مجموعه آزمایشگاه‌های دانشکده مهندسی برق و کامپیوتر

دانشگاه تربیت مدرس

نام آزمایشگاه: مخابرات ماهواره ای

مسئول آزمایشگاه: دکتر زهرا اطلس باف

شماره تماس: 82884339

زمینه‌های پژوهشی آزمایشگاه: فناوریهای نوین الکترومغناطیسی در مخابرات سیار نسلهای آینده با رویکرد هوش مصنوعی- تصویر برداری الکترومغناطیسی با رویکرد هوش مصنوعی- آنتنها- الکترومغناطیس-مدارات اکتیو و پسیو مایکروویوی- فرامواد و فراسطوح و گرافن- روشهای عددی در الکترومغناطیس-

عناوین پایان نامه‌ها و رساله‌های منتخب انجام شده:

رساله های منتخب:

Maryam Shadi,’ Advanced Array Antenna for 5th Wireless Communication Systems”, Sept. 2022
Fatemeh Moharami,’ Analysis and design of tunable multilayer graphene-dielectric metamaterial structures”, Summer 2020
Shiva Hayati raad,’ Ananlysis of Graphene-Based Multilayered Conformal Periodic Structures”, Sept. 2019
Keyhan Hosseini,’ Unconditionally Stable FDTD in Complex Media”, Feb. 2018
Mahdieh Bozorgi,’Analysis of Plasmonic Nano-Antenna Supported by Anisotropic Media’, Jan. 2017
Mahmood Rafaei Booket,’Analysys of Reflectarray Antenna supported by Uniaxial and Biaxial Anisotropic Layers’, May 2016
Omid Zandi, ’Phase and Group Velocities of Electromagnetic
Plane Waves in Bi-Anisotropic and Moving Media’, Winter 2011

پایان نامه های منتخب:

S. Inanloo," Ultra-Wide-Band Antenna Array in 0.5 to 3 GHz Frequency Band with DOA Estimation Ability", Jan. 2020

A. Shiekhaleslam," Design of reflectarray antenna with beam scanning capability ", 2019

Z. Lasemi, 'Design & Fabrication of UWB antennas for Microwave Imaging Tomur Detection', Apr. 2017

Amir Hossein Saghanejad,' Design and Implementation of a New Metamaterial-Loaded Multiband Compact Planar Antenna', Feb. 2014

Zahra Hamzavi,' Design and Implementation of a Multi-band Microstrip Reflectarray Antenna", Jan. 2014

Keyhan Hosseini,' Design and Fabrication of Conformal Leaky-Wave Antennas Utilizing Periodic Structures and Metamaterials', Feb. 2013

Abed Pour Sohrab,'Design and Fabrication of a Wideband Microwave Absorber by Periodic Structures", Spring 2012

Reza Shamsaee Malfajani,' Design and Implementation of a Dual-Band Microstrip Reflectarray Antenna (X & K Bands)', Feb. 2012

عناوین طرح‌های پژوهشی منتخب انجام شده:

طراحی حسگرهای زیستی با استفاده از فراسطوح دی الکتریکی به منظور سنجش کایرالیته و جداسازی اناتیومرها

به کارگیری نانوذرات پوشیده شده با گرافن در حسگرهای زیستی و سلول های خورشیدی

تحلیل ساختارهای لایه ای کروی با مرزهای گرافنی

تحلیل ساختارهای کانفورمال چندلایه با عناصر متناوب از جنس گرافن

روشهای تفاضل محدود پایدار حوزه زمان در محیط‌های پاشنده و ناهمسان‌گرد

تحلیل آنتنهای آرایه بازتابی با لایه های ناهمسانگرد تک محوری و دو محوری

طراحی آنتن G5 دوباندی با قابلیت تنظیم پذیری مجدد و قابلیت چرخش پرتو با استفاده از متامتریال

لیست مقالات منتخب چاپ شده در مجلات:

(لیست مقالات چند سال اخیر)

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3. SEYED MAHDI HOSSEINI AND ZAHRA ATLASBAF," Analysis of tightly-coupled dipole phased array antennas with metasurface superstrate", Scientific Reports, https://doi.org/10.1038/s41598-023-44680-9, 2023
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لیست مقالات منتخب ارایه شده در کنفرانس‌ها:

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3. Pegah Nochian, Zahra Atlasbaf,” A Novel Single Layer X-Band Single Negative Metamaterial Absorber”, 9th International Conf. on Electrical, Computer, Mechanical and Mechatronics Engineering (ICE-2018), 2018
4. Ashkan Esmaeilnia Shirvani, Zahra Atlasbaf,” Analyzing One Layer Array consisting of two sets of different sphere particle”, 26th Iranian Conference on Electrical Engineering (ICEE2018), 2018
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6. K. Hosseini, Z.Atlasbaf,” Development of a CPML for Scattered-Field One-Step Leapfrog ADI-FDTD Scheme”, 25th Iranian Conference on Electrical Engineering (ICEE2017), 2017

خدمات قابل ارایه شده توسط آزمایشگاه:

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لیست دانشجویان ارشد و دکتری فعال در آزمایشگاه:

خانم پگاه نوچیان

خانم اسمعیلی

آقای امیری کوشکی

سایر توضیحات (در صورت نیاز):

تصویری از آزمایشگاه: