PROF. DR. ÖZLEM ÖZGÜN

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Electrical and Electronics Engineering Department
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Google scholar: http://scholar.google.com.tr/citations?user=y6pT0gEAAAAJ&hl=tr

EDUCATION

Ph.D. in Electrical and Electronics Engineering *Sept. 2002 - April 2007*
Middle East Technical University (METU), Ankara, Turkey

M.Sc. in Electrical and Electronics Engineering *Sept.1998 - Jan.2001*
Bilkent University, Ankara, Turkey

B.Sc. in Electrical and Electronics Engineering *Sept.1993 – June 1998*
Bilkent University, Ankara, Turkey

PROFESSIONAL EXPERIENCE

Hacettepe University *April 2018 - present*
Electrical and Electronics Engineering Department
Prof. Dr.

Hacettepe University *Jan. 2015 – Apr. 2018*
Electrical and Electronics Engineering Department
Assoc. Prof. Dr.

TED University (TEDU) *Feb. 2012 – Jan. 2015*
Electrical and Electronics Engineering Department
Assoc. Prof. Dr.

Middle East Technical University *Sept. 2008 – Feb. 2012*
Northern Cyprus Campus (METU-NCC) *Feb. - June 2012 (visiting faculty)*
Electrical and Electronics Engineering Department
Assist. Prof. Dr.

Penn State University *Aug. 2007 – Aug. 2008*
Electrical Engineering Department
Electromagnetic Communication Lab
Postdoctoral Research Fellow

ASELSAN Inc. (Ankara, Turkey) *Oct.2004 - Oct.2005*
Microwave and System Technologies (MST) Division
System Engineer

TÜBİTAK-Iltaren (Ankara, Turkey) *Sept.2000 - Sept.2004*
Scientific and Technical Research Council of Turkey –
Advanced Technologies Research Institute
Research Scientist

Bilkent University *Sept.1998 - Sept.2000*
Department of Electrical and Electronics Engineering
Teaching Assistant

T E A C H I N G E X P E R I E N C E

METU-NCC:

- EE 224 - Electromagnetic Theory (Fall 2008, 2009, 2010, 2011)
- EE 303 - Electromagnetic Waves (Fall 2008, 2009, 2010, 2011)
- EE 426 - Antennas & Propagation (Spring 2011, 2012)
- EE 306 - Signals and Systems II (Spring 2009, 2010, 2011, 2012)
- EE 281 - Electrical Circuits (Fall 2008, 2009, 2010)
- EE 230 - Probability and Random Variables (Spring 2009, 2010, 2011, 2012)
- EE 493, 494 - Engineering Design I, II (project) (Fall 2010, 2011; Spring 2011, 2012)

TEDU:

- MATH 203 - Linear Algebra and Differential Equations (Fall 2013, Fall 2014)
- MATH 204 - Vector and Complex Calculus (Spring 2014)
- MATH 101 - Calculus of One Variable (Spring 2014)
- EE 341 - Electromagnetic Fields and Waves (Fall 2014)

Hacettepe University:

- ELE 244 - Electromagnetics I (Spring 2015, 2016, 2017, 2018)
- ELE 345 - Electromagnetics II (Fall 2015, 2017)
- ELE 401, 402 - Graduation Project I, II (2015-2018)
- ELE 444 - Antennas and Propagation (Spring 2017)
- ELE620 - Electromagnetic Wave Propagation (Fall 2015, 2016)
- ELE624 - Electromagnetic Wave Theory II (Spring 2018)
- ELE626 - Computational Methods in Electromagnetics (Spring 2016, Fall 2017)
- ELE 629 - Special Topics in Electromagnetics (Finite Element Method) (Spring 2015, Fall 2016)

T H E S I S S U P E R V I S I O N

(1) Özüm Emre Aşırım, M.Sc., METU, "Investigation of rough surface scattering of electromagnetic waves using finite element method," 2013. (co-supervision)

(2) Ali Kemal Kazar, M.Sc., METU, “Monte Carlo analysis of the effects of material and shape uncertainties on radar cross section by the finite difference time domain method,” 2013. (co-supervision)

(3) Hüseyin Gülbaş, M.Sc., METU, "Finite element modeling of scattering from objects in rectangular waveguides," 2017. (co-supervision)

(4) Muhsin Eren Ergüden, M.Sc., Hacettepe U., “Development of evaporation duct algorithms for two-way parabolic wave modeling of electromagnetic propagation,” 2018.

(5) Canberk Pay, M.Sc., Hacettepe U., “Development of radar cross section reduction techniques based on the concept of transformation electromagnetics,” 2018.

R E S E A R C H I N T E R E S T S

Computational electromagnetics, finite element method, domain decomposition, electromagnetic wave propagation and scattering, transformation electromagnetics/optics, high frequency techniques, optimization techniques, and stochastic electromagnetic problems.

P R O J E C T E X P E R I E N C E

(1) Hacettepe University Research Fund (Project no: FBA-2016-9954) *March 2016 - March 2017*
Development of Microwave Imaging Algorithms based on Coordinate Transformations for Detection of Cancerous Tissues
Project director

(2) TÜBİTAK-İltaren (ÇAFRAD project - phase I) *July 2014 - Dec 2014*
Radar performance analysis algorithms
Consultant

(3) TEDU BAP Project (Project no: 12B301) *Jan. 2013 – Jan. 2014*
Project title: Visual Application Tools for Undergraduate Education in Electrical and Electronics Engineering
Project director

(4) TÜBİTAK-ARDEB 1001 Project (Project no: 109E169) *July 2010 - January 2012*
Project title: Efficient Numerical Modeling of Electromagnetic Problems by Designing Novel Anisotropic Metamaterial Specifications
Project director

(5) ASELSAN A.Ş. (FİSAG Project – phase II) *April-Sept. 2010*
Project title: Developing statistical classification algorithms in MATLAB in conjunction with a warning system
Researcher

H O N O R S

Awards:

Best paper award *(The Chamber of Electrical Engineers EMO journal)* *June 2014*

Leopold B. Felsen Award for Excellence in Electromagnetics *July 2009*

Best thesis award *(METU Graduate School of Natural and Applied Sciences)* *April 2007*

Student presentation award *(URSI-Türkiye Scientific Congress, Hacettepe Univ., Ankara)* *Sept. 6-8, 2006*

Ranked 94th in the nation-wide University Entrance Exam *June 1993*

Grants:

TÜBİTAK-BİDEB postdoctoral research grant *Aug. 2007 – Aug. 2008*
Pennsylvania State University, Electromagnetic Communication Lab

Scholarships:

Full graduate scholarship *Sept. 1998 – Jan. 2001*
Bilkent University, Department of Electrical and Electronics Engineering

Full under–graduate scholarship *Sept. 1993 – June 1998*
Bilkent University, Department of Electrical and Electronics Engineering

Offer of scholarship for undergraduate study in foreign countries *(not used)* *Sept. 1993*
Turkish Prime Minister

P R O F E S S I O N A L S E R V I C E

2005-present: Senior member of IEEE (Institute of Electrical and Electronics Engineers)

2014-present: Member (President as of 2018) of Steering Committee of URSI-Türkiye (International Union of Radio Science)

2015-present: Professional service at Hacettepe University:

- Department Vice Chair (Dept. of Electrical and Electronics Engineering) (2017-2020)
- Member of Faculty Administration Committee (2017-2018)

2012-2015: Professional service at TED University:

- Department Chair (acting)
- Member of University Senate
- Member of Faculty Committee
- Member of Faculty Administration Committee
- Head/Member of Commission of Library
- Member of Commission of Scholarship
- Member of Commission of Quality Assurance

2006-present: Reviewer for IEEE Transactions on Geoscience and Remote Sensing, IEEE Transactions on Antennas and Propagation, IEEE Transactions on Microwave Theory and Techniques, Waves in Random and Complex Media, Journal of Electromagnetic Waves and Applications, Progress in Electromagnetic Research-PIER, Radio Science, Finite Elements in Analysis and Design, Journal of Computer Engineering Research, Mathematical Problems in Engineering, Turkish Journal of Electrical Engineering & Computer Sciences,

Optics Communications, COMPEL: The International Journal for Computation and Mathematics in Electrical and Electronic Engineering, ACES - Applied Computational Electromagnetics Society Journal

2010: Local organizing committee chair and co-chair, respectively, in "5th URSI-Türkiye Scientific Congress", and "10th edition of the Mediterranean Microwave Symposium (MMS-2010)", METU-NCC, August 25-27, 2010.

2012: Member of local organizing committee in "6th URSI-Türkiye Scientific Congress", and "12th edition of the Mediterranean Microwave Symposium (MMS-2012)", Doğuş University, Sept. 2-5, 2012.

2013: Special session organizer and chair in "the 4th International Conference on Metamaterials, Photonic Crystals and Plasmonics (META'13)", Sharjah, UAE, 18 – 22 March 2013.
Title of the session: Novel applications of transformation electromagnetics

2014: Special Session Organizer and chair in "the 5th International Conference on Metamaterials, Photonic Crystals and Plasmonics (META'14)", Singapore, 20 – 23 May 2014.
Title of the session: Numerical modeling techniques for metamaterials

2014: Member of Scientific Advisory Board in "7th URSI-Türkiye Scientific Congress", Fırat University, Aug. 28-30, 2014.

2016: Coordinator of Student Paper Competition and Member of Scientific Advisory Board in "8th URSI-Türkiye Scientific Congress", METU, Sept. 1-3, 2016.

2017: Chair of Organization Committee in "The Fourth International EMC Conference", METU, Sept. 24-27, 2017.

2018: Coordinator of Student Paper Competition and Member of Scientific Advisory Board in "9th URSI-Türkiye Scientific Congress", Karatay University, Sept. 6-8, 2018.

2018: Publicity and PR Chair in "18th edition of the Mediterranean Microwave Symposium (MMS-2018)", İstanbul, Oct. 31-Nov. 2, 2018.

P U B L I C A T I O N S

Theses:

Ph.D. Finite element modeling of electromagnetic radiation / scattering problems by domain decomposition
M.Sc. Dual-frequency operation of probe-fed rectangular microstrip antennas with slots: analysis and design

Book:

O. Ozgun and M. Kuzuoglu, MATLAB®-Based Finite Element Programming in Electromagnetic Modeling. *CRC Press*, 2018. (ISBN: 978-1498784078)

Chapter in a Book:

O. Ozgun and M. Kuzuoglu, "Transformation optics-based computational materials for stochastic electromagnetics," Chapter 9 in Advanced Engineering Materials and Modeling, pp: 241-286, Editor: A. Tiwari, *Wiley-Scrivener*, 2016. (ISBN: 978-1119242468)

O. Ozgun and M. Kuzuoglu, "Form-invariance of Maxwell's Equations in Coordinate Transformations: Metamaterials and Numerical Models" Chapter 3 in *Metamaterials: Classes, Properties and Applications*, pp: 87-136, Editor: Ethan J. Tremblay, Nova Science Publishers Inc., 2010. (ISBN: 978-1-61668-958-2)

International Journals (SCI/SCIE):

No	Index	Description
1	SCI	**O. Ozgun**, S. Mutlu, M.I. Aksun, and L. Alatan, "Design of Dual-Frequency Probe-Fed Microstrip Antennas with Genetic Optimization Algorithm," *IEEE Transactions on Antennas and Propagation*, vol. 51, no: 8, pp. 1947-1954, August 2003. Impact factor: 2.332 Link: http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=1219605
2	SCIE	**O. Ozgun**, and M. Kuzuoglu, "Locally-Conformal Perfectly Matched Layer Implementation for Finite Element Mesh Truncation," *Microwave and Optical Technology Letters*, vol. 48, no. 9, pp. 1836-1839, September 2006.

		Impact factor: 0.585 Link: http://onlinelibrary.wiley.com/doi/10.1002/mop.21788/abstract
3	SCI	**O. Ozgun**, and M. Kuzuoglu, "Non-Maxwellian Locally-conformal PML Absorbers for Finite Element Mesh Truncation," *IEEE Transactions on Antennas and Propagation*, vol. 55, no. 3, pp. 931-937, March 2007. Impact factor: 2.332 Link: http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=4120288
4	SCIE	**O. Ozgun**, and M. Kuzuoglu, "Multi-center Perfectly Matched Layer Implementation for Finite Element Mesh Truncation," *Microwave and Optical Technology Letters*, vol. 49, no. 4, pp. 827-832, April 2007. Impact factor: 0.585 Link: http://onlinelibrary.wiley.com/doi/10.1002/mop.22258/abstract
5	SCI	**O. Ozgun**, and M. Kuzuoglu, "Near-field Performance Analysis of Locally-conformal Perfectly Matched Absorbers via Monte Carlo Simulations," *Journal of Computational Physics*, vol. 227, Issue 2, pp. 1225-1245, December 2007. Impact factor: 2.851 Link: http://www.sciencedirect.com/science/article/pii/S0021999107003919
6	SCIE	**O. Ozgun**, and M. Kuzuoglu, "Forward-Backward Domain Decomposition Method for Finite Element Solution of Boundary Value Problems," *Microwave and Optical Technology Letters*, vol. 49, no. 10, pp. 2582-2590, October 2007. Impact factor: 0.585 Link: http://onlinelibrary.wiley.com/doi/10.1002/mop.22757/abstract
7	SCIE	**O. Ozgun**, and M. Kuzuoglu, "Electromagnetic Metamorphosis: Reshaping Scatterers via Conformal Anisotropic Metamaterial Coatings," *Microwave and Optical Technology Letters*, vol. 49, no. 10, pp. 2386-2392, October 2007. Impact factor: 0.585 Link: http://onlinelibrary.wiley.com/doi/10.1002/mop.22784/abstract
8	SCI	**O. Ozgun**, and M. Kuzuoglu, "Utilization of Anisotropic Metamaterial Layers in Waveguide Miniaturization and Transitions," *IEEE Microwave and Wireless Components Letters*, vol. 17, no. 11, pp. 754-756, Nov 2007. Impact factor: 1.784 Link: http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=4357987
9	SCIE	**O. Ozgun**, and M. Kuzuoglu, "Recent Advances in Perfectly Matched Layers in Finite Element Applications," *The Turkish Journal of Electrical Engineering & Computer Sciences*, invited paper in the special issue on "From Engineering Electromagnetics towards Electromagnetic Engineering: Issues, Challenges and Applications - Dedicated to the 75th birthday of Prof. Dr. Raj Mittra", vol. 16, no. 1, pp. 57-66, March 2008. Impact factor: 0.568 Link: http://journals.tubitak.gov.tr/elektrik/issues/elk-08-16-1/elk-16-1-6-0802-3.pdf
10	SCIE	**O. Ozgun**, and M. Kuzuoglu, "Finite Element Analysis of Electromagnetic Wave Problems via Iterative Leap-Field Domain Decomposition Method," *Journal of Electromagnetic Waves and Applications*, vol. 22, no. 2, pp. 251-266, April 2008. Impact factor: 1.3 Link: http://www.tandfonline.com/doi/abs/10.1163/156939308784160668
11	SCIE	**O. Ozgun**, and M. Kuzuoglu, "Efficient Finite Element Solution of Low-Frequency Scattering Problems via Anisotropic Metamaterial Layers," *Microwave and Optical Technology Letters*, vol. 50, no. 3, pp. 639-646, March 2008. Impact factor: 0.585 Link:http://onlinelibrary.wiley.com/doi/10.1002/mop.23167/abstract
12	SCI	**O. Ozgun**, "Recursive Two-way Parabolic Equation Approach for Modeling Terrain Effects in Tropospheric Propagation," *IEEE Transactions on Antennas and Propagation*, vol. 57, no. 9, pp. 2706-2714, Sept. 2009. Impact factor: 2.332 Link: http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=5169919
13	SCI	**O. Ozgun**, R. Mittra, and M. Kuzuoglu, "CBFEM-MPI: A Parallelized Version of Characteristic Basis Finite Element Method for Extraction of 3D Interconnect Capacitances," *IEEE Transactions on Advanced Packaging*, vol. 32, no.1, pp. 164-174, February 2009. Impact factor: 1.339 Link: http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=4785316

14	SCI	**O. Ozgun**, and M. Kuzuoglu, "Form-invariance of Maxwell's Equations in Waveguide Cross-section Transformations," *Electromagnetics*, vol.29, no. 4, pp. 353-376, May 2009. Impact factor: 0.789 Link: http://www.tandfonline.com/doi/abs/10.1080/02726340902877025
15	SCI	**O. Ozgun**, R. Mittra, and M. Kuzuoglu, "Parallelized Characteristic Basis Finite Element Method (CBFEM-MPI) - A Non-iterative Domain Decomposition Algorithm for Electromagnetic Scattering Problems," *Journal of Computational Physics*, vol. 228, no. 6, pp. 2225-2238, April 2009. Impact factor: 2.851 Link: http://www.sciencedirect.com/science/article/pii/S0021999108006293
16	SCI	**O. Ozgun**, R. Mittra, and M. Kuzuoglu, "Multi-Level Characteristic Basis Finite Element Method (ML-CBFEM) - An Efficient Version of A Parallel, Non-iterative Domain Decomposition Algorithm for Direct Solution of Large-scale Electromagnetic Problems," *IEEE Transactions on Antennas and Propagation*, vol. 57, no. 10, pp. 3381-3387, Oct. 2009. Impact factor: 2.332 Link: http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=5200463
17	SCI	**O. Ozgun**, and M. Kuzuoglu, "Iterative Leap-Field Domain Decomposition Method - A Domain Decomposition Finite Element Algorithm for 3D Electromagnetic Boundary Value Problems," *IET Microwaves, Antennas & Propagation*, vol. 4, no. 4, pp. 543-552, April 2010. Impact factor: 0.836 Link: http://dx.doi.org/10.1049/iet-map.2008.0446
18	SCI	**O. Ozgun**, R. Mittra, and M. Kuzuoglu, "General Purpose Characteristic Basis Finite Element Method (CBFEM) for Multi-Scale Electrostatic and Electromagnetic Problems," *Electromagnetics*, vol. 30, no. 1&2, pp. 205-221, January 2010. Impact factor: 0.789 Link: http://www.tandfonline.com/doi/abs/10.1080/02726340903485505
19	SCIE	**O. Ozgun**, R. Mittra, and M. Kuzuoglu, "PO-based Characteristic Basis Finite Element Method (CBFEM-PO) - A Parallel, Iteration-free Domain Decomposition Algorithm using Perfectly Matched Layers for Large-scale Electromagnetic Scattering Problems," *Microwave and Optical Technology Letters*, vol.52, no. 5, pp. 1053-1060, May 2010. Impact factor: 0.585 Link: http://onlinelibrary.wiley.com/doi/10.1002/mop.25134/abstract
20	SCI	**O. Ozgun**, and M. Kuzuoglu, "Domain Compression via Anisotropic Metamaterials designed by Coordinate Transformations," *Journal of Computational Physics*, vol. 229, no. 3, pp. 921-932, February 2010. Impact factor: 2.851 Link: http://www.sciencedirect.com/science/article/pii/S0021999109005750
21	SCIE	**O. Ozgun**, and M. Kuzuoglu, "Form Invariance of Maxwell's Equations: The Pathway to Novel Metamaterial Specifications for Electromagnetic Reshaping," *IEEE Antennas and Propagation Magazine*, vol. 52, no. 3, pp. 51-65, June 2010. Impact factor: 1.18 Link:http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=5586575
22	SCI	G. Apaydin, **O. Ozgun**, M. Kuzuoglu, and L. Sevgi, "A Novel Two-Way Finite-Element Parabolic Equation (FEMPE) Groundwave Propagation Tool: Tests with Canonical Structures and Calibration," *IEEE Transactions on GeoScience and Remote Sensing*, vol. 49, no. 8, pp. 2887 - 2899, August 2011. Impact factor: 3.467 Link: http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=5738678
23	SCI	**O. Ozgun**, G. Apaydin, M. Kuzuoglu, and L. Sevgi, "PETOOL: MATLAB-based One-Way and Two-Way Split-Step Parabolic Equation Tool for Radiowave Propagation over Variable Terrain," *Computer Physics Communications*, vol. 182, no. 12, pp. 2638–2654, Dec. 2011. Impact factor: 3.212 Link: http://www.sciencedirect.com/science/article/pii/S0010465511002669 Program link: http://cpc.cs.qub.ac.uk/summaries/AEJS_v1_0.html
24	SCI	**O. Ozgun**, and M. Kuzuoglu, "Monte Carlo-based Characteristic Basis Finite Element Method (MC-CBFEM) for Numerical Analysis of Scattering from Objects on/above Rough Sea Surfaces," *IEEE Transactions on GeoScience and Remote Sensing*, vol. 50, no. 3, pp. 769-783, March 2012.

		Impact factor: 3.467 Link: http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=5991948
25	SCIE	**O. Ozgun**, and L. Sevgi, "Comparative Study of Analytical and Numerical Techniques in Modeling Electromagnetic Scattering from Single and Double Knife-Edge in 2D Ground Wave Propagation Problems," *ACES - Applied Computational Electromagnetics Society Journal*, vol. 27, no. 5, pp. 376-388, May 2012. Impact factor: 1.01 Link: http://aces.ee.olemiss.edu/search.php?vol=27&no=5&type=2
26	SCIE	**O. Ozgun**, and M. Kuzuoglu, "Transformation-based Metamaterials to Eliminate the Staircasing Error in the Finite Difference Time Domain Method", *Int. Journal of RF and Microwave Computer-Aided Engineering (Special Issue on Metamaterials: RF and Microwave Applications)*, vol. 22, no. 4, pp. 530-540, July 2012. Impact factor: 0.752 Link: http://onlinelibrary.wiley.com/doi/10.1002/mmce.20642/abstract
27	SCI	**O. Ozgun**, R. Mittra, and M. Kuzuoglu, "Comments on "ParAFEMCap: A Parallel Adaptive Finite-Element Method for 3-D VLSI Interconnect Capacitance Extraction", *IEEE Transactions on Microwave Theory and Techniques*, vol. 60, no. 6, pp. 1744-1745, 2012. Impact factor: 2.229 Link: http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6178816
28	SCI	**O. Ozgun**, and M. Kuzuoglu, "Software Metamaterials: Transformation Media Based Multiscale Techniques for Computational Electromagnetics," *Journal of Computational Physics*, vol. 236, pp. 203-219, March 2013. Impact factor: 2.851 Link: http://www.sciencedirect.com/science/article/pii/S0021999112006924
29	SCI	**O. Ozgun**, and M. Kuzuoglu, "A Transformation Media Based Approach for Efficient Monte Carlo Analysis of Scattering from Rough Surfaces with Objects," *IEEE Transactions on Antennas and Propagation*, vol. 61, no. 3, pp. 1352 - 1362, March 2013. Impact factor: 2.332 Link: http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6359768
30	SCI	**O. Ozgun**, and M. Kuzuoglu, "Transformation Electromagnetics Based Analysis of Waveguides with Random Rough or Periodic Grooved Surfaces," *IEEE Transactions on Microwave Theory and Techniques*, vol. 61, no. 2, pp. 709 - 719, Feb. 2013. Impact factor: 2.229 Link: http://dx.doi.org/10.1109/TMTT.2012.2231428
31	SCIE	**O. Ozgun**, and M. Kuzuoglu, "Monte Carlo Analysis of Ridged Waveguides with Transformation Media," *International Journal of RF and Microwave Computer-Aided Engineering* (*special issue on Modeling and Simulation Challenges in Microwave Engineering*), vol. 23, no. 4, pp. 476 – 481, July 2013. Impact factor: 0.752 Link: http://onlinelibrary.wiley.com/doi/10.1002/mmce.20737/abstract
32	SCI	**O. Ozgun**, G. Apaydin, M. Kuzuoglu, and L. Sevgi, "Comments on "propagation modeling over irregular terrain by the improved two-way parabolic equation method"," *IEEE Transactions on Antennas and Propagation*, vol. 62, pp. 3894, 2014. Impact factor: 2.332 Link: http://www.dx.doi.org/10.1109/TAP.2014.2328018
33	SCI	M. Kuzuoglu, and **O. Ozgun**, "Combining perturbation theory and transformation electromagnetics for finite element solution of Helmholtz-type scattering problems," *Journal of Computational Physics*, vol. 274, pp. 883-897, 2014. Impact factor: 2.851 Link: http://www.dx.doi.org/10.1016/j.jcp.2014.06.057
34	SCI	**O. Ozgun**, and M. Kuzuoglu, "A coordinate transformation approach for efficient repeated solution of Helmholtz equation pertaining to obstacle scattering by shape deformations," *Computer Physics Communications*, vol. 185, no. 6, pp. 1616-1627, 2014. Impact factor: 3.212 Link: http://www.dx.doi.org/10.1016/j.cpc.2014.03.002
35	SCI	**O. Ozgun**, and M. Kuzuoglu, "Approximation of transformation media-based reshaping action by genetic optimization," *Applied Physics A - Material Science and Processing*, vol. 117, no. 2, pp 597-604, 2014. Impact factor: 1.694

		Link: http://link.springer.com/article/10.1007%2Fs00339-014-8709-4
36	SCIE	**O. Ozgun**, and M. Kuzuoglu, "Cartesian Grid Mapper: Transformation media for modeling arbitrary curved boundaries with Cartesian grids," *IEEE Antennas and Wireless Propagation Letters* (special cluster on Transformation Electromagnetics), vol. 13, no. 1, Dec. 2014. Impact factor: 1.948 Link: http://www.dx.doi.org/10.1109/LAWP.2014.2362873
37	SCIE	**O. Ozgun**, and L. Sevgi, "VectGUI: A MATLAB-Based Simulation Tool," *IEEE Antennas and Propagation Magazine*, vol. 57, no. 3, pp. 113-118, June 2015. Impact factor: 1.186 Link: http://dx.doi.org/10.1109/MAP.2015.2463152
38	SCI	**O. Ozgun**, and L. Sevgi, "Double-tip Diffraction Modeling: 2D Numerical Models vs. High Frequency Asymptotics," *IEEE Transactions on Antennas and Propagation*, vol. 63, no. 6, pp. 2686-2693, March 2015. Impact factor: 2.263 Link: http://dx.doi.org/10.1109/TAP.2015.2417583
39	SCI	**O. Ozgun**, and M. Kuzuoglu, "Monte Carlo simulations of Helmholtz scattering from randomly positioned array of scatterers by utilizing coordinate transformations in finite element method" *Wave Motion*, vol. 56, pp. 165-182, July 2015. Impact factor: 1.325 Link: http://dx.doi.org/10.1016/j.wavemoti.2015.02.010
40	SCIE	**O. Ozgun**, and M. Kuzuoglu, "Implementation of coordinate transformations in periodic finite-element method for modeling rough surface scattering problems," *International Journal of RF and Microwave Computer-Aided Engineering*, vol. 26, no. 4, pp. 322–329, May 2016. Impact factor: 0.549 Link: http://dx.doi.org/10.1002/mmce.20968
41	SCIE	**O. Ozgun**, and M. Kuzuoglu, "Remesh-free Shape Optimization by Transformation Optics," *IEEE Transactions on Antennas and Propagation*, vol. 64, no. 12, pp. 5479-5482, Dec. 2016. Impact factor: 2.263 Link: http://dx.doi.org/10.1109/TAP.2016.2607763
42	SCIE	**O. Ozgun**, "New Software Tool GO+UTD for Visualization of Wave Propagation," *IEEE Antennas and Propagation Magazine,* vol. 58, no. 3, pp. 91–103, June 2016. Impact factor: *1.186* DOI: 10.1109/MAP.2016.2541600 Link: http://dx.doi.org/10.1109/MAP.2016.2541600
43	SCIE	**O. Ozgun**, and L. Sevgi, "Finite Element Modeling of Fringe Waves in Wedge Diffraction Problem," *IEEE Antennas and Wireless Propagation Letters*, vol. 16, pp. 369-372, 2017. Impact factor: 1.806 Link: http://dx.doi.org/10.1109/LAWP.2016.2577599
44	SCIE	**O. Ozgun**, "Modeling of Diffraction Effects in Urban Radiowave Propagation," *ACES-Applied Computational Electromagnetics Society Journal*, vol. 32, no. 7, pp. 593-599, 2017. Impact factor*:* 0.434 Link*:* http://www.aces-society.org/search.php?vol=32&no=7&type=2
45	SCIE	**O. Ozgun**, and M. Kuzuoglu, "Coordinate Transformation Aided Finite Element Method for Contour Detection of Breast Tumors in Microwave Imaging," *International Journal for Numerical Methods in Biomedical Engineering*, e3124, pp. 1-17, 2018. Impact factor: 2.338 Link: https://doi.org/10.1002/cnm.3124

International Journals (other than SCI/SCIE):

No	Description
1	**O. Ozgun**, and M. Kuzuoglu, "Numerical Solution of Multi-scale Electromagnetic Boundary Value Problems by Utilizing Transformation-based Metamaterials," *Lecture Notes in Computer Science*, Volume 6785/2011, pp. 11-25, 2011. Link: http://link.springer.com/chapter/10.1007%2F978-3-642-21898-9_2
2	**O. Ozgun**, and M. Kuzuoglu, "Recent Developments in Transformation Optics-aided CEM," *Forum for Electromagnetic Research Methods and Application Technologies (FERMAT),* vol. 1, paper no: 3, pp. 1-15 (invited paper), 2014.

	Link: http://www.e-fermat.org/files/articles/153371cca58a92.pdf
3	**O. Ozgun**, "Ozlem Ozgun's Autobiography," *Forum for Electromagnetic Research Methods and Application Technologies (FERMAT),* vol. 3 (Women in Engineering Corner) (invited), 2014. Link: http://www.e-fermat.org/files/news_views/1536ba9768bae0.pdf
4	**O. Ozgun**, and M. Kuzuoglu, "Complex Coordinate Approaches with Applications to Perfectly Matched and Double Negative Layers," *Forum for Electromagnetic Research Methods and Application Technologies (FERMAT),* vol. 18, paper no: 2, pp. 1-12, 2016. Link: http://www.e-fermat.org/articles/ozgun-art-2016-vol18-nov-dec-002/

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No	Açıklama
1	M. Kuzuoğlu, **Ö. Özgün**, "Dönüşümsel Elektromanyetik Yaklaşımı ile Dalgalı Deniz Yüzeyi ve Üzerindeki Cisimlerden Saçılma Probleminin Etkin Monte Carlo Simülasyonu," *EMO Bilimsel Dergi*, cilt 3, sayı 5, sayfa 41-48, Haziran 2013. Link: http://edergi.emomerkez.net/index.php/EMOBILIMSEL/article/view/85/pdf
2	**Ö. Özgün**, "Binalar Arası Elektromanyetik Dalga Yayılımının Nümerik Modellenmesi," *EMO Bilimsel Dergi*, cilt 6, sayı 11, sayfa 25-32, 2016. Link: http://dergipark.gov.tr/download/article-file/308209

International Refereed Conference Papers:

No	Description
41	G.Y. Altun, and **O. Ozgun**, "Electromagnetic Propagation Modeling Over Irregular Terrain Using a New Hybrid Method," *The 18th Mediterranean Microwave Symposium (MMS)*, Oct.31-Nov.02, İstanbul, Turkey, 2018.
40	C. Pay, and **O. Ozgun**, "A Radar Cross Section Reduction Method Using the Concept of Coordinate Transformation and Isotropic Dielectric Layers," *The 18th Mediterranean Microwave Symposium (MMS)*, Oct.31-Nov.02, İstanbul, Turkey, 2018.
39	**O. Ozgun**, "Advanced finite element analysis for EMC engineering," *The Fourth International EMC Conference*, Ankara, Turkey, 24-27 September, 2017.
38	**O. Ozgun**, "A Comparative Study of Radiowave Propagation Models for Urban and Suburban Paths," *IEEE AP-S Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting*, San Diego, CA, USA, 9-14 July 2017.
37	**O. Ozgun**, and M. Kuzuoglu, "Finite Element Modeling of Anisotropic Half-Space Problems by a Simple Mesh Truncation Scheme," *IEEE AP-S Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting*, San Diego, CA, USA, 9-14 July 2017.
36	**O. Ozgun**, and M. Kuzuoglu, "A Microwave Imaging Model for Biomedical Applications," *IEEE AP-S Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting*, San Diego, CA, USA, 9-14 July 2017.
35	M. Kuzuoglu, and **O. Ozgun**, "A Numerical Model for Investigating the Effect of Rough Surface Parameters on Radar Cross Section Statistics," *IEEE AP-S Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting*, San Diego, CA, USA, 9-14 July 2017.
34	**O. Ozgun**, and M. Kuzuoglu, "Numerical Modeling of Electromagnetic Scattering from Periodic Structures by Transformation Electromagnetics," *10th International Congress on Advanced Electromagnetic Materials in Microwaves and Optics (Metamaterials 2016*), Crete, Greece, 17-22 September 2016.
33	M. Kuzuoglu, and **O. Ozgun**, "A Microwave Imaging Method based on Transformation Electromagnetics," *10th International Congress on Advanced Electromagnetic Materials in Microwaves and Optics (Metamaterials 2016*), Crete, Greece, 17-22 September 2016.
32	**O. Ozgun**, and M. Kuzuoglu, "Modeling Electromagnetic Scattering from Random Array of Objects by Form Invariance of Maxwell's Equations," *IEEE AP-S International Symposium on Antennas and Propagation and USNC/URSI North American Radio Science Meeting*, Vancouver, BC, Canada, 19-25 July 2015.
31	M. Kuzuoglu, and **O. Ozgun**, "A Hybrid Perturbational and Transformational Electromagnetics Approach for Modeling Rough Surface Scattering Problems," *IEEE AP-S International Symposium on Antennas and Propagation and USNC/URSI North American Radio Science Meeting*, Vancouver, BC, Canada, 19-25 July

	2015.
30	**O. Ozgun**, and L. Sevgi, "Finite Element Modeling of Double-tip Diffraction," *IEEE AP-S International Symposium on Antennas and Propagation and USNC/URSI North American Radio Science Meeting*, Vancouver, BC, Canada, 19-25 July 2015.
29	**O. Ozgun**, G.Apaydin, M.Kuzuoglu, L.Sevgi, "Parabolic Equation Toolbox for Radio Wave Propagation," *IEEE AP-S International Symposium on Antennas and Propagation and USNC/URSI North American Radio Science Meeting*, Vancouver, BC, Canada, 19-25 July 2015.
28	**O. Ozgun**, and M. Kuzuoglu, "Stochastic Modeling in Computational Electromagnetics by Coordinate Transformations," The Third International EMC Conference, Istanbul, Turkey, 2-4 September, 2015.
27	**O. Ozgun**, M. Kuzuoglu, "Modeling and Predicting Surface Roughness via Transformation Optics," *8th International Congress on Advanced Electromagnetic Materials in Microwaves and Optics (Metamaterials 2014)*, August 25-30, Copenhagen, Denmark.
26	**O. Ozgun**, M. Kuzuoglu, "Approximation of Transformation Media-based Reshaping Action by Genetic Optimization," *5th International Conference on Metamaterials, Photonic Crystals and Plasmonics (META'14)*, May 20-23, 2014, Singapore.
25	**O. Ozgun**, M. Kuzuoglu, "Transformation Electromagnetics for Efficient Solution of Rough Surface Scattering Problems by Finite Methods," *4th International Conference on Metamaterials, Photonic Crystals and Plasmonics (META'13)*, 18 – 22 March 2013, Sharjah, UAE.
24	**O. Ozgun**, M. Kuzuoglu, "Statistical Transformation Electromagnetics for the Analysis of Waveguide Problems," *Mediterranean Microwave Symposium MMS'2012*, Dogus University, Istanbul, Sept. 2-5, 2012.
23	**O. Ozgun**, M. Kuzuoglu, "Transformation-based Metamaterials for Enhancing the Ability of Computational Methods in Electromagnetics," *3rd International Conference on Metamaterials, Photonic Crystals and Plasmonics (META'12)*, Paris France, April 19-22, 2012.
22	**O. Ozgun**, M. Kuzuoglu, "Designing Transformation-based Metamaterials for Numerical Modeling of Low Frequency Electromagnetic Scattering," *PIERS Progress In Electromagnetics Research Symposium*, Moscow Russia, August 19-23, 2012.
21	M. Kuzuoglu, **O. Ozgun**, "Reduction of the Staircasing Error in Finite Methods by Using Transformation Media," *PIERS Progress In Electromagnetics Research Symposium*, Moscow Russia, August 19-23, 2012.
20	**O. Ozgun**, M. Kuzuoglu, "Numerical Solution of Multi-scale Electromagnetic Boundary Value Problems by Utilizing Transformation-based Metamaterials," *ICCSA 2011 - The 11th International Conference on Computational Science and Its Applications*, University of Cantabria, Santander, Spain, June 20-23, 2011.
19	M. Kuzuoglu**, O. Ozgun**, "Transformation Media for Finite Element Solution of Multi-scale Electromagnetic Boundary Value Problems," *URSIGASS 2011 - XXX General Assembly and Scientific Symp. of the International Union of Radio Science*, Istanbul, Turkey, August 13-20, 2011.
18	R. Mittra, R. J. Bringuier, C. Pelletti, K. Panayappan, **O. Ozgun**, A. Monorchio, "On the Hybridization of Dipole Moment (DM) and Finite Methods for Efficient Solution of Multiscale Problems," *5th European Conference on Antennas and Propagation (EUCAP),* pp. 3368 - 3369, April 11-15, 2011, Rome, Italy.
17	**O. Ozgun**, G. Apaydin, M. Kuzuoglu, L. Sevgi, "Two-way Split-Step Parabolic Equation Algorithm for Tropospheric Propagation: Tests and Comparisons," *Mediterranean Microwave Symposium MMS'2010*, 25-27 August 2010, Middle East Technical University - Northern Cyprus Campus.
16	**O. Ozgun**, R. Mittra, M. Kuzuoglu, "Solving Multiscale EM Problems Using A New Approach To Hybridizing the Finite Element Method," *The 10th International Workshop on Finite Elements for Microwave Engineering*, October 12-13, 2010, New England, USA.
15	**O. Ozgun**, R. Mittra, M. Kuzuoglu, "A Multilevel Characteristic Basis Finite Element Method for Efficient Solution of Large EM Problems," *The 10th International Workshop on Finite Elements for Microwave Engineering*, October 12-13, 2010, New England, USA.
14	**O. Ozgun**, R. Mittra, M. Kuzuoglu, "Finite Element / Dipole Moment Method for Efficient Solution of Multiscale Electromagnetic Problems," *IEEE International Symposium on Antennas and Propagation and USNC/URSI National Radio Science Meeting*, July 11 - 17, 2010, Sheraton Toronto Centre Hotel, ON, Canada.
13	**O. Ozgun**, R. Mittra, M. Kuzuoglu, "Solution of Large Scattering Problems using a Multilevel Scheme in the context of Characteristic Basis Finite Element Method," *IEEE International Symposium on Antennas and Propagation and USNC/URSI National Radio Science Meeting,* July 11 - 17, 2010, Sheraton Toronto Centre Hotel, ON, Canada.
12	M. Kuzuoglu, **O. Ozgun**, "Transformation Media for Efficient Numerical Modeling of Finite Methods," *IEEE International Symposium on Antennas and Propagation and USNC/URSI National Radio Science Meeting*, July 11 - 17, 2010, Sheraton Toronto Centre Hotel, ON, Canada.

11	**O. Ozgun**, G. Apaydin, M. Kuzuoglu, L. Sevgi, "Two-way Fourier Split Step Algorithm over Variable Terrain with Narrow and Wide Angle Propagators," *IEEE International Symposium on Antennas and Propagation and USNC/URSI National Radio Science Meeting*, July 11 - 17, 2010, Sheraton Centre Hotel, ON, Canada.
10	G. Apaydin, **O. Ozgun**, M. Kuzuoglu, L. Sevgi, "Two-way Split-Step Fourier and Finite Element based Parabolic Equation Propagation Tools: Comparisons and Calibration," *IEEE International Symposium on Antennas and Propagation and USNC/URSI National Radio Science Meeting,* July 11 - 17, 2010, Sheraton Toronto Centre Hotel, ON, Canada.
9	**O. Ozgun**, R. Mittra, and M. Kuzuoglu, "A Version of the Characteristic Basis Finite Element Method (CBFEM) by Utilizing Physical Optics for Large-scale Electromagnetic Problems," *2009 IEEE AP-S Inter. Symp. and USNC/URSI National Radio Science Meeting*, June 1-5 2009, Charleston, SC, USA.
8	**O. Ozgun**, R. Mittra, M. Kuzuoglu, "Characteristic Basis Finite Element Method (CBFEM) - A Non-iterative Domain Decomposition Finite Element Algorithm for Solving Electromagnetic Scattering Problems," *2008 IEEE AP-S International Symposium and USNC/URSI National Radio Science Meeting*, July 5-12 2008, San Diego, California, USA
7	**O. Ozgun**, and M. Kuzuoglu, "A Non-iterative Domain Decomposition Method for Finite Element Analysis of 3D Electromagnetic Scattering Problems," *2008 IEEE AP-S International Symposium and USNC/URSI National Radio Science Meeting*, July 5-12 2008, San Diego, California, USA.
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5	**O. Ozgun**, R. Mittra, and M. Kuzuoglu, "Parallelized Characteristic Basis Finite Element Method (CBFEM-MPI) - A Non-iterative Domain Decomposition Approach for Large-scale Electromagnetic Problems," *The 9th Inter. Workshop on Finite Elements for Microwave Engineering*, May 8-9 2008, Bonn, Germany.
4	**O. Ozgun**, R. Mittra, and M. Kuzuoglu, "Characteristic Basis Finite Element Method (CBFEM-MPI) - A Parallel, Non-iterative Domain Decomposition Algorithm for the Solution of Large-scale Electromagnetic Scattering Problems," *EWS Vth International Workshop on Electromagnetic Wave Scattering*, October 22-25, 2008, Antalya, Turkey.
3	**O. Ozgun**, and M. Kuzuoglu, "Realization of Anisotropic Metamaterials via Coordinate Transformation," *EWS Vth International Workshop on Electromagnetic Wave Scattering*, October 22-25, 2008, Antalya, Turkey.
2	**O. Ozgun**, and M. Kuzuoglu, "Locally-conformal and Multi-center Perfectly Matched Layer Implementations for Finite Element Mesh Truncation," *2006 IEEE AP-S International Symposium and USNC/URSI National Radio Science Meeting*, pp. 1753-1756, July 9-14 2006, Albuquerque, USA.
1	**O. Ozgun**, S.G. Tanyer, C.B. Erol, "An examination of the Fourier split-step method of representing electromagnetic propagation in the troposphere," *IEEE International Geoscience and Remote Sensing Symposium and the 24th Canadian Symposium on Remote Sensing*, IGARSS'2002, vol.6, pp. 3548-3550, June 24-28 2002, Toronto, Canada.

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13	G.Y. Altun, **Ö. Özgün**, "Dünya Yüzeyi Üzerindeki Bir Hedeften Elektromanyetik Dalga Saçılımının Karma Nümerik Yöntemlerle Modellenmesi," *URSI-Türkiye 9. Bilimsel Kongresi*, Karatay Üniversitesi, Konya, Ankara, 6-8 Eylül 2018.
12	C. Pay, **Ö. Özgün**, "Koordinat Dönüşümü Tekniğine Dayanarak Tasarlanan Yön-Bağımsız Dielektrik Katmanlar İle Radar Kesit Alanı Azaltma," *URSI-Türkiye 9. Bilimsel Kongresi*, Karatay Üniversitesi, Konya, Ankara, 6-8 Eylül 2018.
11	M.E. Ergüden, **Ö. Özgün**, "LKB, NWA, NRL, TOGA-COARE, NPS Buharlaşma Oluk Modellerinin Karşılaştırılmalı Analizi," *URSI-Türkiye 9. Bilimsel Kongresi*, Karatay Üniversitesi, Konya, Ankara, 6-8 Eylül 2018.
10	H. Gülbaş, **Ö. Özgün**, M.Kuzuoğlu, "Sonlu Elemanlar Yöntemiyle Yarık Halka Rezonatörlerin Saçılma Parametrelerinin Hesaplanması," *URSI-Türkiye 2016 8. Bilimsel Kongresi*, ODTÜ, Ankara, 1-3 Eylül 2016.
9	**Ö. Özgün**, G. Apaydın, M. Kuzuoğlu, L. Sevgi, "PETOOL: Elektromanyetik Propagasyon Analiz Sistemi," *SAVTEK 6. Savunma Teknolojileri Kongresi*, ODTÜ Ankara, 20-22 Haziran 2012.
8	M. Kuzuoğlu, **Ö. Özgün**, "Dalgalı Deniz Yüzeyi Üzerinde Bulunan Cisimlerden Saçılma Probleminin Sonlu Elemanlar Yöntemiyle İstatistiksel Analizi," *SAVTEK 6. Savunma Teknolojileri Kongresi*, ODTÜ Ankara, 20-

	22 Haziran 2012.
7	**Ö. Özgün**, M. Kuzuoğlu, R. Mittra, "Çok Ölçekli Elektromanyetik Problemlerin Etkin Çözümü İçin Geliştirilen Sonlu Elemanlar / Dipol Moment Yöntemi," *V. URSI-TÜRKİYE Bilimsel Kongresi*, 25-27 Ağustos 2010, Orta Doğu Teknik Üniversitesi - Kuzey Kıbrıs Kampüsü, KKTC.
6	G. Apaydin, **Ö. Özgün**, M. Kuzuoğlu, L. Sevgi, "Yer Dalgaları Yayılımlarının Farklı Açılardan Ele Alınarak İncelenmesi," *V. URSI-TÜRKİYE Bilimsel Kongresi*, 25-27 Ağustos 2010, Orta Doğu Teknik Üniversitesi - Kuzey Kıbrıs Kampüsü, KKTC.
5	G. Apaydin, **Ö. Özgün**, M. Kuzuoğlu, L. Sevgi, "Binalar Arasındaki Dalga Yayılımlarının Sonlu Elemanlar Yöntemi Kullanarak İki Yönlü Parabolik Denklem Çözümü ile Gösterilmesi," *V. URSI-TÜRKİYE Bilimsel Kongresi*, 25-27 Ağustos 2010, Orta Doğu Teknik Üniversitesi - Kuzey Kıbrıs Kampüsü, KKTC.
4	**Ö. Özgün**, M. Kuzuoğlu, R. Mittra, "Karakteristik Baz Sonlu Elemanlar Yöntemi - Büyük Ölçekli Elektromanyetik Problemlerin Çözümünde Kullanılan Paralel ve Özyinelemesiz Bölge Ayrışım Algoritması," *IV. URSI-TÜRKIYE Bilimsel Kongresi*, 20-22 Ekim 2008, Antalya.
3	**Ö. Özgün**, M. Kuzuoğlu, "Koordinat Dönüşümü Yöntemiyle Tasarlanan Yön-bağımlı Metamateryallerin Elektromanyetikteki Yeni Uygulamaları," *IV. URSI-TÜRKIYE Bilimsel Kongresi,* 20-22 Ekim 2008, Antalya.
2	**Ö. Özgün**, M. Kuzuoğlu, "Sonlu Elemanlar Yöntemi Ağ Sonlandırılmasında Kullanılan Yerel-uyumlu ve Çok-merkezli Tamamen Eşlenmiş Katman Yaklaşımları," *URSI-Türkiye 2006 3. Bilimsel Kongresi*, 6-8 Eylül 2006, Hacettepe Üniversitesi, Ankara.
1	**Ö. Özgün**, S.G. Tanyer, "Troposferdeki elektromanyetik yayılımın hesaplanmasında Fourier adımlama yönteminin başarımının incelenmesi," *URSI-2002 1. Ulusal Kongresi*, 18-20 Eylül 2002, İTÜ, İstanbul.