

Hasan T. Abbas

CONTACT INFORMATION

PhD Student
Texas A& M University
Department of Electrical & Computer Engineering
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EDUCATION

Texas A& M University, College Station, TX

Ph.D., [Electrical and Computer Engineering](#), August 2012 - exp. August 2017

- Thesis Proposal: *Terahertz Radiation in two-dimensional semiconductor structures*
- Adviser: [Professor Robert D. Nevels](#)
- GPA 4.0
- Area of Study: Computational Electromagnetics

University of Engineering & Technology, Lahore, Pakistan

B.Sc., [Electrical Engineering](#), July 2009

- With Honors
- Electrical specialization (emphasis in Telecommunication and Computer Science)

RESEARCH INTERESTS

Electromagnetics, Terahertz Antennas, On-chip Antennas, Nanophotonics, Numerical Methods in Electromagnetics, Two-dimensional Physics, Superconductivity, Numerical Analysis

CURRENT ACADEMIC APPOINTMENTS

Fulbright Scholar, Texas A& M University
Department of Electrical & Computer Engineering

August 2012 to present

- Affiliations:
 - [Electromagnetics and Microwave Laboratory](#)
 - [Institute of Quantum Science and Engineering](#)

Instructor, Texas A& M University

August 2014 to present

- Courses:
 - [Electric and Magnetic Fields](#)
 - [Applied Electromagnetic Theory](#)

PREVIOUS ACADEMIC APPOINTMENTS

Lecturer, University of Engineering & Technology, Lahore, Pakistan August 2009 to August 2012

Department of Electrical Engineering & Technology

- Courses:
 - [Electromagnetic Theory](#)
 - [Antennas and Wave Propagation](#)
 - [Applied Electromagnetics](#)
- Laboratories:
 - [Microwave and Antennas Laboratory](#)
 - [Communication Systems](#)

BOOK CHAPTERS 2015 Robert D. Nevels, Hasan Tahir Abbas, "Optical Nanoantennas", In Chapter in Handbook of Antenna Technologies, Springer Singapore, pp. 1-33, 2015.

CONFERENCE PUBLICATIONS	2015 J., Shin, H.T., Abbas, R.D., Nevels, “A numerical method for the electromagnetic field time domain propagator equations”, In Antennas and Propagation & USNC/URSI National Radio Science Meeting, 2015 IEEE International Symposium on, pp. 1480-1481, 2015.
	2015 H.T., Abbas, J., Shin, R.D., Nevels, “Numerical techniques for evaluating electromagnetic field propagators”, In Computational Electromagnetics (ICCEM), 2015 IEEE International Conference on, pp. 22-23, 2015.
	2014 Robert D Nevels, Krzysztof A Michalski, Hasan T. Abbas, “Plasmonic and surface wave propagation in boundary layers in the microwave, THz, and optical regimes”, In Antenna Measurements & Applications (CAMA), 2014 IEEE Conference on, pp. 1-3, 2014.
CONFERENCE TALKS	[1] R.D. Nevels, K.A. Michalski, and H.T. Abbas Complex Plane Interpretation of Nano-Aperture Excited Plasmon Waves. In: <i>University of Electronic Science and Technology China (UESTC) National Summer School</i> , Chengdu, China, July, 2015.
	[2] R.D. Nevels, and H.T. Abbas A decomposition and interpretation of plasma and plasmonic waves. In: <i>Institute for Quantum Science and Engineering Workshop</i> , College Station, TX, January 13–14, 2015.
	[3] R.D. Nevels, L. Kish, and H.T. Abbas Twisted Waves: Concept and Limitations. In: <i>2013 IEEE AP-S/USNC-URSI Symposium</i> , Orlando, FL, July 7–13, 2013.
TEACHING EXPERIENCE	Texas A&M University , College Station, TX
	<i>Substitute Lecturer</i> January 2016
	<ul style="list-style-type: none"> • ECEN 322: Electric and Magnetic Fields <ul style="list-style-type: none"> • Undergraduate course • Main instructor: Robert D. Nevels
	<i>Substitute Lecturer</i> October 2015
	<ul style="list-style-type: none"> • ECEN 445: Applied Electromagnetic Theory <ul style="list-style-type: none"> • Undergraduate course • Main instructor: Robert D. Nevels
	<i>Substitute Lecturer</i> January 2015
	<ul style="list-style-type: none"> • ECEN 351: Applied Electromagnetics <ul style="list-style-type: none"> • Undergraduate course • Main instructor: Robert D. Nevels
	University of Engineering & Technology , KSK Campus, Pakistan
	<i>Lecturer</i> August 2009 to August 2012
	<ul style="list-style-type: none"> • Instructor for EE 480: Antennas and Propagation • Instructor for EE 380: Electromagnetic Theory • Instructor for EE 381: Applied Electromagnetic Theory
	<i>Lab Incharge</i> December 2009 to August 2012
	<ul style="list-style-type: none"> • Set up Microwave and Antennas Laboratory • Authored Antennas lab manual • Lab Instructor for EE 360: Communication Systems <ul style="list-style-type: none"> • Spring 2012

HONORS	<p>Fulbright Foreign Student</p> <ul style="list-style-type: none"> • Pursue Doctoral Degree at Texas A&M University, 2012–2017 <p>Best Young Faculty</p> <ul style="list-style-type: none"> • Department of Electrical Engineering & Technology, UET Lahore, Pakistan, 2010-2011
PROFESSIONAL SERVICE	<p>Professional Memberships</p> <ul style="list-style-type: none"> • IEEE Antennas & Propagation Society • IEEE Microwave Theory & Techniques Society • American Physical Society <p>Referee Service</p> <ul style="list-style-type: none"> • <i>IEEE Antennas and Wireless Propagation Letters</i> • <i>IEEE Transactions on Antennas and Propagation</i> • <i>American Journal of Physics</i>
SOFTWARE AND HARDWARE SKILLS	<p>Computer Programming:</p> <ul style="list-style-type: none"> • C, C++, Python <p>Numerical Analysis:</p> <ul style="list-style-type: none"> • MATLAB, Python <p>Desktop Editing and Productivity Software:</p> <ul style="list-style-type: none"> • Sublime • T_EX (L^AT_EX, B_IB_TE_X, P_STricks), • Microsoft Office, Google Docs • TikZ, InkScape <p>Operating Systems:</p> <ul style="list-style-type: none"> • Microsoft Windows family
EXPERTISE	<p>Mathematics:</p> <ul style="list-style-type: none"> • PDE, Stability Analysis, Linear Algebra, Fourier Transforms <p>Embedded and Real-time Systems:</p> <ul style="list-style-type: none"> • Software and hardware development with several MCU and DSP platforms (e.g., Atmel ATmega MCU's, Microchip PIC MCU's, Arduino and others)
STUDENT MENTORING	<p>Usman Samad</p> <p>Undergraduate student in Electrical and Computer Engineering, Texas A&M University. Modeling and Implementation of a Home Automation System 2015.</p>
REFERENCES AVAILABLE TO CONTACT	<p>Dr. Robert D. Nevels (e-mail: nevels@ece.tamu.edu; phone: +1-979-845-7591)</p> <ul style="list-style-type: none"> • Professor, Department of Electrical & Computer Engineering, Texas A&M University ◇ 205K WEB, Texas A&M University, College Station, TX 77843-3128 ★ <i>Dr. Nevels is my doctoral supervisor.</i> <p>Dr. Kai Chang (e-mail: kaichang@tamu.edu; phone: +1-979-845-5285)</p> <ul style="list-style-type: none"> • Professor, Department of Electrical & Computer Engineering, Texas A&M University ◇ 205C WEB, Texas A&M University, College Station, TX 77843-3128 ★ <i>Dr. Chang has been my graduate courses teacher.</i>