

**Gokhan Mumcu** was born in Bursa, Turkey, on March 30, 1982. He received the B.S. degree in electrical engineering from Bilkent University, Ankara, Turkey, in 2003, and the M.S. and Ph.D. degrees in electrical and computer engineering from The Ohio State University, Columbus, in 2005 and 2008, respectively.

Dr. Mumcu is currently an Associate Professor at the Electrical Engineering Department, University of South Florida, Tampa, FL. He was a recipient of the 2014 CAREER award from the U.S. National Science Foundation. He was also recipient of 2014 faculty outstanding research award from the University of South Florida. He ranked first on the national university entrance exam taken annually by over 1.5 million Turkish students in 1999. He received the 1999 international education fellowship of the Turkish Ministry of Education. He was the recipient of a best paper award at 2008 URSI National Radio Science Meeting, and the 2008 outstanding dissertation award at The Ohio State University, ElectroScience Laboratory. He served as the technical program committee chair of the IEEE International Symposium on Antennas and Propagation and USNC/URSI National Radio Science Meeting in 2013; and IEEE International Workshop on Antenna Technology in 2016.

### **Research Interests**

- Reconfigurable antennas and RF circuits with mm-Wave applications
- Additive manufacturing of structural antennas and phased antenna arrays
- Microfluidics for cost-effective and high power handling mm-wave beam-scanning antenna arrays, frequency tunable filters, switches and phase shifters.
- New concepts (e.g. metamaterials, volumetric 3D reactive loading, polymers) for designing conformal, miniature and multifunctional antennas
- Compact arrays of miniature antennas for anti-jam GPS, GNSS, and THz imaging applications
- Miniature RF filters utilizing electrically small resonators

### **Recent Publications**

- E. Gonzalez and G. Mumcu, "Mm-Wave Beam-Steering Focal Plane Arrays with Microfluidically Switched Feed Networks," IEEE Transactions on Antennas and Propagation, vol. 66, no. 12, pp. 7424 – 7429, Dec. 2018.
- G. Mumcu, M. Kacar, and J. Mendoza, "Mm-Wave Beam Steering Antenna With Reduced Hardware Complexity Using Lens Antenna Subarrays," IEEE Antennas and Wireless Propagation Letters, vol. 17, no. 9, pp. 1603 – 1607, Sept. 2018.
- A. Qaroot and G. Mumcu, "Microfluidically Reconfigurable Reflection Phase Shifter," IEEE Microwave and Wireless Components Letters, vol. 28, no. 8, pp. 684 – 686, Aug. 2018.
- D. Zaiden, J. Granfield, T. Weller, and G. Mumcu, "Compact and Wideband MMIC Phase Shifters Using Tunable Active Inductor Loaded All-Pass Networks," IEEE Transactions on Microwave Theory and Techniques, vol. 66, no. 2, pp. 1047 – 1057, Feb. 2018.
- T. Palomo and G. Mumcu, "Microfluidically Reconfigurable Microstrip Line Compline Filters with Wide Frequency Tuning Capabilities," IEEE Transactions on Microwave Theory and Techniques, vol. 65, no. 10, pp. 3561 – 3568, Oct. 2017.
- M. H. Yilmaz, E. Guvenkaya, G. Mumcu, and H. Arslan; "Millimeter-Wave Wireless Channel Control using Spatially Adaptive Antenna Arrays," IEEE Communications Letters, vol. 21, no. 3, pp. 680 – 683, Mar. 2017.
- A. Dey, R. Guldiken, and G. Mumcu, "Microfluidically Reconfigured Wideband Frequency Tunable Liquid Metal Monopole Antenna," IEEE Transactions on Antennas and Propagation, vol. 64, no. 6, pp. 2572 – 2576, June 2016.

- T. Palomo and G. Mumcu, "Microfluidically Reconfigurable Metallized Plate Loaded Frequency-Agile RF Bandpass Filters," IEEE Transactions on Microwave Theory and Techniques, vol. 64, no. 1, pp. 158 – 165, Jan. 2016.
- A. Dey and G. Mumcu, "Microfluidically Controlled Frequency Tunable Monopole Antenna for High Power Applications," IEEE Antennas and Wireless Propagation Letters, vol. 15, pp. 226 – 229, 2016.
- A. A. Gheethan, A. Dey, and G. Mumcu, "Passive Feed Network Designs for Microfluidic Beam-Scanning Focal Plane Arrays and Their Performance Evaluation," IEEE Transactions on Antennas and Propagation, vol. 63, no. 8, pp. 3452 – 3464, Aug. 2015.
- J. O'Brien, J. E. Granfield, G. Mumcu, and T. M. Weller, "Miniaturization of a Spiral Antenna Using Periodic Z-Plane Meandering," IEEE Transactions on Antennas and Propagation, vol. 63, no. 4, pp. 1843 – 1848, April 2015.
- S. Gupta and G. Mumcu, "Circularly Polarized Printed Antenna Miniaturized Using Complementary Split Ring Resonators and Reactive Pin Loadings," IET Microwaves, Antennas & Propagation, vol. 9, no. 2, pp. 118 – 128, Feb. 2015.