IEE Radar, Sonar and Navigation series 15, 2004.
7. C.-C. Chen, “**Characteristic Resonance Identification Techniques for Buried Targets Seen By Ground Penetrating Radar**”, in *Detection and Identification of Visually Obscured Targets*, Edited by Carl E. Baum, Taylor & Francis, 1998.

Journal Papers

1. Y. Yu and C.-C. Chen, “Automatic Subsurface Unexploded Ordnance Detection Using a Wideband Full-Polarization Ground Penetrating Radar and Entropy-Based Polarimetric Signatures,” *Journal of Applied Geophysics*, Volume 209, 2023, 104913, <https://doi.org/10.1016/j.jappgeo.2022.104913>
2. Y. Yu and C. -C. Chen, "Full-Polarization Target Classification Using Single-Polarization Ground Penetrating Radars," in *IEEE Transactions on Geoscience and Remote Sensing*, vol. 60, pp. 1-8, 2022, Art no. 4504508, doi: 10.1109/TGRS.2021.3093325.
3. J. T. Johnson et al., "Microwave Radiometry at Frequencies From 500 to 1400 MHz: An Emerging Technology for Earth Observations," in *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, vol. 14, pp. 4894-4914, 2021, doi: 10.1109/JSTARS.2021.3073286.
4. J. -K. Che, C. -C. Chen and J. F. Locke, "A Compact Four-Channel MIMO 5G Sub-6 GHz/LTE/WLAN/V2X Antenna Design for Modern Vehicles," in *IEEE Transactions on Antennas and Propagation*, vol. 69, no. 11, pp. 7290-7297, Nov. 2021, doi: 10.1109/TAP.2021.3083765.
5. J. Che, C.-C. Chen, J. F. Locke, “A Compact Cavity-Backed Tri-Band Antenna Design for Flush Mount GNSS (L1/L5) and SDARS Operations,” *IEEE Antennas and Wireless Propagation Letters*, vo. 20, no.5 pp. 638-642, 2021. doi: 10.1109/LAWP.2021.3057092
6. J.T. Johnson, C. Ball, C.-C. Chen, et al, “Real-Time Detection and Filtering of Radio Frequency Interference On-board a Spaceborne Microwave Radiometer: The CubeRRT Mission,” *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, Vol.13, No.1, pp.1610-1624, May, 2020. DOI: 10.1109/JSTARS.2020.2978016
7. K.C. Jezek , J.T. Johnson, O. Demir, M.J. Andrews, G. Macelloni, M. Brogioni , M. Leduc-Leballeur, S. Tan, L. Tsang, R. Kwok, L. Kaleschke, D.J. Belgiovane, C.-C. Chen, A. Bringer, “Remote Sensing of Sea Ice Thickness and Salinity with 0.5-2 GHz Microwave Radiometry,” *IEEE Transaction on Geoscience and Remote Sensing*, vol.57, no.11, pp., 8672-8684, 2019. doi: 10.1109/TGRS.2019.2922163
8. J.-K. Che, C.-C. Chen, J.T. Johnson, E. Kraus, D. Laczkowski, M.A. Solly, K Horgan, “6 GHz to 40 GHz CubeSat Radiometer Antenna System,” *IEEE Trans. on Antennas and Propagat.* vol.67, no.5, 3410-3415, May. 2019. doi: 10.1109/TAP.2019.2900366
9. Yi, Qiang; Chien, Stanley; Li, Lingxi; Niu, Wensen; Chen, Yaobin; Good, David; Chen, Chi-Chih; Sherony, Rini, “Development of Test Scenarios and Bicyclist Surrogate for the Evaluation of Bicyclist Automatic Emergency Braking Systems,” *J. Intelligent and Connected Vehicles*, Feb. 2018, doi: 10.1108/JICV-02-2018-0005
10. M. J. Andrews, J. T. Johnson, K.C. Jezek, H. Li, A. Bringer, C. Yardim, C.-C. Chen, D. J. Belgiovane Jr., V. Leuski, M. Durand, G. Macelloni, M. Brogioni, “The Ultra-Wideband Software-Defined Microwave Radiometer: Instrument Description and Initial Campaign Results,” *IEEE Transaction on Geoscience and Remote Sensing*, vol.56, no. 10, pp.5923-5925, Oct. 2018. doi: 10.1109/TGRS.2018.2828604

11. K.C. Jezek, J. T. Johnson, S. Tan, L. Tsang, M. J. Andrews, M. Brogioni, G. Macelloni, M. Durand. C.-C. Chen, D. J. Belgiovane "500-2000-MHz Brightness Temperature 3 of the Northwestern Greenland Ice Sheet," IEEE Transaction on Geoscience and Remote Sensing, vol.56, No. , pp. 1485-1496, Mar, 2018. DOI: 10.1109/TGRS.2017.2764381
12. J.-K. Che, C.-C. Chen, L. G. Stolarczyk, J. T. Duncan, "Novel In Situ Boundary Detection Algorithm for Horizon Control in Longwall Mining," IEEE Geoscience and Remote Sensing Letters, vol.14, no.10, 1875-1879, Oct. 2017, DOI: 10.1109/LGRS.2017.2742458
13. Y. Yu, C.-C. Chen, "Modified Entropy Based Fully Polarimetric Target Classification Method for Ground Penetrating Radars GPR," IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, vol.10, no.10, 4304-4312, 2017, DOI: 10.1109/JSTARS.2017.2742939
14. D. Belgiovane, C.-C. Chen, S. Y.-P. Chien, R. Sherony, "Surrogate Bicycle Design for Millimeter-Wave Automotive Radar Pre-Collision Testing," IEEE Trans. Intelligent Transportation Systems, vol.18, no.9, 2413-2422, Jan 2017. DOI: 10.1109/TITS.2016.2642889
15. J.L. Volakis, E. Yetisir, C.-C. Chen, A.J. O'Brian, "Small and Adaptive Antennas and Arrays for GNSS Applications," Proc. IEEE, vol.104, no.6, pp.1221-1232, June 2016. DOI: 10.1109/JPROC.2016.2528165
16. E. Yetisir, C.-C. Chen, J.L. Volakis, "UWB Low Profile Multi-port Antenna with Omnidirectional Pattern and High Isolation," IEEE Trans. Ants. Prop., vol.64, no.9, 3777-3786, Septmber 2016.
17. N.K. Host, C.-C. Chen, J.L. Volakis, F.A. Miranda, "Ku-Band Traveling Wave Slot Array Scanned Via Positioning a Dielectric Plunger," IEEE Trans. on Antennas and Prop., vol.63, no. 12, pp5475-5483, 2015.
18. M. Chen, C.-C. Chen, S. Y.-P. Chien, R. Sherony, "Artificial Skin for 76-77 GHz Radar Mannequins," IEEE Trans. on Antennas and Propagat. Vol. 62, No. 11, 5671-5679, November 2014.
19. L. Boccia, G. Amendola, S. Gao, C.-C. Chen "Quantitative evaluation of multipath rejection capabilities of GNSS antennas," Journal of GPS Solutions, vol.18, no.2, 199-208, April, 2014.
20. E. Yetisir, C.-C. Chen, J. L. Volakis, "Low-Profile UWB 2-port Antenna with High Isolation," TEEE Antennas and Wireless Propagation Letters, vol.13, 55-58, March 2014.
21. M. Chen, C.-C. Chen, "RCS Patterns of Pedestrians at 76-77 GHz," IEEE Antennas and Propagation Magazine. vol. 56, no. 4, pp.252-263, Aug. 2014
22. M. Chen, C.-C. Chen, and J.L. Volakis, "A Novel Textured Ferrite Ground Plane for Low Profile Spiral Antenna" Journal of Electromagnetic Waves and Applications, vol. 27, no.13, 1720-1724, Sep. 2013.
23. J. Kasemodel, C.-C. Chen, and J.L. Volakis, "Wideband Planar Array with Integrated Feed and Matching Network for Wide-Angle Scanning," IEEE Trans. on Antennas and Propagat. vol.61, no.9, 4528-4537, Sep. 2013.
24. M. Kuloglu, C.-C. Chen, "Ultra-Wideband Electromagnetic-Polarization Filter Applications to Conventional Horn Antennas for Substantial Cross-Polarization Level Reductions." IEEE Antennas and Propagation Magazine. vol. 55, no. 2, pp.280-288, Apr. 2013
25. M. Chen and C.-C. Chen, "A Novel Iterative Permittivity Calibration Method with a Wideband in-situ Soil Permittivity Probe," IEEE Geoscience and Remote Sensing Letters, vol.10, no.2, 323-327, March 2013.
26. M. Chen and C.-C. Chen, "A Compact Dual Band GPS Antenna Design," IEEE Antennas and Wireless Propagation Letters, vol.12, pp.245-248, Jan. 2013.
27. N. J. Smith, C.-C. Chen, J. L. Volakis, "An Improved Topology for Adaptive Agile Impedance Tuners," IEEE Antennas and Wireless Propagation Letters, vol. 12, pp.92-95, Jan. 2013.
28. J. Zhao, D. Psychoudakis, C.-C. Chen and J.L. Volakis, "Design Optimization of a Low-Profile UWB Body-of-Revolution Monopole Antenna," IEEE Trans. on Antennas and Propagat. 60(12), 5578-5586, Dec, 2012.
29. M. Kuloglu and C.-C. Chen, "A Planar Ultra-wideband Feeding Scheme for Tapered Slot antennas utilizing External 180° Hybrids," Electronic Letters, vol.48, no.21, 1320-1322, Oct. 2012.
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