

# LIST OF SIENTIFIC PUBLICATIONS

## Vladimir Vulfin

### Approved and will be presented in the near future:

1. V. Vulfin and R. Shavit, "Surface Impedance Analysis of a Cylindrical Metasurface Structure", IEEE COMCAS Conference, Metamaterials Track, Tel Aviv, Israel, July 2024.
2. V. Vulfin, N. Verhovski, O. Levi, M. Abdallah and R. Ianculescu, "Complex Dielectric Constant Extraction in Liquids Using Coaxial Cable and Circular Waveguide Configuration", IEEE COMCAS Conference, Biomedical Engineering Track, Tel Aviv, Israel, July 2024.
3. V. Vulfin, "Learning Session Part 1: Basics of Antenna Design for IoT and Sensor-Based Devices", IEEE COMCAS Conference, WirelessApps Track, Tel Aviv, Israel, July 2024.
4. V. Vulfin, "Learning Session Part 2: Antenna Integration in IoT and Sensor-Based Devices", IEEE COMCAS Conference, WirelessApps Track, Tel Aviv, Israel, July 2024.

### Published:

1. V. Vulfin and R. Shavit, "Surface Impedance Extraction of a Cylindrical Metasurface Structure", The 11th Antenna Symposium, Tel Aviv, Israel, March 2023.
2. V. Vulfin, "Design and Simulation of FSS and Metasurfaces for Antenna Applications", IEEE COMCAS Conference, WirelessApps, Tel Aviv, Israel, Nov. 2021.
3. V. Vulfin, "MIMO-SAR mmWave Imaging Using Ansys HFSS", IEEE COMCAS Conference, WirelessApps, Tel Aviv, Israel, Nov. 2021.
4. N. Verhovsky, V. Vulfin, S. Sayfan-Altman, O. Yannay and R. Shavit, "Phased Array Antenna Design for Hyperthermia Purpose", IEEE COMCAS Conference, Tel Aviv, Israel, Nov. 2021.
5. O. Tutian, V. Vulfin and R. Shavit, "The Quadrature 90° Hybrid Miniaturization at 24 GHz Band", IEEE COMCAS Conference, Tel Aviv, Israel, Nov. 2021.
6. V. Vulfin, "Design of Medical Devices Using Simulation Tools", The 13th French Israel Winter Medical Meeting, The Association Franco Israelienne de Chirurgie Plastique, Peisey Vallandry, France, Jan. 2020.
7. V. Vulfin, N. Verhovski, S. Sayfan – Altman and R. Ianculescu, "An Analysis of the Power Balance in Systems Described by S Parameters", IEEE COMCAS Conference, Tel Aviv, Israel, Nov. 2019.
8. V. Vulfin, H. Leibovich and S. Sayfan – Altman, "Automotive Radar Simulation Flow at 77 GHz Using HFSS FEM, IE and SBR+ Solvers", IEEE COMCAS Conference, WirelessAps, Tel Aviv, Israel, Nov. 2019.

9. V. Vulfin and Y. Kagan, "Sense, Avoid, Act – Principles of Sensing Techniques, Using mmWAVE and Imaging Radar", The 6th Israeli Conference on Robotics, Israel, July 2019.
10. R. Ianconescu and V. Vulfin, "Radiation from Free Space TEM Transmission Lines", Journal IET Microwaves, Antennas & Propagation, July 2019.
11. V. Vulfin and I. Madar "Different Methods of Mutual Coupling Reduction in Planar Antenna Arrays", IEEE / Israel EMC Conference, May 2019.
12. V. Vulfin, N. Verhovski and R. Shavit, "Antenna Array Design for Ablation Applications", Antennas Symposium, Tel Aviv University, Israel, March 2019.
13. R. Ianconescu and V. Vulfin, "Radiation from Quasi-TEM Insulated Transmission Lines", Journal IET Microwaves, Antennas & Propagation, Jan 2019.
14. V. Vulfin, N. Verhovski, S. Sayfan-Altman, and R. Ianconescu, "Efficiency of Differential Receiving Antenna Interfaced to a Three-Port Network", ICSEE International Conference on the Science of Electrical Engineering, Eilat, Israel, Dec. 2018.
15. V. Vulfin "Miniaturized Antennas Design for Communication, Wearable, and Biomedical Applications", IEEE / Israel EMC Conference, May 2018.
16. V. Vulfin and R. Shavit, "Monostatic Super-Scattering Using DNG Metamaterials ", Antennas Symposium, Tel Aviv University, Israel, March 2018.
17. V. Vulfin and R. Ianconescu, "Quasi-TEM Insulated Transmission Line Radiation Losses Analysis", IEEE COMCAS Conference, Tel Aviv, Israel, Nov. 2017.
18. P. Schilingovski, V. Vulfin, S. Sayfan-Altman, and R. Shavit, "Wearable Antennas Design for Wireless Communication", IEEE COMCAS Conference, Tel Aviv, Israel, Nov. 2017.
19. S. Sayfan-Altman, V. Vulfin, R. Ianconescu, R. Heinrich and H. Leibovich, "Lighting Strike Analysis for Drones", IEEE COMCAS Conference, Tel Aviv, Israel, Nov. 2017.
20. V. Vulfin, H. Leibovich and S. Sayfan-Altman, "Design of Electromagnetic Devices in Interaction with the Human Body", IEEE COMCAS Conference, Microapps Session, Tel Aviv, Israel, Nov. 2017.
21. V. Vulfin and R. Shavit, "Radar Cross Section Enhancement Using Metamaterials Technology", IEEE / Israel EMC Conference, May 2017.
22. V. Vulfin, S. Sayfan-Altman and R. Ianconescu, "Wireless Power Transfer for a Pacemaker Application", Journal of Medical Engineering & Technology, Feb. 2017.
23. V. Vulfin and R. Ianconescu, "Simulation and Theory of TEM Transmission Lines Radiation Losses", ICSEE International Conference on the Science of Electrical Engineering, Eilat, Israel, Nov. 2016.
24. N. Shimonov, V. Vulfin, S. Sayfan-Altman, and R. Ianconescu, "Design of an Implanted Antenna Inside the Human Body for a Pacemaker Application", ICSEE International Conference on the Science of Electrical Engineering, Eilat, Israel, Nov. 2016.

25. S. Dan, V. Vulfin and R. Shavit, "Design of Reflectarray Antenna Based on Fresnel Zone Plates with AMC Structure", ICSEE International Conference on the Science of Electrical Engineering, Eilat, Israel, Nov. 2016.
26. V. Vulfin, "Antenna Design Using Periodic Structures", Antennas Symposium, Tel Aviv University, Israel, Nov. 2016.
27. R. Ianconescu and V. Vulfin, "TEM Transmission Line Radiation Losses Analysis", The 46th European Microwave Conference, UK, Oct. 2016.
28. R. Ianconescu and V. Vulfin, "Analysis of Lossy Multiconductor Transmission Lines and Application of a Crosstalk Cancelling Algorithm", IET Microwaves, Antennas & Propagation, Sep. 2016.
29. V. Vulfin and R. Ianconescu, "Non-Destructive Testing (NDT) Sensor Development Using Eddy Currents", 16th Annual Conference of Non-Destructive Testing, Israel, Sept. 2016.
30. V. Vulfin and R. Shavit, "Design of a Directive Antenna with a Highly Effective Aperture, Using Active Frequency Selective Surface", IEEE / Israel EMC Conference, May 2016.
31. V. Vulfin, "Design of Reflector Antennas Using FEM, MoM, and PO", European School of Antennas – ESoA, Beams and High-Frequency Methods for Large Antennas, Tel Aviv, Israel, Dec. 2015.
32. V. Vulfin and S. Sayfan-Altman, "Design of Antennas for Operation in the Human Body", Antennas Symposium, Tel Aviv University, Israel, Dec. 2015.
33. S. Sayfan-Altman and V. Vulfin, "Common-Mode Noise Suppression Using Metamaterials", DGCON Conference, Herzlia, Israel, Nov. 2015.
34. V. Vulfin, "Introducing HFSS Component Model Libraries to Support Enterprise-Level Product Development and the IoT Design Chain", IEEE COMCAS Conference, Microapps Session, Tel Aviv, Israel, Nov. 2015.
35. V. Vulfin and R. Shavit, "Design of a High Gain Open Waveguide Antenna Combined with an Active Frequency Selective Surface", IEEE COMCAS Conference, Tel Aviv, Israel, Nov. 2015.
36. S. Sayfan-Altman and V. Vulfin, "Biomedical Monitoring Using Electronic Capsule", IEEE COMCAS Conference, Tel Aviv, Israel, Nov. 2015.
37. R. Ianconescu and V. Vulfin, "Simulation of Lossy Multiconductor Transmission Lines and Application of an Algorithm to Reduce Crosstalk", IEEE COMCAS Conference, Tel Aviv, Nov. 2015.
38. V. Vulfin and R. Ianconescu, "Transmission of the Maximum Number of Signals Through a Multiconductor Transmission Line Without Crosstalk or Return Loss: Theory and Simulation", IET Microwaves, Antennas & Propagation, July 2015.

39. V. Vulfin, S. Sayfan-Altman, and R. Shavit, "Design of Artificial Periodic Absorbers for L-Band", IEEE / Israel EMC Conference, Apr. 2015.
40. V. Vulfin and R. Shavit, "Constitutive Parameters Extraction for Thin Two-Dimensional Cylinders Based on Scattering Field Measurements", *Microwaves, Antennas & Propagation*, IET, Apr. 2015, vol. 9, Issue 6, pp. 585 – 592.
41. V. Vulfin, S. Sayfan-Altman, and R. Shavit, "Design of a Broadband Periodic Absorber for Microwave Frequencies", IEEE Conference – 28th Convention, Eilat, Israel, Dec. 2014.
42. V. Vulfin, S. Sayfan-Altman, and M. Haridim, "Designing High-Speed Signal Distribution for Multi-Drop Connection Using Simulations", IEEE Conference – 28th Convention, Eilat, Israel, Dec. 2014.
43. R. Ianconescu and V. Vulfin, "Simulation of a Crosstalk Avoiding Algorithm in Multi-Conductor", IEEE Conference – 28th Convention, Eilat, Israel, Dec. 2014.
44. V. Vulfin and S. Sayfan-Altman, "PCB EMI Simulation", IEEE Conference – 28th Convention, Eilat, Israel, Dec. 2014.
45. V. Vulfin and S. Sayfan-Altman, "Design of Electrically Small Antennas with Decoupling Network for MIMO Communication", *GlobeSpace – EMC & SI PI Symposium*, Tel Aviv, Israel, Nov. 2014.
46. V. Vulfin and S. Sayfan-Altman, "Simulation and Design for CEI-28G PCB Compliance", *GlobeSpace – EMC & SI PI Symposium*, Tel Aviv, Israel, Nov. 2014.
47. V. Vulfin and R. Shavit, "Superscattering in 2D Cylindrical Structures", *APS/URSI Conference*, Memphis, USA, July 2014.
48. V. Vulfin, "Design of Antennas and Microwave Devices Using Periodic Structures", IEEE / Israel EMC Conference, Radio Systems Session, Feb. 2014.
49. V. Vulfin and R. Shavit, "Monostatic Superscattering in Cylindrical Structures", IEEE COMCAS Conference, Tel Aviv, Israel, Nov. 2013.
50. V. Vulfin and R. Shavit, "Constitutive Parameters Extraction in a Cylindrical Structures", IEEE Conference, Orlando, July 2013.
51. V. Vulfin and R. Shavit, "Constitutive Parameters Extraction in a Curved Metamaterial Structure", IEEE Conference – 27th Convention, Eilat, Israel, Nov. 2012.
52. V. Vulfin and R. Shavit, "A Dual-Band Bat – Shaped Microstrip Antenna", IEEE Conference – 27th Convention, Eilat, Nov. 2012.
53. V. Vulfin, M. Haridim, O. Benisho, G. Malul, and S. Tapuchi, "Directive Fractal Antenna for Scanning Applications", IEEE Conference – 27th Convention, Eilat, Israel, Nov. 2012.
54. V. Vulfin, M. Haridim, T. Ryabov, E. Ginzburg, and S. Goldberg, "Use of Split Ring Resonators for Reducing Antennas' Mutual Coupling", IEEE COMCAS Conference, Tel Aviv, Israel, Nov. 2011.

55. V. Vulfin, M. Haridim, S. Goldberg, S. Tapuchi and J. Gavan, "Design of Microstrip Antenna Array for 77 GHz Anticollision Radar Applications", SEEEI Conference, Eilat, Israel, Dec. 2008.
56. J. Gavan, S. Tapuchi and V. Vulfin, "Low Interference Wideband Wireless Systems Using High Altitude Platforms", URSI Conference, Chicago, Illinois, USA, Aug. 2008.
57. M. Haridim, M. Bank and V. Vulfin, "Investigation of the Impact of Pilot Signals on the Performance of OFDMA Systems", International Journal of Applied Mathematics, vol. 1, Nov. 2007.
58. Y. Ben-Ezra, U. Mahlab, B. Lembrikov, and V. Vulfin, "Analysis and Identification of Fast Transients in Optical Networks", Transparent Optical Networks, ICTON '07. 9th International Conference, Jul. 2007, vol. 1, pp.309-312.