



Prof. Dr. AHMET AKSEN
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- 1. Name** : **Ahmet AKSEN**
- 2. Birth Date** : 1960
- 3. Academic Title** : Professor
- 4. Education :**

DATES	DEGREE	UNIVERSITY	DEPARTMENT
1976-1981	BS	Middle East Technical University	Electrical and Electronics Engineering
1982-1984	MS	Middle East Technical University	Electrical and Electronics Engineering
1989-1994	PhD	Ruhr Universitaet Bochum - Germany	Lehrstuhl für Nachrichtentechnik

5. Academic Titles

YEAR	TITLE	UNIVERSITY	DEPARTMENT
1995	Asst. Prof.	İstanbul University	Electrical and Electronics Engineering
1996	Assoc. Prof.	İstanbul University	Electrical and Electronics Engineering
2002	Professor	Işık University	Electronics Engineering

6. Supervised MS and PhD Theses

6.1. MS Theses

1. Hayri Simsek, "Construction of Multivariable Broadband Matching Networks: An Integrated Design Tool", Işık University, 2009.
2. Ömer Sümer, "Insertion Loss Design of RF Filters with Mixed Lumped-Distributed Realization", Işık University, 2007.
3. Emir Murad Yüksel, "Broadband Microwave Amplifier Design Tool", Işık University, 2006.
4. Hakan Büyüktopçu, "WLAN University Campus Internetworking Infrastructure", Işık University, 2003.

6.2. PhD Theses

Metin Şengül, "Circuit Models with Mixed Lumped and Distributed Elements for Passive Oneport Devices", Işık Üniversitesi, 2006, (Coadvisor: Sıddık Yarman).

7. Publications

7. 1. Journal Publications (SCI-Expanded)

1. B.S.Yarman, A.Kılınc, **A.Aksen**, "Immitance Data modelling via linear Interpolation Techniques A Classical Circuit Theory Approach", *International Journal of Circuit Theory and Applications*, vol. 32, pp. 537-563, 2004.
2. **A.Aksen**, B.S. Yarman, "A Real Frequency approach to describe lossless two-ports formed with mixed lumped and distributed elements", *AEÜ-International Journal of Electronics and Communications*, vol. 6, pp. 389-396, November 2001.
3. B.S.Yarman, **A.Aksen**, A.Kılınc, "An immitance based tool for modeling passive one-port devices by means of Darlington equivalents", *AEÜ-International Journal of Electronics and Communications*, vol. 6, pp. 443-451, November 2001.
4. B.S.Yarman, **A. Aksen**, "An integrated design tool to construct lossless matching networks with mixed lumped and distributed elements", *IEEE Transactions on Circuits and Systems Fundamental Theory and Applications*, CAS-39, Nr.9, pp.713-723, September 1992.

7.2. Journal Publications (Non SCI-Expanded)

7.3. International Conference Papers

1. S.Kilinc, R. Kopru, **A.Aksen**, B.S. Yarman, "Mixed Element Wideband Microwave Amplifier Design via Simplified Real Frequency Technique" 14th Mediterranean Microwave Symposium (MMS2014), December 12-14 2014, Marrakech, Morocco
2. R.Kopru, S.Kilinc, **A.Aksen**, B.S.Yarman, "Unit Element Bandpass Filter Design via Simplified Real Frequency Technique for UWB Microstrip Patch Antenna", 14th Mediterranean Microwave Symposium (MMS2014), December 12-14 2014, Marrakech, Morocco.
3. D.C.Atilla, C.Aydin, T.Nesimoglu, R.Kopru, **A.Aksen**, B.S. Yarman, "Design of Tunable Amplifier Using Digital Capacitors", 14th Mediterranean Microwave Symposium (MMS2014), December 12-14 2014, Marrakech, Morocco.
4. B.S.Yarman, **A.Aksen**, R.Kopru, C.Aydin, D.C.Atilla, "A High Precision Cascade Synthesis Technique for Real Frequency Matching Involving Brune and Darlington Type-C Sections", 14th Mediterranean Microwave Symposium (MMS2014), December 12-14 2014, Marrakech, Morocco.
5. B.S. Yarman, **A. Aksen**, R. Kopru, C. Aydin, and C. Atilla "Computer Aided High Precision Darlington Synthesis for Real Frequency Matching", Proceedings of IEEE Benjamin Franklin Symposium on Microwave and Antenna Sub-systems (BenMAS 2014), Philadelphia, USA, September 2014.
6. R. Köprü, S. Kılınç, **A. Aksen**, and B.S. Yarman "Design and Implementation of Wideband Microwave Amplifiers Based on Normalized Gain Function", Proceedings of IEEE Benjamin Franklin Symposium on Microwave and Antenna Sub-systems (BenMAS 2014), Philadelphia, USA, September 2014.
7. P. Lindberg, M. Şengül, E. Çimen, B.S. Yarman, A. Rydberg and **A. Aksen**, "Single Matching Network Design for a Dual Band PIFA Antenna via Simplified Real Frequency Technique," Proceedings of the first European Conference on Antennas and Propagation EuCAP 2006, Nice, France, November 2006, 6-10.
8. P. Lindberg, M. Şengül, E. Çimen, B.S. Yarman, A. Rydberg, **A. Aksen**, "A Single Matching Network Design for a Double Band PIFA Antenna via Simplified Real Frequency Technique," Proceedings of the Asia-Pacific Microwave Conference APMC 2006 at Yokohama, Japan, December 2006, 12-15.
9. B.S. Yarman, M. Sengul, A. Kilinc, **A. Aksen**, "Reflectance Data Model with Mixed Lumped and Distributed Elements for Wireless Communication Systems", ECCTD 2005 Proceedings of the 2005 European Conference on Circuit Theory and Design, Volume 3, 28 Aug.-2 Sept. 2005, Page(s):289-292, Cork, Ireland.
10. B.S. Yarman, M. Şengül, A. Kılınç, **A. Aksen**, "Circuit Model for Given Reflectance Data Constructed with Mixed Lumped and Distributed Elements for high speed/high frequency communication systems", The Fourth International Workshop on Multidimensional (ND) Systems NDS 2005, Wuppertal, Germany, July 10-13 2005.

11. **A. Aksen**, H. Pınarbası, B.S. Yarman, “A Parametric Approach to Construct Two-Variable Positive Real Impedance Functions for the Real Frequency Design of Mixed Lumped-Distributed Matching Networks”, *Proceedings of IEEE International Microwave Conference, IMS'2004*, pp. 1851-1854, Forth Worth, Texas, June 2004.
12. **A. Aksen**, B.S. Yarman, “A parametric approach to describe distributed two-ports with lumped discontinuities for the design of broadband MMICs”, *Proceedings of IEEE International Symposium on Circuits and Systems ISCAS'2003*, Bangkok, Thailand, May 2003.
13. E.G. Çimen, S. Yarman, **A. Aksen**, “Design and simulation of miniaturized communication systems employing symmetrical lossless two-ports constructed with two-kinds of elements”, *Proceedings of IEEE International Symposium on Circuits and Systems ISCAS'2003*, Bangkok, Thailand, May 2003.
14. Ali Kılınç, H. Pınarbası, Sıddık Yarman, **Ahmet Aksen**, “Microwave Amplifier design for mobile communication via immittance data modeling”, *Proceedings of International Symposium on Circuits and Systems ISCAS'2003*, Bangkok, Thailand, May 2003.
15. **Ahmet Aksen**, B.Sıddık Yarman, “Scattering based Parametric description of lossless two-ports with commensurate lines and lumped discontinuity elements for MMICs”, *Proceedings of ECCTD'2003 European Conference on Circuit Theory and Design*, VII, pp.21-24, Krakow, Poland, September 2003.
16. Hacı Pınarbası, Metin Sengül, **Ahmet Aksen**, B.Sıddık Yarman, “Real frequency design of broadband microwave amplifiers with mixed lumped and distributed element equalizers for MMICs”, *Proceedings of ELECO'2003, International Conference on Electrical and Electronics Engineering*, Bursa, Turkey, December 2003.
17. B.S. Yarman, **A. Aksen**, A. Kilinc, “Immittance Data Modelling via Linear Interpolation Techniques”, *Proceedings of IEEE International Symposium on Circuits and Systems, ISCAS'2002* Phoenix, Arizona, v.2, pp.527-530, May 2002.
18. B.S. Yarman, E.G. Çimen, **A. Aksen**, “Description of symmetrical lossless two-ports in two kinds of elements for the design of microwave communication systems in MMIC Realization”, *Proceedings of 15th European Conference on Circuit Theory and Design, ECCTD'2001*, Espoo, Finland, August 2001.
19. **A. Aksen**, B.S. Yarman, “Design of microwave amplifiers using distributed equalizers with lumped discontinuities for hybrid and monolithic MIC realizations”, *Proceedings of Progress in Electromagnetics Research Symposium, PIERS'2001*, Osaka, Japan, July 2001.
20. **A. Aksen**, B.S. Yarman, “A computer aided design technique for hybrid and monolithic microwave amplifiers employing distributed equalizers with lumped

discontinuities”, *Proceedings of IEEE Int. Microwave Symposium, IMS’2001*, Arizona, USA, May 2001.

21. B.S. Yarman, **A. Aksen**, “A reflectance-based computer aided modelling tool for high speed/high frequency communication systems”, *Proceedings of IEEE International Symposium on Circuits and Systems, ISCAS’2001*, Sydney, Australia, May 2001.
22. B.S. Yarman, A. Kılınç, **A. Aksen**, “A systematic procedure to model measured data obtained from a passive physical device by means of its Darlington Equivalent”, *First IEEE Balkan Conference on Signal Processing, Communications, Circuits and Systems*, İstanbul, June 2000.
23. B.S. Yarman, A. Sertbaş, **A. Aksen**, “A computer-aided design technique for analog RF circuits with lumped and distributed element interconnect models”, *First IEEE Balkan Conference on Signal Processing, Communications, Circuits and Systems*, İstanbul, June 2000.
24. B.S. Yarman, E.G. Çimen, **A. Aksen**, A. Sertbaş, “Explicit descriptive equations to construct symmetrical lossless two ports with mixed lumped and distributed elements”, *IEEE Balkan Conference on Signal Processing, Communication, Circuits and Systems*, İstanbul, June 2000.
25. B.S. Yarman, F. Güneş, T. Bazan, **A. Aksen**, “Potential broadband characteristics of a microwave transistor and realization conditions”, *IEEE Balkan Conference on Signal Processing, Communications, Circuits and Systems*, İstanbul, June 2000.
26. A. Sertbaş, **A. Aksen**, B.S. Yarman, “Explicit formulas for a special class of two-variable resonant ladder networks with simple lumped elements and commensurate stubs”, *International Conference on Electrical and Electronics Engineering, ELECO’99*, pp.132-135, Bursa, Dec. 1999.
27. A. Sertbaş, **A. Aksen**, B.S. Yarman, “Construction of analog RF circuits with lumped and distributed components for high speed/high frequency mobile communication MMICs,” *Proceedings of the European Conference on Circuit Theory and Design, ECCTD’99*, pp.1123-1126, Stresa, Italy, September 1999.
28. **A. Aksen**, E.G. Çimen, B.S. Yarman, “A numerical real frequency broadband matching technique based on parametric representation of scattering parameters”, *Proceedings of IEEE Asia Pacific Conference on Circuits and Systems, APCCAS’98*, pp.351-354, Chiangmai, Thailand, November 1998.
29. A. Sertbaş, **A. Aksen**, B.S. Yarman, “Construction of some classes of two-variable lossless ladder networks with simple lumped elements and uniform transmission lines”, *Proceedings of IEEE Asia Pacific Conference on Circuits and Systems, APCCAS’98*, pp.295-298, Chiangmai, Thailand, November 1998.
30. **A. Aksen**, B.S. Yarman, “Cascade synthesis of two-variable lossless two-port networks of mixed, lumped elements and transmission lines: A semi-analytic procedure”, *Proceedings of the First International Workshop on*

Multidimensional Systems, NDS-98, pp.35-37, Technical University of Zielona Gora, Poland, July 1998.

31. A. Sertbaş, B.S. Yarman, **A. Aksen**, “Explicit two-variable description of a class of band-pass lossless two-ports with mixed, lumped elements and transmission lines”, *Proceedings of the First International Workshop on Multidimensional Systems, NDS-98*, pp.45-47, Technical University of Zielona Gora, Poland, July 1998.
32. B.S. Yarman, N. Bağcı, **A. Aksen**, “The role of projects in student centered education”, *International Conf. on New Trends in Science Education, FMVCE'97*, İstanbul, May 1997.
33. **A. Aksen**, B.S. Yarman, “A semi-analytic method to design microwave networks with mixed lumped elements and transmission lines”, *Proceedings of Progress in Electromagnetic Research Symposium, PIERS'96*, University of Insbruck, Austria, July 1996.
34. **A. Aksen**, B.S. Yarman, “A semi-analytic procedure to describe lossless two-ports with mixed lumped and distributed elements”, *Proceedings of International Symposium on Circuits and Systems, ISCAS'94*, pp. 205-208, London, England, May 1994.
35. **A. Aksen**, B.S. Yarman, “Construction of low-pass ladder networks with mixed lumped and distributed elements”, *Proceedings of European Conference on Circuit Theory and Design, ECCTD'93*, vol.1, pp. 1388-1393, Davos, Switzerland, September 1993.
36. B.S. Yarman, **A. Aksen**, A. Fettweis, “An integrated design tool to construct lossless matching networks with mixed lumped and distributed elements”, *Proceedings of 10'th European Conference on Circuit Theory and Design, ECCTD'91*, vol.3, pp.1280-1289, Copenhagen, Denmark, September 1991.
37. B.S. Yarman, **A. Aksen**, A. Fettweis, “An integrated design tool to construct lossless two-ports with mixed lumped and distributed elements for matching problems”, *Proceedings of 3'rd International Symposium on Recent Advances in Microwave Technology, ISRAMT'91*, vol. 2, pp. 570-573, Reno, Nevada, USA, August 1991.
38. **A. Aksen**, N. Yildırım, “Broadbanding branch-line couplers by matching and optimization”, *Mediterranean Elektrotechnical Conference, MELECON'85, Proceedings on Radio-communication*, pp.85-88, , Madrid, Spain, September 1985.

7.4. Book Chapters

A. Aksen, B.S. Yarman, “Cascade synthesis of two-variable lossless two-port networks with lumped elements and transmission lines”, in *Multidimensional Signals, Circuits and Systems*, Editors: K. Galkowski and J. Wood, Chapter 12, pp.219-232, Taylor and Francis, New York, 2001, (ISBN 0-415-25363-2(hbk))

7.5. National Journal Publications

7.6. National Conference Papers

1. R.Köprü, H.Kuntman, A.Aksen, B.S.Yarman, “Kablosuz Haberleşme İçin Yeni Bir Genişband Mikrodalga Yükselteç Tasarım Yöntemi”, ASELSAN Haberleşme Teknolojileri Çalıştayı, 18-19 Ekim 2013, Ankara
2. D.Ç.Atilla, Ç.Aydın, T.Nesimoğlu, R.Köprü, A.Aksen, B.S.Yarman, “Ayarlanabilir Mikrodalga Uyumlaşma Devresi ve Yükselteç Tasarımı”, ASELSAN Haberleşme Teknolojileri Çalıştayı, 18-19 Ekim 2013, Ankara
3. Şengül M., **Aksen A.**, Yarman B.S., (2005), “Karışık Toplu ve Dağınık Devre Elemanları İçeren Merdiven Devrelerin Sentezi”, Elektrik-Elektronik-Bilgisayar Mühendisliği 11. Ulusal Kongresi ve Fuarı, İstanbul, 22-25 Eylül 2005.
4. H. Pınarbaşı, M. Şengül, **A. Aksen**, S.B. Yarman, “Genişbant Mikrodalga Devre Tasarım Paket Programı”, *Proc. of the National Conference on Electricity Electronics and Computer Engineering ELECO 2004*, Bursa, Turkey, 166-169, 08-12 Aralık 2004.
5. **A. Aksen**, E.G. Çimen, B.S. Yarman, “ Saçılma parametrelerinin parametrik tanımı ile bilgisayar destekli geniş bandlı empedans uyumlaştırma”, *Çukurova Üniversitesi, Elektrik-Elektronik Mühendisliği Bölümü, 10.Yıl Sempozyumu*, s.18-20, Adana, Şubat 1998.
6. A. Sertbaş, B.S. Yarman, **A. Aksen**, “Mikrodalga kuvvetlendiricileri için bandgeçiren tip karma (toplu-dağılmış) elemanlı dengeleyici tasarımı”, *Çukurova Üniversitesi, Elektrik-Elektronik Mühendisliği Bölümü, 10.Yıl Sempozyumu*, s.84-89, Adana, Şubat 1998.
7. E.G. Çimen, B.S. Yarman, **A. Aksen**, “Kayıpsız iki kapılı devrelere ait ölçüm verilerinin dağılmış elemanlarla modellenmesi”, *Elektrik mühendisliği 6. Ulusal kongresi*, Bursa, Eylül 1995.
8. **A. Aksen**, N.Yıldırım, "Uyumlama ve iyileştirme yöntemi ile geniş bandlı merdiven tipi yönlü bağlaçların bilgisayarla tasarımı ve gerçekleştirilmesi", *Birinci ulusal elektrik mühendisliği sempozyumu kitabı*, pp. 529-534, Ağustos, 1985, Adana.

8. Research Projects

NEWCOM NoE,
Project No: 507325, WPR3 Research integration for Project 3,
“Design, modelling and experimental characterisation of RF and microwave devices and subsystems”, 2004-2006

9. Administrative Positions and Employment History

9.1. Administrative Positions

DATES	UNIVERSITY/ INSTITUTION	POSITION
1997-1999	Işık University	Head of Department (acting), Electronics Eng.
1997-2002	Işık University	Head of Division, Computing and Information Center
2000-2005	Işık University	Head of Department, Computer Engineering
2005-2012	Işık University	Head of Department, Electrical and Electronics Eng.
2013-2014	Işık University	Vice Dean, Engineering Faculty
2015-	Işık University	Head of Department, Electrical and Electronics Eng.

9.2. Employment History

DATES	TITLE	UNIVERSITY/ INSTITUTION	DEPARTMENT
1981-1983	Engineer	PTT	Radiolink
1983-1988	Research Assistant	Middle East Technical University	Electrical and Electronics Eng.
1988	Instructor	Hacettepe University	Electrical and Electronics Eng.
1989-1995	Research Assistant	Ruhr-Universitaet Bochum, Germany	Lehrstuhl für Nachrichtentechnik
1995-1996	Assist. Prof. Dr.	İstanbul University	Electrical and Electronics Eng.
1996-1997	Assoc. Prof. Dr.	İstanbul University	Electrical and Electronics Eng.
1997-2002	Assoc. Prof. Dr.	Işık University	Electronics Eng.
2002-	Prof. Dr.	Işık University	Electrical and Electronics Eng.

10. Scientific and Professional Membership

Institute of Electrical Electronics Engineers (IEEE)
Chamber of Electrical Engineers, Turkey

11. Awards and Honours

1. TÜBİTAK Scholarship (1977-1984)
2. DAAD Fellowship (1988-1994)

12. Courses Taught

- Electromagnetic Fields and Waves
- Microwave Engineering
- Wireless Communications
- Circuit Theory
- Electronics
- Electronics Lab.
- Engineering Orientation

13. Other Academic and Scientific Activities

13.1. Reviewer Activities (SCI-Expanded Journals)

IET Electronics Letters

International Journal of Electronics and Communications

13.2. Conference Organization

- **ICTPE2013- 9th International Conference on Technical and Physical Problems of Electrical Engineering**, 8-11 September, Işık University, İstanbul (Organizing Committee Member, Conference Secretary)
- **EMC2013- 2. National Electromagnetic Compatibility Symposium**, 9-10 September 2013, Işık University, İstanbul (Organizing Committee Member)
- **CEW2012 “Continue Education Workshops: Radio Frequency Integrated Circuit Design Workshop”**, 10-14 Eylül 2012, Işık Üniversitesi, İstanbul (Organizing Committee Member)

13.3. Other Reviewer Activities

- TESİD 2013 “Yenilikçilik Yaratıcılık Ödül Hakemliği”, November 2013, İstanbul
- “IPContest2012 International Project Contest and Exhibition for Undergraduate Students in Science and Engineering”, Işık University, June 2012
- TÜBİTAK ARDEP, R1001 project reviewer (2008-2012)

14. Research Interests

- Broadband matching theory
- Real frequency broadband matching
- Multidimensional network theory
- Broadband microwave amplifier design
- Microwave Filter Design
- Construction of circuit models for collected RF data
- Multidimensional wave digital filter applications in computational electromagnetics