

Professor Dr. Elif (URAY) AYDIN

Education

Ph.D.(1996-2001) Electrical and Electronics Engineering, Gazi University.

Conducted research at the Electromagnetic Communication Laboratory of the Electrical Engineering Department, at Pennsylvania State University between October 1999-October 2000.

MS(1993-1996) Electrical and Electronics Engineering, Gazi University.

BS(1988-1992) Electrical and Electronics Engineering, Gazi University.

Experience

1993- 2001 **Research Assistant**, Electrical and Electronics Engineering, Gazi University, Ankara, Turkey.

1999- 2000 **Visiting Scholar**, Electromagnetic Communication Laboratory in the Electrical Engineering Department, Pennsylvania State University, USA. (Supported by TUBITAK)

2001-2010 **Asst. Prof. Dr.**, Electrical and Electronics Engineering, Atılım University, Ankara, Turkey.

2010-2015 **Assoc. Prof. Dr.**, Electrical and Electronics Engineering, Atılım University, Ankara, Turkey.

2015- **Prof. Dr.**, Electrical and Electronics Engineering, Atılım University, Ankara, Turkey.

Research

JOURNAL PUBLICATIONS

Indexed in SCI

1. **E. Aydın**, E. Kalaycı, *“Implementing consecutive project-based learning in an antenna and propagation course”*, International Journal of Electrical Engineering Education, Vol. 53, No. 1, January 2016
2. K.Y. Kapusuz, S. Can, **E. Aydın**, *“Calculation of resonant frequencies of a shorting pin-loaded ETMA with ANN”*, Microwave and Optical Technology Letters, 56 (3), 660–663 (2014).

3. K.Y. Kapusuz, S. Can, E. Aydın, "**Neural network based resonant frequency solver for rectangular shaped shorting pin-loaded antennas**", Microwave and Optical Technology Letters, 12 (55), 3025-3028, (2013).
4. E. Aydın, N. E. Çağıltay, "**A New RF and Microwave Engineering Course Enriched With Advanced Technologies**", Computer Applications in Engineering Education , 20, 634–645 (2012).
5. E. Aydın, S. Can, "**Operating Frequency Calculation of a Shorting Pin-Loaded ETMA**", Microwave and Optical Technology Letters, 54, 1432-1435 (2012).
6. N.E. Çağıltay, E. Aydın, C.C. Aydın, A. Kara, M. Alexandru, "**Seven Principles of Instructional Content Design for a Remote Laboratory: A Case Study on ERRL**", IEEE Trans. on Education, 2, 320-327 (2011).
7. E. Aydın, S. Can, "**Modified resonant frequency computation for tunable equilateral triangular microstrip patch**", IEICE Electron. Express, 7(7), 500-505 (2010).
8. R. Öktem, E. Aydın, "**An RFID Based Indoor Tracking Method for Navigating Visually Impaired People**", Turkish Journal of Electrical Engineering & Computer Sciences , 18(2), 185-198 (2010).
9. E. Aydın, "**Computation of a Tunable Slot-Loaded Equilateral Triangular Microstrip Antenna**" Journal of Electromagnetic Waves and Applications, 23(14/15), 2001-2009 (2009).
10. N.E. Çağıltay, E.U. Aydın, R. Öktem, A. Kara, M. Alexandru, B. Reiner, "**Requirements on Remote RF Laboratory Applications: An Educators' Perspective**", IEEE Trans. on Education, 52 (1), 75-81 (2009).
11. E. Aydın, "**A new model for indoor propagation prediction using genetic algorithm**", IEICE Electron. Express, 5(24), 1067-1073 (2008).
12. C. Alparslan, N.E. Çağıltay, M. Özen, E.U. Aydın, "**Teaching Usage of Equipments in a Remote Laboratory**", Turkish Online Journal of Educational Technology, TOJET 7(1), article 4 (2008).
13. Ç. S. Gürel, E. Aydın, E. Yazgan, "**Computation and Optimization of Resonant Frequency and Input Impedance of a Coax-Fed Circular Microstrip Antenna**", Microwave and Optical Technology Letters, 49(9), 2263-2267 (2007).
14. E. Aydın, R. Yildirim, "**Optimizing the Performance of Single Mode Laser Diode System Using Genetic Algorithm**", Optics and Lasers in Engineering, 42, 41-46 (2004).
15. E. Aydın, C. Nakiboğlu, "**Genetic Algorithm Approach to Estimate Radar Cross Section of Dielectric Objects**", IEICE Transactions on Electronics, E86-c(11), 2237-2240 (2003).

16. S. Chakravarty, R. Mitra, E. Aydın, *“An Extrapolation Technique for Predicting the RCS Characteristics of Large Objects Using Genetic Algorithm and Prony’s Method”* Microwave and Optical Technology Letter, 28(6), 410-414 (2001).

Others

1. N.E. Cagiltay, G. Tokdemir, E. Aydın, A. Kara, *“A Remote laboratory development as an action research: A case study”*, Scientific Research and Essays, 7(27), 2337-2342 (2012).
2. A. Kara, M.E. Ozbek, N. Cagiltay, E. Aydın, *“Maintenance, Sustainability and Extendibility in Virtual and Remote Laboratories”*, Procedia-Social and Behavioral Sciences, 28, 722-728 (2011).
3. A. Kara, N. Cagiltay, E. Aydın, *“Remote RF Laboratory Requirements: Engineers’ and Technicians’ Perspective”*, Turkish Online Journal of Distance Education (TOJDE), 8, 80-95 (2007).

Books&Book Chapters

1. Alexandru, M., Kara, A., Aydın, E., Yapıcı, A.C., Communications, RF and Microwaves Fundamentals. From theory to remote experimentations, Transilvania University Publishing House, ISBN 978-973-598-357-4, 2009.
2. Özalp Yaman Ş., Aydın, E., Cagiltay, N.E, Proceedings of International Engineering Education Conference, ISBN 978-975-6707-28-9, 2010.
3. E. Aydın, M.F. Caglar, A. Kara, *Antenna Theory: Analysis and Design* (translation), Nobel Publications, 2013.

CONFERENCE PUBLICATIONS (International)

1. G. İnanan, B. Baranoglu, E. Aydın, *“An Application of High-Power Electromagnetic Pulse: Forming of sheet metal using electromagnetic waves”* Eleco 2015, 26-29, November 2015.
1. T. Acar, F. Çalışkan, E. Aydın, *“Comparison of Computer-Based Propagation Models with Experimental Data Collected in an Urban area at 1800 MHz”*, 16th IEEE MTT-S WAMICON, 2015, Orlando.
2. T. Demirci, F. Çalışkan, E. Aydın, *“Microstrip Antennas For WiMAX Applications”*, IEEE Proceedings of the 23rd Conference on Signal Processing and Communication Applications, 2015, Malatya
3. M. Demir, M. A. Özkök, F. Çalışkan, E. Aydın, *“Design And Analysis Of Rectangular Dielectric Rod Antennas”*, IEEE Proceedings of the 23rd Conference on Signal Processing and Communication Applications, 2015, Malatya.

4. A. Çelik, M. Serindere, Z. Özmen, F. Çalışkan, E. Aydın, "**Modelling of the Slotted Rectangular Waveguide Array Antennas**", IEEE Proceedings of the 23rd Conference on Signal Processing and Communication Applications, 2015, Malatya.
2. E. Özyurt, E. Aydın, A. Ç. Yapıcı, "**An algorithm for passive RFID based location estimation**", IEEE 22th Signal Processing and Communications Applications Conference, 2014, Trabzon.
3. B. Baranoğlu, E. Aydın, S. Tutuncu, K. Y. Kocaman "**Electromagnetic Bulging: A Sheet Metal Forming Process Using Electromagnetic Field**", Diemolds, 2013, Antalya.
4. B. Dağdeviren, K.Y. Kapusuz, S. Can, E. Aydın, "**Düzlemdeş Dalga Kılavuzu Beslemeli Yama Antenlerde Çalışma Frekansı ve Bant Genişliğini Etkileyen Parametrelerin Analizi**" IEEE 21th Signal Processing and Communications Applications Conference, 2013, Girne.
5. B. Dağdeviren, K.Y. Kapusuz, S. Can, E. Aydın, "**Çift Frekanslı, H-Şekilli Anten Tasarımı Ve Üretimi**" IEEE 21th Signal Processing and Communications Applications Conference, 2013, Girne.
6. G.Kaynaköz, N. Koray Kılıç, K.Y. Kapusuz, S. Can, E. Aydın, "**Reader Antenna Design for RFID Applications**", IEEE 21th Signal Processing and Communications Applications Conference, 2013, Girne.
7. E. Aydın, S. Can, "**Enhancement of Student Learning in Antennas and Propagation Area via Real-Life Projects**", 2nd International Engineering Education Conference (IEEC), 2012, Antalya.
8. S. Can, E. Aydın, G.N. Can, "**Woman Students Situation in Engineering Faculties in Turkey**", 2nd International Engineering Education Conference (IEEC), 2012, Antalya.
9. S. Can, E. Aydın, E. Kalaycı, "**A Study on Antennas and Propagation Course Project Collaborated with Department of Management**", 2nd International Engineering Education Conference (IEEC), 2012, Antalya.
10. E. Aydın, B. Baranoğlu, "**Encouraging Engineering Students in Collaborative Research Projects**", 2nd International Engineering Education Conference (IEEC), 2012, Antalya.
11. Ş. Tütüncü, K. Y. Kocaman, T. Yılmaz, O. Coşkun, G. İnanan, S. Annak, E. Aydın, B. Baranoğlu "**Electromagnetic Sheet Metal Forming Process Using Electromagnetic Field**", 2nd International Engineering Education Conference (IEEC), 2012, Antalya.
12. K.Y. Kapusuz, S.Can, E. Aydın, "**Rectangular Shaped, Dual-Frequency Antenna with a Single Shorting Pin with a Single Shorting Pin**", 9th International Conference on Electronics, Computer and Computation (ICECCO), 2012, Ankara.
13. K.Y. Kapusuz, S.Can, E. Aydın, "**Dual frequency two shorting pin loaded equilateral triangular patch antennas**", 32th PIERS, 2012, Moskova.

14. S. Can, K. Y. Kapusuz, E. Aydın, "**Analysis of a Dual Frequency Circular Patch Antenna**", 32th PIERS, 2012, Moskova.
15. S. Can, K. Y. Kapusuz, E. Aydın, "**Design & analyzes of dual-frequency circular microstrip patch antenna with a shorting pin**", 12th Mediteranean Microwave Symposium, 2012, İstanbul.
16. S. Can, K. Y. Kapusuz, E. Aydın, "**Dual-Frequency, Single Shorting Pin Loaded Equilateral Triangular Patch Antennas**", 12th Mediteranean Microwave Symposium, 2012, İstanbul.
17. E. Özyurt, E. Aydın, A. Ç. Yapıcı, "**Indoor Location Finding Algorithms for Mobile Robots Carrying Passive RFID Tags**" 6th European Conference on Antennas and Propagation (EUCAP), 2012, Prag.
18. N. Cagiltay, E. Aydın, A. Kara, C. Erdem, M.E. Ozbek, "**Virtual or Remote Laboratory Why?**", World Conference on Educational Multimedia, Hypermedia and Telecommunications, 2011, Lizbon.
19. A. Kara, C. Erdem, M.E. Ozbek, N. Cagiltay, E. Aydın, "**A web Based Training Module for Teaching Digital Communications: Content Design**", Int. Engineering Education Conference (IEEC), 2010, Antalya.
20. E. Özyurt, E. Aydın, N. Cagiltay, "**Instructional Approaches in a RF and Microwave Engineering Course**", Int. Engineering Education Conference (IEEC), 2010, Antalya.
21. A. Kara, E. Aydın, M.E. Ozbek, N. Cagiltay, "**Design and Development of a Remote and Virtual Environment for Experimental Training in Electrical and Electronics Engineering**", IEEE 9th Int. Conf. On Information Technology Based Higher Education and Training (ITHET), 2010, Kapadokya.
22. E. Aydın, N. Cagiltay, "**Use of Advanced Technologies in a RF and Microwave Engineering Course**", IEEE Global Engineering Education Conference (EDUCON), 2010, Madrid.
23. N. Cagiltay, E. Aydın, A. Kara, "**Principles for the Design of a Remote Laboratory: A Case Study on ERRL**", IEEE Global Engineering Education Conference (EDUCON), 2010, Madrid.
24. R. Oktem, E. Aydın, N. Cagiltay, "**An RFID Based Location Finding and Tracking with Guidance**", 4th IEEE International Conference on Wireless Comm., Networking and Mobile Computing, 2008, Dalian.
25. R. Oktem, E. Aydın, N. Cagiltay, "**An Indoor Navigation Aid Designed for Visually Impaired People**", 34th Annual Conference of the IEEE Industrial Electronics Society, 2008, Orlando.

26. C.Ç. Aydın, G. Türkmen, E. Özyurt, **E. Aydın**, N. E. Çağiltay, M. E. Özbek, N. Ceren Alparslan, A. Kara, **“Distance Laboratory Applications ERRL: A Study on Radio Communication in Electronic Field”**, IEEE 11th International Conf. on Optimization of Electrical and Electronic Equipment, 2008, Brasov.
27. C. C. Aydın, G. Türkmen, E. Özyurt, **E. Aydın**, N. Cagiltay, M. E. Özbek, A. Kara, **“Uzaktan Laboratuvar Uygulamaları ERRL: Elektronik Alanında Radyo Haberleşmesi Üzerine Bir Çalışma”**, 2nd International Future-Learning Conference On Innovations in Learning for the Future 2008 : e-Learning, Turkish Informatics Foundation Distance Learning Platform (UzEP), 2008, İstanbul.
28. **E. Aydın**, R. Öktem, Z. Dinçer, İ. K. Akbulut, **“Study of an RFID Based Moving Object Tracking System”**, RFIDEurasia 2007, 2007, İstanbul.
29. Z. Dinçer, R. Öktem, **E. Aydın**, **“A Bayes Decision Model for RSS Based Location Estimation”**, IEEE 15th Signal Processing and Communications Applications Conference, 2007, Eskişehir.
30. A. Kara, **E. Aydın**, R. Öktem, and N. Çağiltay, **“A Remote Laboratory for Training in Radio Communications: ERRL”**, IEEE 18th International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), 2007, Atina.
31. M. Özen, **E. Aydın**, A. Kara, **“Pilot Remote Experiment in The ERRL: Measurement of Scattering Parameters”**, IEEE 18th International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), 2007, Atina.
32. N. C. Alparslan, N. Cagiltay, M. Özen, **E. Aydın**, **“How to Teach Usage of Equipments in a Remote Laboratory”**, IEEE 18th International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), 2007, Atina.

CONFERENCE PUBLICATIONS (National)

1. C. Erdem, M.E. Ozbek, A. Kara, N. E. Cagiltay, **E. Aydın**, **“Web tabanlı Sayısal Haberleşme Sistemi Eğitim Sistemi Geliştirilmesi: Teknik Boyut”**, URSI Ulusal Kongresi, 2010, Kıbrıs.
2. A. Kara, N.E. Cagiltay, **E. Aydın**, C.C. Aydın, A. Kara, **“What Do Remote Laboratory Applications Promise for Engineering Students: A Case Study of ERRL Project”**, Bilişim Teknolojileri Işığında Eğitim Konferansı bildiri kitapçığı, 2008, İstanbul.
3. N. E. Çağiltay, **E. Aydın**, M. E. Özbek, R. Öktem, A. Kara, **“Avrupa Uzaktan Radyo Laboratuvarı: ERRL”**, Akademik Bilişim Konferansı, 2007, Kütahya.
4. M. Safran, **E. Aydın**, **“Pek Geniş Bant Anten Tasarımı ve İmalatı”**, URSI Ulusal Kongresi, 2006, Ankara.

5. O. Aldemir, Z. Dinçer, **E. Aydın**, R. Öktem, "**Aktif RFID Sistemi Kullanarak İç Mekanda Yönlendirme**" URSI Ulusal Kongresi, 2006, Ankara.
6. **E. Aydın**, N. E. Çağıltay, "**Elektrik Devre Analizi Dersinde Bilgisayar Destekli Laboratuvar Uygulamaları**", T.B.D. 21. Ulusal Bilişim Kurultayı, 2004, Ankara.
7. C. Nakiboğlu, **E. Uray**, "**Difraksiyonun Geometrik Teorisi ile Reflektör Anten Analizi**", Elektrik-Elektronik Bilgisayar Mühendisliği 7. Ulusal Kongresi, 1997, Ankara.
8. C. Nakiboğlu, **E. Uray**, "**Düzensiz Olmayan Örneklem Tekniklerinin Demet Yayılım Metoduna (BPM) Uygulanması**", Elektrik-Elektronik Bilgisayar Mühendisliği 7. Ulusal Kongresi, 1997, Ankara.
9. **E. Uray**, C. Nakiboğlu, "**Geometrik Optik Metoduyla Alanlar Hesabı**", Elektrik-Elektronik Bilgisayar Mühendisliği 6. Ulusal Kongresi, 1995, Ankara.

Projects (National/International)

1. Workpackage coordinator, "European Remote Radio Laboratory (ERRL) ", (Sponsor: European Commission (Leonardo Da Vinci Program)). You can visit ERRL project web site at <http://errlmoodle.atilim.edu.tr>
2. Researcher, "PUSULAL: A Compass to Aid the Visually Impaired in Shopping Centres", (Sponsor: Tübitak).
3. A Speed, Orientation and Location Finding Algorithm for Navigation of a Passive RFID Tag Attached Mobile Robot (Sponsor: Atılım University, ARGEDA)