

# Osama Alkhateeb, PhD

US Citizen

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## Work Experience

**The University of Akron, Akron, USA**  
**Visiting Assistant Professor**

**08/2019 Present**

Teaching of lower-level courses, preparation of course materials, conducting examinations, grading, holding office hours.  
One-year experience with online mode of delivery.  
Courses: Basic Electrical Engineering, Tools of Electrical and Computer Engineering Laboratory, Programing for Engineers.

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**Al- Balqa' Applied University, Salt, Jordan**  
**Part-time Lecturer**

**09/2018 05/2019**

Teaching of lower-level courses, preparation of course materials, conducting examinations, grading, holding office hours.

# Education

## **PhD in Electrical Engineering - 12/2017**

**The University of Akron**, Akron, OH

Dissertation title: "Data-Driven Uncertainty Quantification in Applications of Electromagnetics and Wireless Communication via Arbitrary Polynomial Chaos".

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## **MS in Electrical Engineering - 05/2012**

**The University of Akron**, Akron, OH

Thesis title: "Singularity-Free Boundary Methods for Electrostatics and Wave Scattering".

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## **BA in Electrical Engineering - 08/2007**

**The University of Jordan**, Amman, Jordan

Senior project: implemented autonomous cruise control system in vehicles using PIC microcontrollers, ultrasonic sensors, and infrared sensors.

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**Technical Skills:** MATLAB/SIMULINK, MathCAD, HFSS, CST, Mathematica, Pspice, C, C++, LabView, and MEEP.

**Numerical Methods:** finite-difference time-domain (FDTD) method, method of moments (MoM), and finite element method (FEM).

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# Professional Publications

[1] A N M Shahriyar Hossain, Osama J. Alkhateeb, Igor Tsukerman, and Nathan Ida. Finite element analysis of metaguides and metasurfaces for dynamic beam steering. 19<sup>th</sup> Biennial IEEE Conference on Electromagnetic Field Computation, Pisa, Italy, November 2020.

[2] Osama J. Alkhateeb and Nathan Ida. Data-driven arbitrary polynomial chaos for uncertainty quantification in filters. Applied Computational Electromagnetics Society Journal, vol.33, no.9, September 2018.

[3] Shampy Mansha, Osama Alkhateeb, Igor Tsukerman, Chong Yidong. Trefftz-based methods for electromagnetic wave scattering in aperiodic slabs. 11th International Symposium on Electric and Magnetic Fields. Darmstadt, Germany, April 2018.

[4] Osama Alkhateeb and Nathan Ida. Data-driven multi-element arbitrary polynomial chaos for uncertainty quantification in sensors. IEEE Transactions on Magnetics, vol.54, issue.3, pp.1-4, March 2018.

[5] O. Alkhateeb and N. Ida. Uncertainty analysis on band-stop filter using data-driven arbitrary polynomial chaos. In 2017 International Applied Computational Electromagnetics Society Symposium - Italy (ACES), pages 1-2, March 2017.

[6] Igor Tsukerman, Osama Alkhateeb, Fritz Kretschmar and Sascha Schnepf, Trefftz Approximations: Finite-Difference, Boundary-Difference and Discontinuous Galerkin Schemes. Sixth Conference on Finite Difference Methods: Theory and Applications, Lozenetz, Bulgaria, June 2014

[7] Alkhateeb, O.; Tsukerman, I. A boundary difference method for electromagnetic scattering problems with perfect conductors and corners. IEEE Transactions on Antennas and Propagation, vol.65, no.1, pp.1-11, Jan 2017.