

## Asst. Prof. PEYMAN MAHOUTI

### Personal Information

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### Education Information

Doctorate, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Electronics and Communications Engineering, Turkey 2013 - 2016

### Research Areas

Artificial Intelligence, Computer Learning and Pattern Recognition, Electromagnetic Band Spacing Structures, Electromagnetic Waves, Antennas and Propagation, Passive Microwave Circuits

### Academic Titles / Tasks

Assistant Professor, İstanbul University-Cerrahpaşa, Vocational School Of Technical Sciences, Department Of Electronics And Automation, 2020 - Continues

Assistant Professor, Istanbul Arel University, Faculty Of Engineering And Architecture, Department Of Electrical And Electronics Engineering, 2019 - 2020

Lecturer PhD, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, 2016 - 2019

### Courses

AC circuit analysis, Associate Degree, 2020 - 2021

satellite and GSM communication, Associate Degree, 2020 - 2021

ac circuit analysis, Associate Degree, 2020 - 2021

satellite and GSM communication, Associate Degree, 2020 - 2021

calculus II, Associate Degree, 2020 - 2021

### Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **Optimal characterization of a microwave transistor using grey wolf algorithms**  
Kiani F., Seyyedabbasi A., MAHOUTI P.  
ANALOG INTEGRATED CIRCUITS AND SIGNAL PROCESSING, vol.109, pp.599-609, 2021 (Journal Indexed in SCI)
- II. **Ensemble-based surrogate modeling of microwave antennas using XGBoost algorithm**  
Kalayci H., AYTEN U. E. , Mahouti P.  
INTERNATIONAL JOURNAL OF NUMERICAL MODELLING-ELECTRONIC NETWORKS DEVICES AND FIELDS, 2021 (Journal Indexed in SCI)
- III. **A compact triband antipodal Vivaldi antenna with frequency selective surface inspired director for IoT/WLAN applications**

Gunes F., Evranos I. O. , Belen M. A. , Mahouti P., Palandoken M.

WIRELESS NETWORKS, 2021 (Journal Indexed in SCI)

- IV. **Microstrip leaky wave antenna for wide range of beam scanning in X band**  
Belen A., GÜNEŞ F., Belen M. A. , Mahouti P.  
MICROWAVE AND OPTICAL TECHNOLOGY LETTERS, 2021 (Journal Indexed in SCI)
- V. **Physical parameter-based data-driven modeling of small signal parameters of a metal-semiconductor field-effect transistor**  
Satilmis G., GÜNEŞ F., Mahouti P.  
INTERNATIONAL JOURNAL OF NUMERICAL MODELLING-ELECTRONIC NETWORKS DEVICES AND FIELDS, vol.34, 2021 (Journal Indexed in SCI)
- VI. **Gain Enhancement of a Traditional Horn Antenna using 3D Printed Square-Shaped Multi-layer Dielectric Lens for X-band Applications**  
Belen A., MAHOUTI P., GÜNEŞ F., Tari O.  
APPLIED COMPUTATIONAL ELECTROMAGNETICS SOCIETY JOURNAL, vol.36, no.2, pp.132-138, 2021 (Journal Indexed in SCI)
- VII. **Accurate Modeling of Frequency Selective Surfaces Using Fully-Connected Regression Model With Automated Architecture Determination and Parameter Selection Based on Bayesian Optimization**  
ÇALIK N., Belen M. A. , Mahouti P., Koziel S.  
IEEE ACCESS, vol.9, pp.38396-38410, 2021 (Journal Indexed in SCI)
- VIII. **On Decomposition-Based Surrogate-Assisted Optimization of Leaky Wave Antenna Input Characteristics for Beam Scanning Applications**  
Belen M. A. , Mahouti P., Koziel S., ÇALIŞKAN A., Szczepanski S.  
IEEE ACCESS, vol.9, pp.161318-161325, 2021 (Journal Indexed in SCI)
- IX. **Improved Modeling of Microwave Structures Using Performance-Driven Fully-Connected Regression Surrogate**  
Koziel S., MAHOUTI P., ÇALIK N., Belen M. A. , Szczepanski S.  
IEEE ACCESS, vol.9, pp.71470-71481, 2021 (Journal Indexed in SCI)
- X. **Design Optimization of a Dual-band Microstrip SIW Antenna using Differential Evolutionary Algorithm for X and K-Band Radar Applications**  
Belen A., GÜNEŞ F., Mahouti P.  
APPLIED COMPUTATIONAL ELECTROMAGNETICS SOCIETY JOURNAL, vol.35, no.7, pp.778-783, 2020 (Journal Indexed in SCI)
- XI. **3D printed wideband flat gain multilayer nonuniform reflectarray antenna for X-band applications**  
Belen A., GÜNEŞ F., Belen M. A. , Mahouti P.  
INTERNATIONAL JOURNAL OF NUMERICAL MODELLING-ELECTRONIC NETWORKS DEVICES AND FIELDS, 2020 (Journal Indexed in SCI)
- XII. **Artificial neural network application for novel 3D printed nonuniform ceramic reflectarray antenna**  
Mahouti M., KUŞKONMAZ N., Mahouti P., Belen M. A. , Palandoken M.  
INTERNATIONAL JOURNAL OF NUMERICAL MODELLING-ELECTRONIC NETWORKS DEVICES AND FIELDS, 2020 (Journal Indexed in SCI)
- XIII. **Design of nonuniform substrate dielectric lens antennas using 3D printing technology**  
Belen M. A. , Mahouti P.  
MICROWAVE AND OPTICAL TECHNOLOGY LETTERS, vol.62, no.2, pp.756-762, 2020 (Journal Indexed in SCI)
- XIV. **Design and realization of novel frequency selective surface loaded dielectric resonator antenna via 3D printing technology**  
Belen M. A. , Mahouti P., Palandoken M.  
MICROWAVE AND OPTICAL TECHNOLOGY LETTERS, 2020 (Journal Indexed in SCI)
- XV. **Pareto Optimal Characterization of a Microwave Transistor**  
GÜNEŞ F., Uluslu A. A. , Mahouti P.  
IEEE ACCESS, vol.8, pp.47900-47913, 2020 (Journal Indexed in SCI)
- XVI. **Active Inductor Design for Reconfigurable Bandpass Microstrip Filter Applications**

Belen M. A. , Mahouti P.

APPLIED COMPUTATIONAL ELECTROMAGNETICS SOCIETY JOURNAL, vol.34, no.11, pp.1764-1768, 2019 (Journal Indexed in SCI)

- XVII. **Application of artificial intelligence algorithms on modeling of reflection phase characteristics of a nonuniform reflectarray element**  
Mahouti P.  
INTERNATIONAL JOURNAL OF NUMERICAL MODELLING-ELECTRONIC NETWORKS DEVICES AND FIELDS, 2019 (Journal Indexed in SCI)
- XVIII. **A novel design of high performance multilayered cylindrical dielectric lens antenna using 3D printing technology**  
Belen A., GÜNEŞ F., Mahouti P., Palandoken M.  
INTERNATIONAL JOURNAL OF RF AND MICROWAVE COMPUTER-AIDED ENGINEERING, 2019 (Journal Indexed in SCI)
- XIX. **Deep learning base modified MLP model for precise scattering parameter prediction of capacitive feed antenna**  
Calik N., Belen M. A. , Mahouti P.  
INTERNATIONAL JOURNAL OF NUMERICAL MODELLING-ELECTRONIC NETWORKS DEVICES AND FIELDS, 2019 (Journal Indexed in SCI)
- XX. **Design optimization of a pattern reconfigurable microstrip antenna using differential evolution and 3D EM simulation-based neural network model**  
Mahouti P.  
INTERNATIONAL JOURNAL OF RF AND MICROWAVE COMPUTER-AIDED ENGINEERING, vol.29, no.8, 2019 (Journal Indexed in SCI)
- XXI. **Design and realization of multilayered cylindrical dielectric lens antenna using 3D printing technology**  
Mahouti P., Belen M. A. , GÜNEŞ F., Yurt R.  
MICROWAVE AND OPTICAL TECHNOLOGY LETTERS, vol.61, no.5, pp.1400-1403, 2019 (Journal Indexed in SCI)
- XXII. **Realization of Dielectric Sheets for Gain Improvement of Ultra-Wideband Horn Antennas Using 3D Printer Technology**  
Belen M. A. , Mahouti P.  
APPLIED COMPUTATIONAL ELECTROMAGNETICS SOCIETY JOURNAL, vol.34, no.5, pp.760-764, 2019 (Journal Indexed in SCI)
- XXIII. **A Novel Design of Non-Uniform Reflectarrays with Symbolic Regression and its Realization using 3-D Printer**  
Mahouti P., GÜNEŞ F., Belen M. A. , ÇALIŞKAN A.  
APPLIED COMPUTATIONAL ELECTROMAGNETICS SOCIETY JOURNAL, vol.34, no.2, pp.280-285, 2019 (Journal Indexed in SCI)
- XXIV. **Design and realization of quasi Yagi antenna for indoor application with 3D printing technology**  
Belen M. A. , Mahouti P.  
MICROWAVE AND OPTICAL TECHNOLOGY LETTERS, vol.60, no.9, pp.2177-2181, 2018 (Journal Indexed in SCI)
- XXV. **UWB Gain Enhancement of Horn Antennas Using Miniaturized Frequency Selective Surface**  
Belen M. A. , GÜNEŞ F., Mahouti P., Belen A.  
APPLIED COMPUTATIONAL ELECTROMAGNETICS SOCIETY JOURNAL, vol.33, no.9, pp.997-1002, 2018 (Journal Indexed in SCI)
- XXVI. **Performance enhancement of a microstrip patch antenna using substrate integrated waveguide frequency selective surface for ISM band applications**  
GÜNEŞ F., Belen M. A. , Mahouti P.  
MICROWAVE AND OPTICAL TECHNOLOGY LETTERS, vol.60, no.5, pp.1160-1164, 2018 (Journal Indexed in SCI)
- XXVII. **Competitive evolutionary algorithms for building performance database of a microwave transistor**  
GÜNEŞ F., Belen M. A. , Mahouti P.  
INTERNATIONAL JOURNAL OF CIRCUIT THEORY AND APPLICATIONS, vol.46, no.2, pp.244-258, 2018 (Journal

- Indexed in SCI)
- XXVIII. **Modeling and Realization of Cavity-Backed Dual Band SIW Antenna**  
Belen M. A. , Mahouti P., ÇALIŞKAN A., Belen A.  
APPLIED COMPUTATIONAL ELECTROMAGNETICS SOCIETY JOURNAL, vol.32, no.11, pp.974-978, 2017 (Journal Indexed in SCI)
- XXIX. **GSM filtering of horn antennas using modified double square frequency selective surface**  
GÜNEŞ F., Sharipov Z., Belen M. A. , Mahouti P.  
INTERNATIONAL JOURNAL OF RF AND MICROWAVE COMPUTER-AIDED ENGINEERING, vol.27, no.9, 2017 (Journal Indexed in SCI)
- XXX. **Adjoint sensitivity analysis of the T, , and L types of microstripline low noise amplifiers**  
Demirel S., GÜNEŞ F., Mahouti P.  
INTERNATIONAL JOURNAL OF NUMERICAL MODELLING-ELECTRONIC NETWORKS DEVICES AND FIELDS, vol.30, 2017 (Journal Indexed in SCI)
- XXXI. **Cost-effective GRNN-based modeling of microwave transistors with a reduced number of measurements**  
GÜNEŞ F., Mahouti P., Demirel S., Belen M. A. , Uluslu A. A.  
INTERNATIONAL JOURNAL OF NUMERICAL MODELLING-ELECTRONIC NETWORKS DEVICES AND FIELDS, vol.30, 2017 (Journal Indexed in SCI)
- XXXII. **Symbolic Regression for Derivation of an Accurate Analytical Formulation Using "Big Data": An Application Example**  
Mahouti P., GÜNEŞ F., Belen M. A. , Demirel S.  
APPLIED COMPUTATIONAL ELECTROMAGNETICS SOCIETY JOURNAL, vol.32, no.5, pp.372-380, 2017 (Journal Indexed in SCI)
- XXXIII. **Signal and Noise Modeling of Microwave Transistors Using Characteristic Support Vector-based Sparse Regression**  
GÜNEŞ F., Belen M. A. , Mahouti P., Demirel S.  
RADIOENGINEERING, vol.25, no.3, pp.490-499, 2016 (Journal Indexed in SCI)
- XXXIV. **Horn antennas with enhanced functionalities through the use of frequency selective surfaces**  
Mahouti P., GÜNEŞ F., Belen M. A. , ÇALIŞKAN A., Demirel S., Sharipov Z.  
INTERNATIONAL JOURNAL OF RF AND MICROWAVE COMPUTER-AIDED ENGINEERING, vol.26, no.4, pp.287-293, 2016 (Journal Indexed in SCI)
- XXXV. **A simple and efficient honey bee mating optimization approach to performance characterization of a microwave transistor for the maximum power delivery and required noise**  
GÜNEŞ F., Demirel S., Mahouti P.  
INTERNATIONAL JOURNAL OF NUMERICAL MODELLING-ELECTRONIC NETWORKS DEVICES AND FIELDS, vol.29, no.1, pp.4-20, 2016 (Journal Indexed in SCI)
- XXXVI. **Design of a Front-End Amplifier for the Maximum Power Delivery and Required Noise by HBMO with Support Vector Microstrip Model**  
GÜNEŞ F., Demirel S., Mahouti P.  
RADIOENGINEERING, vol.23, no.1, pp.134-143, 2014 (Journal Indexed in SCI)

## Articles Published in Other Journals

- I. **DESIGN AND IMPLEMENTATION OF DOPPLER MICROWAVE MOTION SENSOR FOR INDOOR APPLICATION**  
Belen M. A. , Mahouti P., GÜNEŞ F., Partal H. P.  
SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BILIMLERI DERGISI, vol.36, no.3, pp.849-859, 2018 (Journal Indexed in ESCI)
- II. **DESIGN OF A HIGH EFFICIENCY POWER AMPLIFIER FOR WIRELESS AND RADAR APPLICATIONS**  
Mahouti P., Belen M. A. , Partal H. P. , Demirel S., GÜNEŞ F.

SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BILIMLERI DERGISI, vol.33, no.1, pp.94-101, 2015 (Journal Indexed in ESCI)

**III. DESIGN AND SIMULATION OF A TUNABLE BANDPASS FILTER USING VARACTOR DIODES FOR WIRELESS AND RADAR APPLICATIONS**

Belen M. A. , Mahouti P., Partal H. P. , Demirel S., GÜNEŞ F.

SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BILIMLERI DERGISI, vol.33, no.1, pp.86-93, 2015 (Journal Indexed in ESCI)

### **Refereed Congress / Symposium Publications in Proceedings**

- I. Design Optimization of Ultra Wide Band Vivaldi Antenna Using Artificial Intelligence**  
Mahouti P., KIZILAY A., Tari O., Belen A., Belen M. A.  
International Symposium of the Applied-Computational-Electromagnetics-Society (ACES), ELECTR NETWORK, 1 - 05 August 2021
- II. Surrogate Based Design Optimization of Multi-Band Antenna**  
Tari O., Belen A., Mahouti P., Belen M. A.  
International Symposium of the Applied-Computational-Electromagnetics-Society (ACES), ELECTR NETWORK, 1 - 05 August 2021
- III. Design and Manufacturing of an X-Band Horn Antenna using 3-D Printing Technology**  
Toy Y. C. , Mahouti P., GÜNEŞ F., Belen M. A.  
8th International Conference on Recent Advances in Space Technologies (RAST), İstanbul, Turkey, 19 - 22 June 2017, pp.195-198
- IV. An UWB Vivaldi Antenna with the Enhanced Functionalities Through the use of DGS and Dielectric Lens**  
Belen M. A. , EVRANOS İ. Ö. , GÜNEŞ F., Mahouti P.  
8th International Conference on Recent Advances in Space Technologies (RAST), İstanbul, Turkey, 19 - 22 June 2017, pp.199-201
- V. Microstrip Frequency Selective Surface For Use In Horn Antenna**  
Sharipov Z., GÜNEŞ F., TÜRK A. S. , Belen M. A. , Mahouti P., Demirel S.  
3rd IEEE Radar Methods and Systems Workshop (RMSW), Kyiv, Ukraine, 27 - 28 September 2016, pp.107-109
- VI. Design and Realization of Dual Band Microstrip Monopole Antenna**  
Mahouti P., GÜNEŞ F., Belen M. A. , ÇALIŞKAN A., Demirel S.  
21st International Conference on Microwave, Radar and Wireless Communications (MIKON), Krakow, Poland, 9 - 11 May 2016
- VII. Design of Dielectric Lens Loaded Double Ridged Horn Antenna for Millimetre Wave Application**  
Demirel S., ÇALIŞKAN A., Mersin M. T. , TÜRK A. S. , Belen M. A. , Mahouti P.  
21st International Conference on Microwave, Radar and Wireless Communications (MIKON), Krakow, Poland, 9 - 11 May 2016
- VIII. Microstrip SIW Patch Antenna Design for X band Application**  
Belen M. A. , GÜNEŞ F., ÇALIŞKAN A., Mahouti P., Demirel S., Yildirim A.  
21st International Conference on Microwave, Radar and Wireless Communications (MIKON), Krakow, Poland, 9 - 11 May 2016
- IX. Coplanar Stripline-Fed Microstrip Yagi-Uda Antenna for ISM Band Application**  
ÇALIŞKAN A., GÜNEŞ F., Belen M. A. , Mahouti P., Demirel S.  
21st International Conference on Microwave, Radar and Wireless Communications (MIKON), Krakow, Poland, 9 - 11 May 2016
- X. Frequency-Selective Surfaces to Enhance Performance of TEM Horn Antenna**  
Belen M. A. , Sharipov Z., Mahouti P., Demirel S., GÜNEŞ F.  
16th International Radar Symposium (IRS), Dresden, Germany, 24 - 26 June 2015, pp.936-941
- XI. Miniaturization with Dumbbell Shaped Defected Ground Structure for Power Divider Designs Using**

## **Sonnet**

Mahouti P., Belen M. A. , Partal H. P. , Demirel S., GÜNEŞ F.

31st International Review of Progress in Applied Computational Electromagnetics, Virginia, United States Of America, 22 - 26 March 2015

- XII. **Efficient Scattering Parameter Modeling of a Microwave Transistor Using Generalized Regression Neural Network**  
Mahouti P., GÜNEŞ F., Demirel S., Uluslu A. A. , Belen M. A.  
20th International Conference on Microwaves, Radar, and Wireless Communication (MIKON), Gdansk, Poland, 16 - 18 June 2014
- XIII. **A Deterministic Approach for Designing Flat Gain Ultra-Wideband LNAs**  
Belen M. A. , GÜNEŞ F., Demirel S., Mahouti P.  
20th International Conference on Microwaves, Radar, and Wireless Communication (MIKON), Gdansk, Poland, 16 - 18 June 2014
- XIV. **Space Gravity Optimization Applied to the Feasible Design Target Space Required for a Wide-band Front-end Amplifier**  
Kilmc N., Mahouti P., GÜNEŞ F.  
Progress In Electromagnetics Research Symposium, Stockholm, Sweden, 12 - 15 August 2013, pp.1495-1499
- XV. **Design Optimization of Microstrip Matching Circuits Using a Honey Bee Mating Algorithm Subject to the Transistor's Potential Performance**  
Mahouti P., Demirel S., GÜNEŞ F.  
Progress In Electromagnetics Research Symposium, Stockholm, Sweden, 12 - 15 August 2013, pp.1890-1893

## **Scientific Refereeing**

INTERNATIONAL JOURNAL OF RF AND MICROWAVE COMPUTER-AIDED ENGINEERING, SCI Journal, May 2020

INTERNATIONAL JOURNAL OF RF AND MICROWAVE COMPUTER-AIDED ENGINEERING, Journal Indexed in SCI-E, February 2019

INTERNATIONAL JOURNAL OF RF AND MICROWAVE COMPUTER-AIDED ENGINEERING, Journal Indexed in SCI-E, January 2019

INTERNATIONAL JOURNAL OF RF AND MICROWAVE COMPUTER-AIDED ENGINEERING, Journal Indexed in SCI-E, October 2018

INTERNATIONAL JOURNAL OF COMMUNICATION SYSTEMS, Journal Indexed in SCI-E, September 2018

## **Citations**

Total Citations (WOS):155

h-index (WOS):9