

## CURRICULUM VITAE

1. **Name** : Ercan Topuz
2. **Academic Title** : Prof. Dr.
3. **Education** : Dr.Müh.
4. **Institution** : DOĞUŞ UNIVERSITY

Degree	Program	University	Date
BA / BS	Electronics	I.T.U	1959
MA/MS/MBA	Electronics	I.T.U	1964
Ph.D.	EM Waves	ITU	1973

5. **Academic Titles** **Date**
  - Assistant Professor : 1965-1973
  - Associate Professor : 1973-1981
  - Full Professor : 1981- -

6. **Theses Supervised**

6.1. M.A. /MBA/MS Theses More than 30

6.2. Ph.D. Theses

- A.Pekmezci, "Characterization of EM wave propagation in matematerial environments"D.Ü., 2018.
- S. Şimşek, "Kesiti Ardışık Dielektrik Bölgeler ile Dolu EM Dalga Kılavuzlarında İletim", İ.T.Ü., 2008.
- Ç. Uluşık, "EM Işınlayıcı Dizileri için Zaman-Frekans Domeni Green Fonksiyonu Gösterimleri", İ.T.Ü., 2008
- B. Türetken, "Skaler Dalgaların Dielektrik Horndan Işıması", İ.T.Ü., 2002. (A. Büyükaksoy ile birlikte)
- Akleman F., "Time and Frequency Domain Modeling for Groundwave Propagation over Non-homogeneous Earth", İTÜ, 2002. (L. Sevgi ile birlikte).
- Özyalçın M. O., "Modeling and Simulation of Electromagnetic Problems via Transmission Line Matrix Method", İTÜ, 2002. (L. Sevgi ile birlikte)
- N. Yener, "Bazı Üniform Dalga Kılavuzlarında Özdeğerlerin Transmisyon Hattı Eşdeğerlikleri Yardımıyla Belirlenmesi", İ.T.Ü., 2000.
- H. İnanoğlu, "Efficient Indoor Propagation Simulation Techniques and Their Applications to Performance Evaluation in DECT Sytems", İ.T.Ü., 1998.
- L. Sevgi, "Local Intrinsic Modes - A New Method to Solve Non-Seperable Wave Problems", İ.T.Ü. 1990. (L.B. Felsen ile birlikte)

7. **Publications**

- 7.1. Articles published in SCI, SSCI, AHCI journals

- A. Pekmezci, E. Topuz, "Modal Properties of Parallel Plate Waveguide Partially Loaded with Double Negative Materials"; Journal of Electromagnetic Waves and Applications, May 2019; DOI: 10.1080/09205071.2019.1614096.
- A. Pekmezci, E. Topuz, L. Sevgi, "First and Second Order Mur Type ABCs for DNG Media"; The Applied Computational Electromagnetics Society Journal; vol. 33, no. 6, pp: 569-574, June 2018.
- A. Pekmezci, E. Topuz, L. Sevgi, "Finite Difference Time Domain Formulation for Epsilon-Negative Medium Using Wave Equation"; International Journal of RF and Microwave Computer-Aided Engineering/Vol. 26, No. 4, May 2016.
- Çağatay Uluşık, Ercan Topuz, Levent Sevgi, "Some Characteristics of Radiation from Linearly Phased/Sequentially Excited Periodic, Rectangular Arrays of Dipoles", IEEE Trans. Antennas and Propagation, Vol.56, No.6, pp.1794-1799, June, 2008.
- Serkan Şimşek, Ercan Topuz, "Some Properties of Generalized Scattering Matrix Representations for Metallic Waveguides with Periodic Dielectric Loading", IEEE Trans. Microwave Theory and Techniques, Vol. 55, No. 11, pp. 2336-2344, Nov. 2007
- S.Şimşek, C.İşık, E. Topuz, B. Esen, "Determination of the Complex Permittivity of Materials with Transmission/Reflection Measurements in Rectangular Waveguides", AEU-International Journal of Electronics and Communications, Vol. 60, No.9, pp. 677-680, Oct. 2006.
- N.İnce, E.Topuz, "Modelling and Simulation for Safe and Efficient Navigation in Narrow Waterways", Journal of the Royal Institute of Navigation, Vol.57, No.1, pp.53-71, 2004.

- N. Yener, E. Topuz, "A Novel Mom Approach for Obtaining Accurate and Efficient Solutions in Optical Rib Waveguides", *Turkish Journal of Electronics and Communications*, Vol.10, No.2, pp.399-410, 2002.
- B.Polat, E. Topuz, L. Sevgi, Wave Propagation Through Linearly Tapered Homogeneous Dielectric Slab Waveguides, AEU, Int. J. of Electronics and Commun., Vol.52, No.2, pp.105-108, March 1998
- H. İnanoğlu, E.Topuz, "An Optimal Ray Tracing Model for Wireless Indoor Communication Systems", AEU International Journal of Electronics and Communications,, Vol.52, No.6, pp.355-366, 1998.
- L. Sevgi, S. Paker, E. Topuz, Intrinsic Mode (IM) Formalism and Its Asymptotical Evaluations in 3D Non-Homogeneous Environments, AEU, Int. J. of Electronics and Communication, V.50, No.3, pp.201-207, May 1996
- L. Sevgi, E. Topuz, Split step Parabolic Equation analysis of Coupled Dielectric Waveguides, ELEKTRİK, Turkish J. of Electrical Engineering and Computer Sciences, Vol. 3, No 2-3, pp. 85-92, 1995
- E. Topuz, L. Sevgi, Intrinsic Mode Representations of the Green's Function for a Benchmark Problem: The Nonpenetrable Wedge, J. of Electromagnetic Waves and its Applications, V.9, N. 7/8, pp. 1065-1081, 1995
- E.Topuz, L.B. Felsen, "Sound Pulse Propagation in Weakly Range Dependent Shallow Ocean", Ocean Seismo Acoustics, ed. T.Akal, J.M.Bergson, pp.1-11, Plenum Press, 1986.
- E.Topuz, L.B.Felsen, "Intrinsic Modes:Numerical Implementation in a Wedge Shaped Ocean", Journal of the Acoustical Soc.of Amer., Vol.78, No.5, pp.1735-1745, 1985.
- E.Topuz, L.B.Felsen, "Hybrid Representation of Long Range Sound Propagations in an Underwater Surface Duct", Journal of the Acoustical Soc. of Amer., Vol.78, No.5, pp.1746-1756, 1985.
- E.Topuz, L.B.Felsen, " Multiply Reverberated Sound Fields in Surface Ducts", Scattering Phenomena in Underwater Acoustics, Vol 7, Pt.3,pp.135-142, April 1985.
- E.Topuz, E.Niver, L.B.Felsen, "Electromagnetic Fields Near a Concave Perfectly Conducting Cylindrical Surface", IEEE Trans. Antennas and Propagation, Vol.AP 30, No.2, pp.280-292, 1982.
- E.Topuz, L.B.Felsen, "High Frequency Electromagnetic Fields on Perfectly Conducting Cylindrical Surfaces", IEEE Trans. Antennas and Propagation, Vol. AP 28, No.6, pp 819-831, 1980.
- B.Yazgan, E.Topuz, "Laser Beam Scintillation in the Turbulent Atmosphere - Comparison of Theory and Experiments", Bulletin of the Technical University of Istanbul, Vol 31, No.1, pp.94 -109, 1978.
- E.Topuz, "E- Type Modes in Cylindrical Dielectric Waveguides with Boundary Perturbations", IEEE Trans. Microwave Theory and Techniques, Vol. MTT 24, No.11, pp. 872- 876, 1976.

## 7.2. Articles published in other international indexed journals

### 7.3. Proceedings (International)

- Ayşegül PEKMEZCİ, Ercan TOPUZ, Levent SEVGİ; " FDTD Formulation for Epsilon-Negative (ENG) Medium Using Wave Equation, 3rd International EMC Türkiye Conference, Işık Üniversitesi, İstanbul 2-4 Eylül 2015.
- S.Parlar, E.Topuz, "A Monte Carlo Type Simulation Approach for Performance Evaluation in Optical Burst Switched Networks", Proc. of COST 285 Symposium, Springer ISBN 10: 0387 32921-8, pp. 309-324., 2006.
- E. Gedik, E. Topuz, "Double Core Photonic Crystal Fiber", Proc. 5th WSEAS, pp. 394-398, 2006.
- S.Parlar, E. Topuz, "Determination of Burst Drop Probability in Optical Burst Switched Networks with Monte Carlo Simulations", IEEE, ICTON 2005, pp. 429-432, 2005.
- E.Topuz, "Modeling the Fiber Optic Propagation Channel", Proc. of COST 256 Symposium, Kluwer Academic Publ.,ISBN 0-7923-7547-5, pp. 255-270, 2002.
- K. Emir, E.Topuz," Radar Signature Analysis and Imaging of Military Targets", Agard, CP-583, pp.22-1 – 22-6, 1997 .
- H. İnanoğlu, E.Topuz, "Hybrid Representations for Indoor Propagation Modeling", Proceedings of the IEEE Wireless Communications Symposium, Boulder U.S.A.. pp.215-219, 1997.
- H.Inanoğlu, E.Topuz, "A Hybrid Ray-Optical Model for Indoor Communications", Proc. ICT'96 International Conference on Telecommunications, pp.721-725, April 1996, Istanbul, Turkey.
- L. Sevgi, E. Topuz, E. Panayirci, HF-VHF Surface Wave Propagation over mixed- paths, Proc. of ICT'96 International Conference on Telecommunications, V.2, pp.713-717, April 13-17, Istanbul, Turkey, 1996.
- B. Polat, E. Topuz, L. Sevgi, Wave Propagation Through Tapered Homogeneous Dielectric Slab Waveguides, Proc. of ICEAA'95, Int. Conf. EM Advanced Appl., September 12-15, Torino, Italy, 1995.
- H.Inanoğlu, E.Topuz, " Hybrid Ray-Mode Modeling of Indoor Propagation for Wireless Applications", Proc. 6 th IEEE Symposium on Personal,Indoor and Mobile Radio Communication , pp. 312-317, September 1995, Toronto, Canada.
- L. Sevgi, E. Topuz, E. Panayirci, Stochastic Modeling of Target Detection in Surface Wave HF Radars, Proc. of 5th Int. Conf. on Advances in Comm. and Control, June 26-30 1995, Chania, Greece
- L. Sevgi, E. Topuz, Comparison of Coupled Mode and Parabolic Equation Methods for the Analysis of Coupling Between Two-Dielectric Waveguides, PIERS'94, Proc. of Progress in EM Research Symposium, July 11-15 1994, The Netherlands
- E. Topuz, L. Sevgi, Intrinsic Mode Representations of the Green's Function for a Benchmark Problem: The Nonpenetrable Wedge, MELECON'94, Proc. of Mediterranean Electrotechnical Conf., pp. 461-464, April 12-14 1994 Antalya, Turkey
- L.Sevgi, E.Topuz, "Comparison of Coupled Mode and Parabolic Equation Methods for the Analysis of Coupling Between two Dielectric Waveguides", Proc. PIERS'94, July 1994, Netherland.
- H.Inanoğlu, E.Topuz, "A Ray Based Indoor Communications Model for DECT Applications", Proc. European Simulation Symposium, pp. 264 - 269, Oct. 1994, Istanbul,Turkey.
- L.Sevgi, E.Topuz, "Intrinsic Mode Representations of the Green's Function for a Benchmark Problem - The Non-Penetrable Wedge", Proceedings MELECON'94, pp. 461-464, April 1994, Antalya,Turkey.

- H.Inanođlu, E.Topuz, "A Novel Method of Design for a Class of Waveguide Filters", Proc. MELECON'94, pp.478-481, April 1994, Antalya, Turkey.
- E.Topuz, "A Direct Method of Synthesis for a Class of Waveguide Filters", Proc. 19 th European Microwave Conf., pp.1232-1237, Sept. 1989, London, UK.
- E. Topuz, "Ray Methods for Tapered Dielectric Antennas", Proc. of the 17th European Microwave Conf., pp.753-758, Sept. 1987, Rome,Italy.
- E.Topuz, L.B.Felsen, "High Frequency Pulse Propagation in a Tapered Dielectric Waveguide", Proc.Dig. URSI Symposium ,Aug.1986, Budapest,, Hungary.
- E.Topuz, L.B.Felsen, "Pulse Propagation at Long Ranges in an Underwater Surface Duct", Proc.Dig., JASA'85, April 1985, Austin,Texas,USA.
- E.Topuz, L.B.Felsen,"Numerical Implementation of Intrinsic Mode Green's Functions for Oceans with Weakly Penetrable Bottom", Proc.Dig.,JASA'84, October 1984, Minneapolis,USA.
- E.Topuz, "Optimization of Self-Imaging Properties in Planar Optical Waveguides", Proc. 1 st. European Conf. on Integrated Optics, pp.43-46, Sept.1981, London,UK.
- E.Topuz, L.B.Felsen, "Long-Range Sound Pulse Propagation in Underwater Surface Channels" Proc.Dig. JASA'80, Nov.1980, Los Angeles, Ca.,USA.
- E.Topuz et.al., " High Frequency Fields inside Regions with Concave Boundaries", Proc.Dig., URSI Symp., Nov.1979, Boulder, Co.,USA.
- E.Topuz, L.B.Felsen, "High Frequency Electromagnetic Fields on Perfectly Conducting Concave Surfaces", Proc.Dig., URSI Symposium , June 1979, Seattle, Wa,USA.

#### 7.4. Books or chapters in books (International)

- A.N. Ince, E. Topuz, ed.s, "Modeling and Simulation Tools for Emerging Telecommunications Networks", Springer ISBN 0-387-32921-8, 2006.
- A.N. İnce, E. Topuz, E. Panayırđı, C. İřık, "Principles of Integrated Maritime Surveillance Systems", Kluwer Academic, ISBN 0-7923-8672-8, 2000.

#### 7.5. Articles published in national refereed journals

#### 7.6. Proceedings (national)

#### 7.7. Other publications

### 8. Projects

- TWTA – Travelling Wave Tube Amplifier Design, Aselsan-İTÜ ETAV, 2006-2007.
- TURBO - Vessel Traffic Control and Management System for Turkish Straits, İTÜV-SAM, Center for Defense Study,2000 - 2002
- Long-Horizon - Turkish Integrated Maritime Surveillance System, İTÜV-SAM, Center for Defense Study, 1991 - 1997

### 9. Administrative Responsibilities

- |                                 |     |           |
|---------------------------------|-----|-----------|
| • Bölüm Başkanlığı Yardımcılığı | İTÜ | 1982-1985 |
| • Fakülte Kurulu Üyesi          | İTÜ | 2002-2007 |
| • Bölüm Başkanı                 | İTÜ | 2004-2007 |
| • Fakülte Yönetim Kurulu Üyesi  | İTÜ | 2004-2007 |
| • Üniversite Senatosu Üyesi     | İTÜ | 2004-2007 |

### 10. Membership for academic or professional organizations

- Electromagnetics Academy (1996 - ).

### 11. Awards

### 12. Undergraduate and graduate courses taught in the last two years (including the summer school program)

Academic Year	Semester	Course Title	Teaching Hours (Weekly)		Number of Students
			Theory	Practice	
2017-18	Fall	Probability (CEE 301)	4	-	34
		Olasılık (EHM 301)	4	-	29
	Spring	Linear Algeb. (CEE 104)	3	1	35

		Lineer Cebir (EHM 104)	3	1	36
		Complex Fn.s (CEE 505)	3	1	1
2018-19	<b>Fall</b>	Probability (CEE 301)	4	-	6
		Olasılık (EHM 301)	4	-	41
	<b>Spring</b>	Linear Algeb. (CEE 104)	4		4
		Lineer Cebir (EHM 104)	4		39
		Radars (CEE 416)	4		22