

CURRICULUM VITA

Ayhan Altıntaş

PERSONAL DATA

- 1.1. Birth date and place: March 29, 1958, Turkey.
- 1.2. Address: Department of Electrical & Electronics Eng.,
Bilkent University,
Bilkent 06533, Ankara Turkey
- 1.3. Phone: ++90-312-290-1489; ++90-312-290 2457
++90-312-266 4494 (Home)
- 1.4. Fax: ++90-312-266-4192
- 1.5. E-mail: altintas@ee.bilkent.edu.tr
a.altintas@ieee.org

ACADEMIC DEGREES

- 1.6. Ph.D. Electrical Eng. - Ohio State University, Columbus, Ohio 1986
- 1.7. M.S. Electrical Eng. - Middle East Technical University, Ankara, Turkey 1981
- 1.8. B.S. Electrical Eng. - Middle East Technical University, Ankara, Turkey 1979

EMPLOYMENT HISTORY

- 1.9. **09/2014 – Present** Provost and Dean of Engineering, Abdullah Gul University, Kayseri
- 1.10. **06/05 – 06/11:** Chair, Department of Electrical and Electronics Engineering, Bilkent University, Ankara, Turkey
- 1.11. **12/04 – Present:** Director, Communication and Spectrum Management Research Center (ISYAM), Bilkent University, Ankara, Turkey
- 1.12. **12/94 – 12/04** Deputy Director, Communication and Spectrum Management Research Center (ISYAM), Bilkent University, Ankara, Turkey
- 1.13. **08/02 – 06/03** Visiting Scientist, Concordia University, Montreal, Canada
- 1.14. **3/98 - 1/99** Visiting Professor, Technical University of Munich, Munich, Germany
- 1.15. **2/96 - 9/98** Associate Provost, Bilkent University, Ankara, Turkey
- 1.16. **1/96 - 2/96** Visiting Professor, Tokyo Institute of Technology, Dept. of Electrical and Electronics Eng., Tokyo, Japan
- 1.17. **2/96 – Present:** Professor, Bilkent University, Dept. of Electrical and Electronics Engineering, Ankara, Turkey
- 1.18. **5/90 - 2/96** Associate Professor, Bilkent University, Dept. of Electrical and Electronics

	Engineering, Ankara, Turkey
1.19. 2/88 - 5/90	Assistant Professor, Bilkent University, Dept. of Electrical and Electronics Engineering, Ankara, Turkey
1.20. 3/87 - 2/88	Post Doctoral Fellow, Australian National University, Optical Sciences Center, Canberra, Australia
1.21. 3/86 - 2/87	Post Doctoral Researcher, Ohio State University, Dept. of Electrical Eng., Columbus, Ohio, USA
1.22. 9/81 - 2/87	Graduate Research Associate, Ohio State University, Dept. of Electrical Eng., Columbus, Ohio, USA
1.23. 12/79 - 7/81	Research Assistant, Middle East Technical University (METU), Dept. of Electrical Eng., Ankara, Turkey

PROFESSIONAL AWARDS

- [2000] IEEE Third Millennium Medal Recipient
- [1998] Alexander von Humboldt Research Fellow
- [1996] Tubitak (Scientific and Technical Research Council of Turkey) Research Award
- [1991] METU Parlar Foundation Research Award
- [1991] IEEE Outstanding Student Branch Counsellor Award
- [1986] Ohio State University, ElectroScience Laboratory, Outstanding Dissertation Award
- [1981-1987] Fulbright Scholar
- [1972-1981] Tubitak Scholar

GRANTS

- Project co-director for Aselsan ARGE Project “KANAT: Development of Propagation Simulation System for Point to Point and Point to Area links” Grant Amount: US\$ 750 000. 09/2013 – 03/2016.
- Project Director: “New Physical Optics Optics Method for Curvilinear Refractive Surfaces and its Verification in the Design and Testing of W-Band Dual-Aspheric Lenses”, US Air Force Office of Scientific Research, European Office of Scientific Research, 09/ 2012 – 09/2013. Grant Amount: US\$ 25 000.
- Project Director for the TUBİTAK Research Grant No. EEEAG- 112 E 255, Yapısal Sağlık İzleme İçin Kablosuz Pasif Elektromanyetik Algılayıcı Sistemlerin Tasarlanması ve Gerçekleştirilmesi”, Grant amount: 239 160 TL. 03/2013 – 03/2015.
- Project Director for the TEİAŞ Contract “YHMIKS: Yan Hizmetler Merkezi İzleme ve Kontrol Sistemi”, subcontractor: Havelsan A.Ş. 07/2011 – 03/2013 (Total Budget 2 720 000 TL, Bilkent Share 453 000 TL).
- Project Director for the RTÜK Contract “KARTEF: Karasal Sayısal Radyo Televizyon Frekans

Planlaması” as a subcontractor for GATE Elektronik A.Ş. 06/2011 – 11/2012. (Total Budget: 1 200 000 TL, Bilkent share: 630 000 TL).

- Project Director, IMBE Decoder, ASELSAN, 1/2011-10-2011.
- Researcher in “Newcom++: Network of Excellence in Wireless Communications”, European Union 7th Framework Programme project, Call No: FP7-ICT-2007.1, Project no:216715, 01/2008 - 12/2010. (Total budget: 4 964 199 Euros, Bilkent Share: 146 840 Euros)
- Project Director for the TUBITAK Research Grant No. EEEAG-106E081 “Antenna Analysis and Propagation Channel Modelling for MIMO Systems”, 9/2006 -9/2008 (Grant Amount 164 000 YTL).
- Project Director for “Centralized Management Information System Development for Telekomünikasyon Kurumu (Telecommunications Authority)”, Aselsan, 01/06-12/06. (Grant Amount: USD 260 000).
- Project Director for “Modern Management Information System Development for Telekomünikasyon Kurumu (Telecommunications Authority)”, Aselsan, 06/2006-12/2007. (Grant Amount: USD 400 000).
- Researcher in the TUBITAK Research Grant No. EEEAG-105E065 “New Information Technologies for Turkey”, 12/2005 - 12/2008. (Grant Amount USD 400 000).
- Project Director for “Coverage Analysis for Digital Land Mobile Systems”, Aselsan, 05/05-12/06. (Grant Amount USD 70 000).
- Researcher in “Newcom: Network of Excellence in Wireless Communications”, European Union 6th Framework Programme project, 03/2004 - 03/2007. (Project Grant Amount: 9 000 000 Euros, Bilkent Share: 347 142 TL).
- Project Co-Director for the TUBITAK Research Grant No. EEEAG-103E037 “Processing of Light with Micro-scale to nano-scale Mirrors and Lenses for the Emerging Optoelectronic Applications”, 04/04 - 04/07. (Grant Amount 4 464 YTL)
- Project Director for "MASKE: Radar Cross Section Analysis of Liquid Tank", for Turkish Space and Aeronatics Industries, 9/03 – 03/04. (Grant amount: USD 6 100).
- Project Associate Director for "National Frequency Management System" Aselsan, (for General Directorate of Radiocommunications of the Republic of Turkey), 5/98 – 11/02. (Grant amount: USD 3 650 000).
- Project Associate Director for "Radio and TV Frequency Planning of Turkey" for Supreme Council of Radio and TV of Turkey, 7/94 – 6/95.
- Project Director for TUBITAK International Cooperation Project on "Accurate Simulation of Reflector Antennas", 4/94 - 4/96. (Grant Amount: USD 2 000)
- Project Director for the TUBITAK Research Grant No. EEEAG-114 "RCS study of coated cavities using Riemann-Hilbert technique", 9/93 - 9/95.(Grant amount: USD 2 000)
- Researcher in the NATO Science-for-Stability project with Grant No. TU-MIMIC, 1/93 - 1/98. (Grant amount: USD 600 000)
- Project Director for NATO-AGARD Guidance and Control Panel Project T.65 on “Fiber Optic Structural Sensor for the Aircraft”, 10/89 - 10/91.

HONORS, SCHOLARLY and PROFESSIONAL DUTIES and ACHIEVEMENTS

- [2014] Chairman of URSI-TURKİYE'2014 Scientific Congress
- [2014] Scientific Programme Coordinator, for URSI General Assembly and Scientific Symposium 2014, 16-23 August 2014, Beijing, China.
- [2012-Present] President of URSI Turkish National Committee.
- [Consultant] Vestel Elektronik A.Ş. On “Digital Broadcasting in Europe”.
- [2011] Vice-Chair of URSI General Assembly and Scientific Symposium 2011, 13-20 August 2011, Istanbul.
- [2010] Chairman of URSI-TURKİYE'2010 Scientific Congress
- [2010-2012] Member of Tubitak SAVTAG (Defense Technologies Research Group) Executive Committee
- [2010] Chairman of YOK (Council of Higher Education) Committee on University Research Funding
- [2008- Present] Evaluator for MUDEK (Engineering Accreditation Evaluation Association)
- [2005-Present] Chair of URSI National Committee on “Waves and Fields”(Commission B)
- [2007] Chairman of the “Digital TV Set-Top Box Specifications Commission” of Supreme Council of Radio and TV of Turkey.
- [2007-2008-2010-2011] Evaluator for MUDEK (Engineering Accreditation Evaluation Association)
- [2003-2005] Chair of URSI National Committee on “Electromagnetic Noise and Interference”
- [2004-2012] Vice Chair of URSI National Committee
- [2004] Chairman of URSI-TURKİYE'2004 Scientific Congress
- [2000] Member of the Turkish Delegation at the World Radiocommunication Conference (WRC-2000) of ITU-R
- [1995-1997] Chairman of IEEE Turkey Section
- [1995] Chairman of the Turkish Delegation for the resolution of the "Broadcasts over Borders" with the Government of Bulgaria
- [1995-2000] Chairman of IEEE AP-MTT-ED Societies Joint Chapter in Turkey Section
- [1994-1995] Vice-chairman of the Frequency Planning Commission of Supreme Council of Radio and TV of Turkey.
- [1994] Steering Committee Member of MELECON'94 IEEE Region 8 International Conference
- [1991-1993] Chairman of IEEE Turkey Section
- [1989-1991] Co-founder and Vice-chairman of IEEE Turkey Section

- [1992] Organizing Committee Chairman of BILCON'92 International Conference
- [1990-1992] Counsellor for IEEE Bilkent Student Branch
- [1990] Organizing Committee Member of BILCON'90 International Conference
- [1975-1979] High Honor Student at Middle East Technical University
- [Reviewer] IEEE Trans. AP, IEEE Trans. MTT, IEEE Trans. EMC, Opt. Lett., IEE Proceedings, JOSA, IEICE Trans. on Elect. Japan, Elektrik (Turkish Journal of Electrical Engineering).
- [Consultant (1990-1992)] Turkish Ministry of Defense SSM (Undersecretariat For Defense Industries) in the field of integrated communications systems, in particular on optical fiber communication systems (TAFICS Project).

MEMBERSHIP

- [1996] Member of New York Academy of Sciences
- [1982] Member of IEEE (Senior Member: 1993)
- [1986] Member of Sigma Xi (Scientific Research Society)
- [1986] Member of the Honor Society of Phi Kappa Phi
- [1994 - Present] Correspondent of URSI (International Union of Radio Science)
- [1989 - 1994] Member of SPIE (Society of Optical Engineering)
- [1979 - Present] Member of Turkish Chamber of Electrical Engineers (EMO)

TEACHING

Graduate Courses

- EE603 Advanced Electromagnetic Theory I
- EE604 Advanced Electromagnetic Theory II
- ELEC 6301 Advanced Electromagnetic Theory (at Concordia University)
- EE553 Optical Waveguide Theory
- EE554 High Frequency Techniques in Electromagnetics
- EE534 Wireless Communications (jointly given with Prof. Koymen)

Undergraduate Courses

- Math240 Differential Equations

- Math204 Complex Calculus
- EEE 202 Circuit Theory
- EEE 351 Engineering Electromagnetics
- EE 303 Electromagnetic Theory I
- EE 304 Electromagnetic Theory II
- EE 451 Microwaves
- EE 452 Antennas and Propagation
- EEE 495 Electrical and Electronics Engineering Design II

GRADUATE STUDENT SUPERVISION

Şeyma Canik, {M.S.}, “Non Foster Impedance Matching for Electrically Small Capacitive Antennas”, 9/2011 – 9/2014

Behnam Ghassemiparvin, {M.S.}, “Scattering from Impedance objects at the edge of a perfectly conducting wedge”, 9/2010 – 9/2012.

Celal Alp Tunc, {Ph.D.}, “Antenna Analysis/Design and Propagation Channel Modelling for MIMO Wireless Communication Systems”, 9/2003 – 02/2009.

Harun Bodur, {M.S.}, “Application and Improvement of SAGE Algorithm for Channel Parameter Estimation”, 9/2005-9/2008.

Keziban Akkaya, {M.S.}, “Polarization Included Geometry Based Channel Modelling for MIMO Systems”, 9/2005-9/2008.

Ender Öztürk, {M.S.}, “Comparison of Two Physical Optics Integration Approaches For Electromagnetic Scattering”, 9/2005-9/2008.

Burak Alisan, {M.S.}, “Efficient Computation of Surface Fields Exited on an Electrically Large Circular Cylinder with an Impedance Boundary Condition”, Co-Supervisor: Dr. Vakur Erturk, 9/03 –07/06.

Celal Alp Tunc, {M.S.}, “Application of the Spectral Acceleration Forward-Backward Method for Propagation Over Terrain, ”, Co-Supervisor: Dr. Vakur Erturk, 9/01 –09/03.

N. Aslıhan Albayrak {M.S.} “RCS Computation_s with PO/PTD for conducting and Impedance Objects Modelled as large Flat Plates”, 9/2002 – 7/2005.

Baris Babaoglu, {M.S.}, “Application of Biconjugate Gradient Stabilized Method with Spectral Acceleration for Propagation Over Terrain Profiles, ” Co-Supervisor: Dr. Vakur Erturk, 9/01 –10/03.

K. Alper Ozturk, {M.S.}, “Implementation of Physical Theory of Diffraction for Radar Cross Section Calculations”, 09/2000 – 06/02.

Ozgur Yilmaz, {M.S.}, “Propagation Simulation for Outdoor Wireless Communications in Urban Areas”, 9/99 – 06/02.

Imad Abd-el Hafez, {M.S.}, “Ultimate Intrinsic SNR in Magnetic Resonance Imaging by Optimizing the EM field Generated by Internal Coils”, Co-Supervisor: Dr. Ergin Atalar, 9/97 - 6/2000.

H. Karapinar, {M.S.}, "Radiation Fields of the Line Source in a Cylindrical Wire Gratings," Co-supervisor: Dr. Vladimir Yurchenko, 9/96 – 1/99.

S. Ouardani, {M.S.}, "Radiation Fields of a Complex Source in 2-D Circular Radome With Metal Gratings," Co-supervisor: Dr. Vladimir Yurchenko, 10/95 - 8/97.

E. Ofli, {M.S.}, "Analysis of Dielectric Waveguide Bends and Curved Coupler Structures Using Finite Difference Beam Propagation Method," 10/95 - 7/97.

A.P. Tan, {M.S.}, "Optimization of Reflector Antenna Serrations Using Genetic Algorithm and Equivalent Edge Current Concepts," 10/95 - 7/97.

T. Oguzer, {Ph.D.}, "Analysis of Cylindrical Reflector Antennas in the Presence of Circular Radomes by Complex Source - Dual Series Approach ", 10/91 - 11/96.

A. Bircan, {M.S.}, "A Study of Line Source Fields Transmitted Thorough a 2D Circular Dielectric Radome or a Slab", 10/94 - 8/96.

G. Onal, {M.S.}, "Computer Aided Analysis and Simulation of Complex Passive Integrated Optical Circuits", Co-supervisor: Assoc. Prof. Dr. Haldun Ozaktas, 10/91 - 6/93.

D. Colak, {M.S.}, "Numerical Study of plane Wave Scattering from Cavity- Backed Apertures with Outer or Inner Material Coating", Co-supervisor: Dr. Alexander I_. Nosich, 10/91 - 7/93.

T. Oguzer, {M.S.}, "The Examination of New Equivalent Edge Currents in the Prediction of High Frequency Backscattering from Flat Plates ", 10/89 - 9/91.

S. G. Tanyer, {M.S.}, "The Examination of the Effect of Polarization on the Radiation Losses of Bent Optical Fibers", 10/88 - 7/90.

SCHOLARLY PUBLICATIONS

6.1. Ph.D. Dissertation:

Electromagnetic Scattering from a Class of Open-ended Waveguide Discontinuities, March 1986. Supervisor: Prof. Dr. P.H. Pathak, Ohio State University, Columbus, Ohio.

6.2. Edited Book:

A. Altintas and G. Saplakoglu, *Lightwave Technology and Communications*, Bilkent University, Ankara, Turkey, July 1992.

6.3. Book Chapters:

- C.A. Tunc, F. Akleman, V.B. Erturk, A. Altintas, and L. Sevgi, "Fast Integral Equation Solutions: Application to Mixed Path Terrain Profiles and Comparisons with Parabolic Equation Method", in Complex Computing-Networks, Brain-like and Wave-oriented Electrodynamical Algorithms, I.C. Goknar and L. Sevgi, Editors, Springer Proceedings in Physics, No: 104, 2005, pp.55-63.
- S. Topcu, H. Koymen, A. Altintas, and I. Aksun. "A GIS Aided Frequency Planning Tool for Terrestrial Broadcasting and Land Mobile Services", Chapter 8 in Geographical Information Systems (GIS) for Emergency Preparedness and Health Risk Reduction, David Briggs, Pip Forer, Lars Jarup, and Richard Stern, Editors, Kluwer, 2002. pp.157-171.

- A. Altintas, A.I. Nosich, "The Method of Regularization and its Application to some EM Problems", Chapter in the *Applied Computational Electromagnetics*, Editors: Nikolaos K. Uzunoglu, Konstantina S. Nikita and Dimitra I. Kaklamani, NATO-ASI Series vol.171, pp.409-423, Springer Verlag, 1999.

6.4. Articles in Refereed Journals:

1. K. Aydin, A. Altintas and A. Hizal, "Null-field Formulations of Dielectric Coated Antennas", *Radio Science*, Vol.18, No.6, pp.1225-1242, Nov-Dec. 1983.
2. A.W. Snyder, A. Ankiewicz and A. Altintas, "Fundamental Error of Recent Coupled Mode Formulations", *Electronics Letters*, Vol.23, No.20, pp.1097-1098, Sept. 1987.
3. A. Altintas, P.H. Pathak and M.C. Liang, "A Selective Modal Scheme for the Analysis of Coupling Into or Radiation From a Large Open-ended Waveguides". *IEEE Trans. Antennas Prop.*, Vol.36, No.1, pp.84-96, January 1988.
4. A.W. Snyder, A. Ankiewicz and A. Altintas, "Coupled Mode Theory Neglects Polarization Phenomena", *Electronics Letters*, Vol.24, No.11, pp.720-721, May 1988.
5. A. Ankiewicz, A. Altintas and A.W. Snyder, "Polarization Properties of Evanescent Couplers", *Optics Letters*, Vol.13, No.6, pp.524-526, June 1988.
6. P.H. Pathak and A. Altintas, "An Efficient High-frequency Analysis of Modal Reflection and Transmission Coefficients for a Class of Waveguide Discontinuities", *Radio Science*, Vol.23, No.6, pp.1107-1119, November-December 1988.
7. A. Altintas, "Archimedes' Principle as an Application of Divergence Theorem", *IEEE Trans. on Education*, Vol.33, No.2, pp. 222, May 1990.
8. A. Altintas and J.D. Love, "Effective Cutoffs for Modes on Helical Fibers", *Optical and Quantum Electronics*, Vol.22, pp. 213-226, 1990.
9. T. Oguzer, A. Altintas and O.M. Buyukdura, "On the Elimination of Infinities in the PO Component of Equivalent Edge Currents", *Wave Motion*, Vol. 18, No.1, pp. 1-10, 1993.
10. A. Altintas and S.G. Tanyer, "An Examination of the Effect of Polarization on the Radiation Losses of Bent Optical Fibres", *Optical and Quantum Electronics*, Vol.25, No. 2, pp. 105-112, February 1993.
11. Colak, A.I. Nosich and A. Altintas, "Radar Cross Section Study of Cylindrical Cavity-backed Apertures with Outer or Inner Material Coating: The Case of E-Polarization", *IEEE Trans. on Antennas and Propagation*, Vol.41, No.11, pp.1551-1559, November 1993.
12. G. Onal, A. Altintas and H. Ozaktas, "Computer-aided analysis and simulation of complex passive integrated optical circuits of arbitrary rectilinear topology", *Optical Engineering*, Vol.33, No. 5, pp.1596-1603, May 1994.
13. A. Altintas, O.M. Buyukdura and P.H. Pathak, "An extension of PTD concept for aperture radiation problems", *Radio Science*, Vol. 29, No.6, pp.1403-1407, Nov.-Dec. 1994.
14. Colak, A.I. Nosich and A. Altintas, "Radar Cross Section Study of Cylindrical Cavity-backed Apertures with Outer or Inner Material Coating: The Case of H-Polarization," *IEEE Transactions on Antennas and Propagation*, Vol.43, No.5, pp.440-447, May 1995.

15. T. Oguzer, A. Altintas, and A. I. Nosich, "Accurate simulation of reflector antennas using complex source-dual series approach", *IEEE Trans. Antennas Propagation*, Vol.43, No.8, pp.793-801, August 1995.
16. Altintas, O. Ocali, S. Topcu, S.G. Tanyer, and H. Koymen, "Computer Aided Frequency Planning for the Radio and TV Broadcasts," *IEEE Trans. Broadcasting*, Vol.42, No.2, pp.144-148, June 1996.
17. A.I. Nosich, V.B. Yurchenko, and A. Altintas, "Numerically Exact Analysis of a 2-D Variable-Resistivity Reflector Fed by a Complex-Point Source," *IEEE Trans. Antennas Propagation*, Vol.45, No.11, pp.1592-1601, Nov. 1997.
18. S. Koshikawa, D. Colak, A. Altintas, K. Kobayashi, and A.I. Nosich, "A Comparative Study of RCS Predictions of Canonical Rectangular and Circular Cavities with Double-Layer Material Coating," *IEICE Trans. on Electronics*, Vol.E80-C, No.11, pp.1457-1466, Nov. 1997.
19. V.B. Yurchenko, A. Altintas, and A.I. Nosich "Numerical Optimization of a Cylindrical Reflector-in-Radome Antenna System" *IEEE Trans. Antennas and Propagation*, Vol.47, No.4, pp.668-673, April 1999.
20. Altintas, S.Ouardani, and V.B. Yurchenko "Complex Source Radiation in a cylindrical Radome of Metal-Dielectric Grating" *IEEE Trans. Antennas and Propagation*, vol.47, No.8, pp.1293-1300, August 1999.
21. S. Boriskina, A.I. Nosich, and A. Altintas, "Effect of Imperfect Flat Earth on the Vertically Polarized Radiation of Cylindrical Reflector Antenna" *IEEE Trans. Antennas and Propagation*, vol.48, No.2, pp.285-292, February 2000.
22. S.S. Vinogradov, E.D. Vinogradova, A.I. Nosich, and A. Altintas "Analytical regularization based analysis of a spherical reflector symmetrically illuminated by an acoustic beam", *Journal of Acoustical Society of America*, Vol.107, no.6, pp.2999-3005, June 2000.
23. A.Altintas and P. Russer, "Time-Domain Equivalent Edge Currents For Transient Scattering" *IEEE Trans. Antennas and Propagation*, Vol.49, No.4, pp.602-607, April 2001.
24. T. Oguzer, A.I. Nosich, and A. Altintas, "E-Polarized beam scattering by an open cylindrical PEC strip having 'Conical Section' profile", *Microwave and Optical Technology Letters*, vol.31, no.6, pp.480-484, 2001.
25. H. Celik, Y. Eryaman, A.Altintas, I.A. Abdel-Hafez, E. Atalar, "Evaluation of Internal MRI Coils using ultimate Intrinsic SNR", *Magnetic Resonance in Medicine*, Vol.52, pp.640-649, 2004.
26. A.V.Boriskin, A.I. Nosich, S.V. Boriskina, T.M. Benson, P. Sewell and A. Altintas, "Lens or Resonator? Electromagnetic Behaviour of and Extended Hemielliptic Lens for a Sub-Millimeter-Wave Receiver," *Microwave and Optical Technology Letters*, vol.43, no.6, pp.515-518, December 20 2004.
27. T. Oguzer, A.I. Nosich, and A. Altintas, "Analysis of an arbitrary conic section profile cylindrical reflector antenna, H-polarization case", *IEEE Trans. Antennas and Propagation*, Vol.52, No.11, pp.3156-3162, November 2004.
28. Babaoglu, A. Altintas and V.B. Erturk, "Spectrally accelerated BiConjugate gradient stabilized method for scattering from and propagation over electrically large inhomogenous geometries", *Microwave and Optical Technology Letters*, vol. 46, pp. 158-162 (2005).
29. C.A. Tunc, A. Altintas, and V.B. Erturk, "Examination of existent propagation models over large terrain profiles using fast integral equation solution", *IEEE Trans. Antennas and Propagation*, vol. 53, pp. 3080-3083 (2005).
30. T. Oguzer, and A. Altintas, "Analysis of the nonconcentric radome-enclosed cylindrical reflector antenna system, E-polarization case", *J. of EM Wave and Applications.(JEMWA)*, vol. 19, pp. 2093-2111 (2005).

31. Alisan, V.B. Erturk, and A. Altintas, "Efficient computation of nonparaxial surface fields excited on an electrically large circular cylinder with an impedance boundary condition", *IEEE Trans. Antennas and Propagation*, vol. 54, pp. 2559-2567 (2006).
32. A.A. Nosich, Y.V. Gandel, T. Magath and A. Altintas, "Numerical analysis and synthesis of 2D quasi-optical reflectors and beam waveguides based on integral-equation approach with Nystrom2s discretization", *J. Opt. Soc. Am. A. (JOSA-A)*, vol. 24, no.9, 2831-2836 (2007).
33. T. Oguzer, and A. Altintas, "Analysis of the nonconcentric reflector antenna in radome system by the iterative reflector antenna nad radome interaction", *J. of EM Wave and Applications.(JEMWA)*. vol. 21, pp. 57-70 (2007).
34. AYagbasan, C.A. Tunc, V.B. Erturk, A. Altintas and R. Mittra, "Characteristic Basis Function Method for Scattering from Terrain Profiles," *ELEKTRIK, Turk. J. Elec. Engin.*, vol.16, no.1, pp.33-39, 2008.
35. Celal Alp Tunc, Defne Aktas, Vakur B. Erturk, and Ayhan Altintas "Capacity of Printed Dipole Arrays in MIMO Channel", *IEEE Antennas and Propagation Society Magazine*, Vol.50, No.5, pp. 690-698, October 2008.
36. S.Karan, V.B. Erturk and A. Altintas, "Closed-Form Green's Function Representations in Cylindrically Stratified Media For Method of Moments Applications" *IEEE Transactions on Antennas and Propagation*. vol. 57, pp. 1158-1168, 2009.
37. V. Yurchenko and A. Altintas, "Physical Optics Modeling of 2D Dielectric Lenses," *J. Opt. Soc. Am. A*, vol.26, no.2, pp.305-312, February 2009.
38. U. Olgun, C. A. Tunc, D. Aktas, V.B. Erturk and A. Altintas, "Particle Swarm Optimization of Dipole Arrays for Superior MIMO Capacity" *Microwave and Optical Technology Letters*, vol.51, no.2, pp.333-337, February 2009.
39. T. Oguzer, A. Altintas and A.Nosich, "Integral Equation Analysis of an Arbitrary Profile and Varying-Resistivity Cylindrical Reflector Illuminated by an E-Polarized Complex-Source-Point Beam " *J. Op. Soc. Am. A*, vol.26, No:7, pp. 1525-1532, July 2009.
40. V. Byelobrov, J. Ctyroky, Trevor M. Benson, Ronan Sauleau, Ayhan Altintas and Alexander I. Nosich, "Low Threshold Lasing Eigenmodes of Infinite Periodic Chain of Quantum Wires", *Optics Letters*, Vol.35, No.21, pp.3634-3636, Nov.1, 2010.
41. A. Yagbasan, C.A. Tunc, V.B. Erturk, A. Altintas and R. Mittra, "Characteristic Basis Function Method for Solving Electromagnetic Scattering Problems Over Rough Terrain Profiles," *IEEE Trans. Antennas Propagat.*, vol. 58, pp.1579-1589, May 2010.
42. C.A. Tunc, U. Olgun, V.B. Erturk, A. Altintas, "On the Capacity of Printed Planar Rectangular Patch Antenna Arrays in the MIMO Channel: Analysis and Measurements", *IEEE Antennas and Propagation Society Magazine*, vol.52, no.6, pp. 181-193, Nov-Dec.2010.
43. T. Oguzer, A. Altintas, A.I. Nosich, "Analysis of the elliptic profile cylindrical reflector with a non-uniform resistivity using the complex source and dual series approach: H-polarization case," *Optical and Quantum Electronics*, vol. 45, no 6, 2013.
44. "V. B. Yurchenko, A. Altintas, M. Ciydem, and S. Koc, "Experimental conditions for the excitation of thin disk whispering gallery mode resonators," *Progress In Electromagnetics Research C*, vol.43, pp.29-40, 2013.
45. Burak Ozbey, Emre Unal, Hatice Ertugrul, Ozgur Kurc, Christian M. Puttlitz, Vakur B. Erturk, Ayhan Altintas, Hilmi Volkan Demir, Wireless Displacement Sensing Enabled by Metamaterial Probes for Remote

Structural Health Monitoring, *Sensors*, vol.14, no.1, pp.1691-1704, Jan. 2014.

46. V. B. Yurchenko, M. Ciydem, M. Gradziel, J. A. Murphy, and A. Altintas, "Double-Sided Split-Step MM-Wave Fresnel Lenses: Design, Fabrication and Focal Field Measurements," *Journal of European Optical Society: Rapid Publications*, vol:9, 14007, 2014.
47. B. Ghassemiparvin, A. Altintas, "Scattering from an Impedance Object at the Edge of a Perfectly Conducting Wedge," *IEEE Trans. Antennas and Propagat.* Vol.62, no. 2, pp.852-861, Feb. 2014.
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CURRENT RESEARCH INTERESTS

- Electromagnetic radiation, scattering and diffraction
- Antennas and electromagnetic compatibility
- Wave propagation, simulation and spectrum management
- Fiber and Guided Wave Optics

CURRENT TEACHING INTERESTS

- Electromagnetics, Electricity and Magnetism
- Electromagnetic Waves
- Electrical Circuit Theory
- Microwaves and Antennas
- Signals and Systems
- Introduction to Electrical Engineering
- Wireless Communications