Dr. Ertugrul Basar

Professor of Wireless Systems, IEEE Fellow

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December 2025

Professional Experience

- 2025 – ...: *Full Professor of Wireless Systems* - Tampere University, Department of Electrical Engineering, Tampere, Finland.
- 2024 – 2025: *Full Professor and Department Chair* - Koç University, Department of Electrical and Electronics Engineering, Istanbul, Türkiye (On leave).
- 2022 Summer: *Visiting Professor (Mercator Fellow)* - Ruhr University Bochum (Ruhr-Universität Bochum), Faculty of Electrical Engineering and Information Technology, Bochum, Germany.
- 2018 – 2024: *Associate Professor* - Koç University, Department of Electrical and Electronics Engineering, Istanbul, Türkiye.
- 2017 – 2018: *Associate Professor* - Istanbul Technical University, Electronics and Communication Engineering Department, Istanbul, Türkiye.
- 2014 – 2017: *Assistant Professor* - Istanbul Technical University, Electronics and Communication Engineering Department, Istanbul, Türkiye.
- 2009 – 2014: *Research & Teaching Assistant* - Istanbul Technical University, Electronics and Communication Engineering Department, Istanbul, Türkiye.

Educational Background

- 2011 – 2012 : *Visiting Student Research Collaborator* - Princeton University, Department of Electrical Engineering, Princeton, NJ, USA.
- 2009 – 2013: *Doctor of Philosophy* - Istanbul Technical University, Electronics and Communication Engineering Department, Istanbul, Türkiye. GPA: 3.94/4.00
  Thesis: Advanced Spatial Modulation Techniques for MIMO Systems
- 2007 – 2009: *Master of Science* - Istanbul Technical University, Electronics and Communication Engineering Department, Istanbul, Türkiye. GPA: 4.00/4.00
  Thesis: New High-Rate Space-Time Block Codes
- 2003 – 2007: *Bachelor of Science* - Istanbul University, Department of Electrical and Electronics Engineering, Istanbul, Türkiye. GPA: 3.62/4.00 (High Honors)
- 2000 – 2003: *High School* - Kabatas Erkek Lisesi, Istanbul, Türkiye.

Key Research Figures

- # journal papers: 202, books: 1, book chapters: 5, proceedings: 102
- # of projects: 14, $\sum$ funding received: $\sim$ €2 million
- # of citations: ∼19,000 / h-index: 56 / FWCI : 3.44
- # of patents granted: 5 / patents pending: 12
- # of Ph.D./M.Sc. students supervised: 10/21

- # journals and conferences served as Editor: 14 / Reviewer: 53 / TPC-Member: 44
- # of invited keynotes, seminars, and presentations: ∼70
- # of scientific awards and recognitions: ∼35
- Top 2% Scientists rankings (yearly/overall): 1,517/17,655 (All fields) & 15/128 (Netw. & Telecommun.)

Research Interests

Wireless Communications ⋆ 6G and Beyond Wireless Networks ⋆ MIMO and Reconfigurable Intelligent Surfaces ⋆ Internet-of-Things (IoT) ⋆ Software-Defined Radio ⋆ Signal Processing for Communications ⋆ Deep Learning for Communications ⋆ Zero-Power and Noise-Driven Communications ⋆ Quantum Key Distribution ⋆ Physical Layer Security

Awards & Recognitions

- 2025: Best Paper Award, *Intelligent and Converged Networks*
- 2025: Best Paper Award, *33rd Signal Processing and Telecommunication Applications Conference (SİU 2025)*
- 2025: Full Professor of Wireless Systems, Tampere University.
- 2024: Full Professor, Koç University.
- 2024: IEEE ComSoc Türkiye Best Paper Award, *32nd Signal Processing and Telecommunication Applications Conference (SİU 2024)*
- 2024: Distinguished Lecturer, IEEE Communications Society (ComSoc)
- 2024: Artificial Intelligence Industry Alliance (AIIA) Fellow
- 2023: Associate Member, Turkish Academy of Sciences (TÜBA)
- 2023: Best Paper Award, *26th International Symposium on Wireless Personal Multimedia Communications (WPMC 2023)*
- 2023: Asia-Pacific Artificial Intelligence Association (AAIA) Fellow
- 2023: Best Paper Award, *2023 46th International Conference on Telecommunications and Signal Processing (TSP 2023)*
- 2023: Best Paper Award, *2023 IEEE 97th Vehicular Technology Conference: VTC2023-Spring*
- 2023: IEEE Fellow, for contributions to physical-layer design for next-generation wireless networks
- 2022: National Leader Researcher, The Scientific and Technological Research Council of Türkiye
- 2020: IEEE ComSoc Best Young Researcher for the Europe, Middle East, and Africa Region (2019)
- 2020: Exemplary Editor, IEEE Communications Letters
- 2020: Best Paper Award, *12th IEEE Latin-American Conference on Communications (IEEE LATINCOM 2020)*
- 2020: Science Heroes Association, Scientist of the Year (2019)
- 2019: Best Paper Award, *2019 19th IEEE International Conference on Communication Technology (ICCT 2019)*
- 2018: ODTÜ Parlar Foundation, Research Encouragement Award
- 2018: Science Academy (Türkiye), Young Scientist Award (BAGEP)
- 2018: Exemplary Reviewer, IEEE Transactions on Wireless Communications (2017)
- 2018: Best Paper Award, *2018 41st International Conference on Telecommunications and Signal Processing (TSP 2018)*

- 2017: Turkish Academy of Sciences (TÜBA), Outstanding Young Scientist Award (GEBIP)
- 2017: Institute for Electrical and Electronics Engineers (IEEE) Türkiye, Research Encouragement Award
- 2017: Best Graduation Project Award (Advisor), Electrical Engineers Branch of Türkiye
- 2017: IEEE ComSoc Türkiye Best Student Paper Award, *25th Signal Processing and Telecommunication Applications Conference (SİU 2017)*
- 2016: Best Paper Award, *IEEE International Conference on Communications (ICC 2016)*
- 2014: Best Ph.D. Thesis of the Year Award, Istanbul Technical University
- 2012: Best Paper of the Year Award, Electrical Engineers Branch of Türkiye
- 2009: Best Student Paper Award, *17th Signal Processing and Telecommunication Applications Conference (SİU 2009)*
- 2007: B.Sc. Degree with High Honors, Istanbul University

Administrative Duties

- Department Chair, Department of Electrical and Electronics Engineering, Koç University: 2024-2025.
- Graduate Program Coordinator, Department of Electrical and Electronics Engineering, Koç University: 2019-2024.
- ABET Commission Member, Electronics and Communication Engineering Department, Istanbul Technical University, 2015-2017.

Projects

Principal Investigator

- Horizon Europe, Smart Networks and Services Joint Undertaking (SNS JU)
  ORIX: Orchestration of Reconfigurable Intelligent Surfaces with xApps
  Budget: €120.000, 2024-2025.
- Aselsan – KU Joint (Industry) Project,
  Waveform Design for Future Networks
  Budget: ∼8.000.000 TL, 2022-2023.
- The Scientific and Technological Research Council of Türkiye
  2247A (National Leader Researchers) - 121C254: Deep Learning-Based Next-Generation Communication Systems
  Budget: ∼2.500.000 TL, 2022-2025.
- The Scientific and Technological Research Council of Türkiye
  2519 (COST) - 120E401: Future Wireless Communications with Reconfigurable Intelligent Surfaces
  Budget: ∼785.000 TL, 2020-2023.
- The Scientific and Technological Research Council of Türkiye,
  2244 (Industry Collaboration) - 119C157: Novel Physical Layer Designs for Next-Generation Wi-Fi Standards
  Budget: ∼1.270.000 TL, 2020-2024.
- Vestel – KU Joint (Industry) Project,
  Novel Physical Layer Designs for Next-Generation Wi-Fi Standards
  Budget: ∼350.000 TL, 2020-2022.
- The Scientific and Technological Research Council of Türkiye,
  1003 (Primary Subjects) - 218E035: Novel Index Modulation Techniques for 5G and Beyond Broadband Networks
  Budget: ∼635.000 TL, 2019-2021.

- Koc University - Seed Research Fund,
  Large Intelligent Surface-Based Communications for 6G
  Budget: ∼50.000 TL, 2019-2020.
- Aselsan – KU Joint (Industry) Project,
  Index Modulation-Based Waveform Design for Tactical Networks
  Budget: ∼80.000 TL, 2019-2020.
- The Scientific and Technological Research Council of Türkiye,
  1001 (Basic Research) - 117E869: Novel Media-Based Modulation System Design
  Budget: ∼560.000 TL, 2018-2021.
- Scientific Research Projects of Istanbul Technical University,
  Novel Index Modulation Techniques for Next-Generation Wireless Systems
  Budget: ∼25.000 TL, 2017-2018.
- The Scientific and Technological Research Council of Türkiye
  1001 (Basic Research) - 114E607: Cooperative Spatial Modulation Systems
  Budget: ∼420.000 TL, 2015-2018.

Researcher

- The Scientific and Technological Research Council of Türkiye,
  1001 (Basic Research) - 119E190: Design and Implementation of Molecular Communication Systems with Index Modulation
  Researcher, Budget: ∼760.000 TL, 2020-2023.
- Scientific Research Projects of Istanbul Technical University,
  5G+: Techniques for 5G and Beyond Wireless Communications Systems
  Researcher, Budget: ∼150.000 TL, 2015-2016.
- Istanbul Development Agency (ISTKA),
  Optical Wireless Communications Perfection Center
  Researcher, Budget: ∼1.200.000 TL, 2015-2016.
- The Scientific and Technological Research Council of Türkiye,
  COST 2515 - 113E307: MIMO-OFDM Based Visible Light Communications
  Researcher, Budget: ∼165.000 TL, 2013-2016.

Supervised Theses

Doctor of Philosophy

- Yarkın Gevez, Koç University, 2025: *Deep Learning Meets Reconfigurable Intelligent Surfaces: Novel System Designs and Solutions Toward 6G and Beyond.*
- Emre Arslan, Koç University, 2025: *Novel Over-the-Air Methods and Practical Approaches for Reconfigurable Intelligent Surface System Designs and Analyses.*
- Elvan Kuzucu Hidir, Istanbul Technical University, 2025 (co-supervised with Prof. Hakan Ali Cirpan): *Emerging Novel Index Modulation Solutions for Reconfigurable Intelligent Surface-Assisted Systems.*
- Ali Tugberk Dogukan, Koç University, 2025: *Advanced Modulation Techniques for Next-Generation Wireless Communications.*
- Mahmoud Raeisi, Koç University, 2025: *Novel System Designs for Future mmWave Communication Networks.*
- Ibrahim Yildirim, Koç University, 2024: *Reconfigurable Intelligent Surface-Centric Communication Networks: A Comprehensive Exploration of Channel Modeling and Coverage Extension.*

- Aymen Khaleel, Koç University, 2023: *Reconfigurable Intelligent Surface-Based Novel Transceiver Architectures and Multiple Access.*
- Zehra Yigit, Istanbul Technical University, 2022: *From Media-Based Modulation to Reconfigurable Intelligent Surfaces: Novel Index Modulation Solutions.*
- Ersin Ozturk, Istanbul Technical University, 2019 (co-supervised with Prof. Hakan Ali Cirpan): *Non-Orthogonal Multi-Carrier Modulation Schemes for Future Wireless Communication Systems.*
- Gokhan Altin, Istanbul Technical University, 2018 (co-supervised with Prof. Ertugrul Celebi): *Low-Complexity Detection and Cooperative Communication for Spatial Modulation Systems.*

Master of Science

- Atalay Aydin, Koç University, 2025: *Machine Learning Applications in Multiple Input Multiple Output Index Modulation Systems.*
- Erkin Yapici, Koç University, 2025: *Noise-Driven Communication for Next-Generation Wireless Networks and IoT Systems.*
- Recep Vural, Koç University, 2025: *Novel Applications in RIS Identification and User Localization for Next-Generation Wireless Systems.*
- Ertug Pihtili, Koç University, 2024: *Information Harvesting: Leveraging Wireless Power Transfer for Next-Generation Communication Frameworks.*
- Yusuf Islam Tek, Koç University, 2023: *Novel OTFS System Designs for 6G Communication Networks.*
- Enes Koktas, Koç University, 2023: *Communications for the Planet Mars: Past, Present, and Future.*
- Sefa Kayraklik, Koç University, 2023: *Practical Implementation and Real-World Validation of Reconfigurable Intelligent Surfaces.*
- Recep Akif Tasci, Koç University, 2022: *Active Reconfigurable Intelligent Surface Architectures for Future Wireless Networks.*
- Fatih Kilinc, Koç University, 2022: *Reconfigurable Intelligent Surface-Assisted Wireless Networks and Channel Modeling.*
- Omer Furkan Tugtekin, Koç University, 2022: *OFDM with Index Modulation-Based Alternative Waveform Designs for Future Wireless Systems.*
- Mehmet Akif Kurt, Koç University, 2022: *Advanced Spatial Modulation Systems for Future MIMO Systems.*
- Joana Angjo, Koç University, 2022: *Molecular Communications: Novel Relaying Schemes and Molecular Beamforming.*
- Burak Ozpoyraz, Koç University, 2022: *Next-Generation MIMO Systems: From Index Modulation to Deep Learning.*
- Ilter Erol Gurol, Koç University, 2021: *Advanced Waveform Designs for Tactical Communication Systems.*
- Emre Arslan, Koç University, 2020: *Waveform Design and Multiple Access Techniques for 5G and Beyond Wireless Communication Systems.*
- Ali Tugberk Dogukan, Koç University, 2020: *OFDM-Based Novel Waveform Design for 5G and Beyond Wireless Communication Networks.*
- Ibrahim Yildirim, Istanbul Technical University, 2019: *Novel System Design with Media-Based Modulation.*
- Ahmet Celik, Istanbul Technical University, 2019: *Index Modulation-Based Techniques for Diffusive Molecular Communication Systems.*

- Ebubekir Memisoğlu, Istanbul Technical University, 2019: *OFDM with Index Modulation For 5G and Beyond.*
- Seyfettin Uluocak, Istanbul Technical University, 2018: *Novel Spatial Modulation Based System Designs for Multi-User Multiple-Input Multiple-Output Systems.*
- Zehra Yigit, Istanbul Technical University, 2017: *Novel Quadrature Spatial Modulation Techniques for Multiple-Input Multiple-Output Communication Systems.*

Courses

- ITC.CEE.300-17 Communication Systems Laboratory with SDRs, 2026/S (TAU)
- ELEC 414/514 Wireless Communications (2019/S, 2020/S, 2020/F, 2021/F, 2023/F, 2024/F) (KU)
- ELEC 402/501 Random Processes (2018/F, 2019/F, 2020/F, 2021/F, 2022/F, 2023/F, 2024/F) (KU)
- ELEC 316 Analog and Digital Communications Laboratory (2021/S, 2022/S, 2023/S, 2024/S) (KU)
- ELEC 204/205 Digital System Design (2021/S, 2022/S, 2023/S, 2024/S) (KU)
- ELEC 201 Signals and Systems (2018/F) (KU)
- ELEC 100 Introduction to Electrical & Electronics Engineering (2020/S) (KU)
- MAT 271 Probability and Statistics (2015/S, 2016/S, 2017/S) (İTÜ)
- EHB 481E Design and Applications of Basic Communication Systems (2015/F) (İTÜ)
- EHB 451 Introduction to Mobile Communications (2017/S) (İTÜ)
- EHB 415E Data Communications (2015/F, 2016/F, 2017/F) (İTÜ)
- EHB 351 Analog Communications (2015/F, 2016/F, 2017/F) (İTÜ)
- EHB 252E Signals and Systems (2015/S, 2016/S, 2018/S) (İTÜ)

Teaching Distinction

- 2022-2023 Outstanding Teaching Award, Koç University.
- ELEC 402/501 Random Processes - President's List for Outstanding Teaching (ranked 10% in College), 2022/F.
- ELEC 414/514 Wireless Communications - President's List for Outstanding Teaching (ranked 10% in College), 2020/F, 2019/S.

Scholarships

- 2011: The Scientific & Technological Research Council of Türkiye - Ph.D. International Scholarship
- 2009: The Scientific & Technological Research Council of Türkiye - Ph.D. National Scholarship
- 2007: The Scientific & Technological Research Council of Türkiye - M.Sc. National Scholarship
- 2007: Turkcell İletişim A.Ş. - M.Sc. National Scholarship

Professional Activities

Membership

- Artificial Intelligence Industry Alliance (AIIA), Fellow: 2024-...
- COST Action CA22168 - Physical layer security for trustworthy and resilient 6G systems (6G-PHYSEC), Management Committee (MC) Member, 2024-...
- COST Action CA22168 - Physical layer security for trustworthy and resilient 6G systems (6G-PHYSEC), Working Group (WG) Member, 2024-...
- Institute for Electrical and Electronics Engineers (IEEE), Fellow: 2023- ...
- Turkish Academy of Sciences (TÜBA), Associate Member, 2023- ...
- Asia-Pacific Artificial Intelligence Association (AAIA), Fellow: 2023-...
- Turkish Academy of Sciences (TÜBA), Young Member, 2017-2023.
- Institute for Electrical and Electronics Engineers (IEEE), Senior Member: 2016-2022.
- IEEE ComSoc - Emerging Technologies Initiative (ETI) on "Reconfigurable Intelligent Surfaces", Academic Chair and ETI Proposer, 2020.
- SyMat COST Action CA18223 - Future communications with higher-symmetric engineered artificial materials, Management Committee (MC) Substitute, 2020-2024.
- SyMat COST Action CA18223 - Future communications with higher-symmetric engineered artificial materials, Working Group (WG) Member, 2020-2024.
- IEEE ComSoc - Signal Processing and Computing for Communications Technical Committee, Member, 2020-...
- IEEE ComSoc - Communication Theory Technical Committee, Member, 2019-...
- IEEE ComSoc - Radio Communications Technical Committee, Member, 2019-...
- IEEE ComSoc - Wireless Communications Technical Committee Technical Committee, Member, 2019-...

Editor Service

- Editorial Board Member, *npj Wireless Technology*, 2025-....
- Associate Editor, *Frontiers in Communications and Networks*, 2020-2025.
- Editor, IEEE Transactions on Communications, 2018-2022.
- Senior Editor, IEEE Communications Letters, 2019-2022.
- Editor, *Physical Communication* (Elsevier), 2017-2020.
- Associate Editor, IEEE Communications Letters, 2016-2019.
- Associate Editor, IEEE Access, 2016-2018.

Other Editorial Activities

- Guest Editor, IEEE Open Journal of Communications Society,
  Special Issue: Emerging Modulation Techniques Towards 6G Networks, 2024.
- Guest Editor, IEEE Open Journal of Communications Society,
  Special Issue: Multi-Function RIS for 6G: Models, Design, and Future Directions, 2023.
- Guest Editor, IEEE Network,
  Special Issue: Next Generation Multiple Access for 6G, 2022.
- Guest Editor, IEEE Vehicular Technology Magazine,
  Special Issue: Backscatter and Reconfigurable Intelligent Surface Empowered Wireless Communications in 6G, 2021.
- Guest Editor, *MDPI Electronics*,
  Special Issue: Reconfigurable Intelligent Surface (RIS) for Wireless Communications, 2021.
- Guest Editor, IEEE Communications Magazine,
  Feature Topic: Reconfigurable Intelligent Surfaces: Design and Implementation, 2020.
- Guest Editor, *Frontiers in Communications and Networks*,
  Research Topic: Wireless Communications with Reconfigurable Intelligent Surfaces: Fundamentals, Experimentation, and Applications, 2020.
- Guest Editor, IEEE Open Journal of Communications Society,
  Special Issue: Reconfigurable Intelligent Surface-Based Communications for 6G Wireless Networks, 2020.
- Lead Guest Editor, IEEE Journal of Selected Topics in Signal Processing,
  Special Issue: Index Modulation for Future Wireless Networks: A Signal Processing Perspective, 2019.
- Guest Editor, IEEE Access,
  Special Section: Advances in Signal Processing for Non-Orthogonal Multiple Access, 2019.
- Lead Guest Editor, *Physical Communication*,
  Special Issue: Radio Access Technologies for Beyond 5G Wireless Networks, 2018.
- Lead Guest Editor, IEEE Access,
  Special Section: Index Modulation Techniques for Next-Generation Wireless Networks, 2017.
- Manuscript Editor, *Turkish Journal of Electrical Engineering & Computer Sciences*, 2016.

Reviewer Service

- IEEE Transactions on Communications
- IEEE Transactions on Wireless Communications
- IEEE Communications Letters
- IEEE Wireless Communications Letters
- IEEE Journal on Selected Areas in Communications
- IEEE Communications Magazine
- IEEE Wireless Communications Magazine
- IEEE Open Journal of the Communications Society
- IEEE Network
- IEEE Networking Letters
- IEEE Communications Standards Magazine
- IEEE Transactions on Cognitive Communications and Networking
- IEEE Transactions on Vehicular Technology

- IEEE Vehicular Technology Magazine
- IEEE Transactions on Information Theory
- IEEE Transactions on Signal Processing
- IEEE Signal Processing Magazine
- IEEE Signal Processing Letters
- IEEE Journal of Selected Topics in Signal Processing
- IEEE Transactions on Multimedia
- IEEE Internet of Things Journal
- IEEE Access
- IEEE/OSA Journal of Lightwave Technology
- IEEE Photonics Journal
- IEEE Systems Journal
- IEEE Transactions on Mobile Computing
- IEEE Transactions on NanoBioscience
- IEEE Transactions on Microwave Theory and Techniques
- IEEE Transactions on Circuits and Systems II: Express Briefs
- IEEE Transactions on Industrial Informatics
- Proceedings of the IEEE
- *Frontiers in Communications and Networks*
- *Nature*
- *Nature Electronics*
- *IET Communications*
- *IET Electronics Letters*
- *IET Networks*
- *Physical Communication (Elsevier)*
- *AEÜ - International Journal of Electronics and Communications (Elsevier)*
- *Wiley Transactions on Emerging Telecommunications Technologies*
- *Wiley International Journal of Communication Systems*
- *Wiley Wireless Communications and Mobile Computing*
- *KICS Journal of Communications and Networks*
- *EURASIP Journal on Wireless Communications and Networking*
- *EURASIP Journal on Advances in Signal Processing*
- *Springer Annals of Telecommunications*
- *Springer Wireless Networks*
- *China Communications*
- *Turkish Journal of Electrical Engineering & Computer Sciences*
- *MDPI Information*
- *Journal of Communications*
- *SAIEE Africa Research Journal*
- *Fluctuation and Noise Letters*

Book Proposal Reviewer

- Springer
- CRC Press
- John Wiley & Sons

Technical Program Committee (TPC) - Chair

- Track Chair, *Wireless Communications*, International Conference on Computing, Networking and Communications (ICNC 2025), HI, USA.
- Tutorial Chair, The 5th International Conference on Communications, Signal Processing, and their Applications (ICCSPA'24), Istanbul, Türkiye, July 2024.
- Tutorial Chair, IEEE Wireless Communications and Networking Conference (WCNC) 2024, Dubai, UAE.
- Tutorial Chair, IEEE International Black Sea Conference on Communications and Networking, Sofia, Bulgaria, June 2022.
- Track Chair, *Wireless Communications*, The 28th IEEE Conference on Signal Processing and Communications Applications, Gaziantep, Türkiye, Apr. 2020.
- Track Chair, *Fundamentals and PHY*, IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (IEEE PIMRC'19), Istanbul, Türkiye, Sep. 2019.
- Track Chair, *Signal Transmission and Reception*, 2019 IEEE 90th Vehicular Technology Conference: VTC2019-Fall, Hawaii, HI, USA, Sep. 2019.

Advisory/Steering Committee Member

- 7th International Conference on Smart Systems and Technologies (SST 2026), Osijek, Croatia, Oct. 2026.
- IEEE Wireless Communications and Networking Conference, Workshop on Advanced Waveforms for 6G and Beyond: Communications, Sensing, Localization and their Integration, Kuala Lumpur, Malaysia, Apr. 2026.
- 6th International Conference on Smart Systems and Technologies (SST 2024), Osijek, Croatia, Oct. 2024.
- The 9th International Conference on Unsolved Problems of Noise, Budapest, Hungary, June 2024.

Technical Program Committee (TPC) - Member

- 2025 IEEE 101st Vehicular Technology Conference: VTC2025-Spring, Oslo, Norway, June 2025.
- 2024 IEEE International Conference on Communications (ICC), Denver, CO, USA, June 2024.
- 2023 IEEE International Conference on Communications (ICC), Rome, Italy, May 2023.
- International Conference on Smart Systems and Technologies (SST 2022), Osijek, Croatia, Oct. 2022.
- 2022 Global Communications Conference(GLOBECOM 2022), Selected Areas in Communications Reconfigurable Intelligent Surfaces, Rio de Janeiro, Brazil, Dec. 2022.
- 2022 IEEE International Conference on Communications (ICC), Seoul, South Korea, June 2022.
- 2021 IEEE International Conference on Communications (ICC), Montreal, QC, Canada, June 2021.
- The 2020 European Conference on Networks and Communications (EuCNC), Dubrovnik, Croatia, June 2020.

- 45th International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2020), Barselona, May 2020.
- 2020 IEEE International Conference on Communications (ICC), Dublin, Ireland, June 2020.
- 2020 IEEE 91th Vehicular Technology Conference: VTC2020-Spring, Antwerp, Belgium, May 2020.
- 2019 IEEE 90th Vehicular Technology Conference: VTC2019-Fall, Honolulu, HI, USA, Sep. 2019.
- Third International Balkan Conference on Communications and Networking (BalkanCom 2019), Skopje, Macedonia, June 2019.
- 2019 IEEE 89th Vehicular Technology Conference: VTC2019-Spring, Kuala Lumpur, Malaysia, May 2019.
- 2019 IEEE International Conference on Communications (ICC), Shanghai, China, May 2019.
- 2018 IEEE Global Communications Conference: Workshops: International Workshop on Emerging Technologies for 5G and Beyond Wireless and Mobile Networks, Abu Dhabi, UAE, Dec. 2018.
- 2018 IEEE Global Communications Conference (GLOBECOM 2018), Abu Dhabi, UAE, Dec. 2018.
- Global Information Infrastructure and Networking Symposium (GIIS 2018), Thessaloniki, Greece, Oct. 2018.
- 2018 41st International Conference on Telecommunications and Signal Processing (TSP), Athens, Greece, July 2018.
- The Fourteenth International Conference on Wireless and Mobile Communications (ICWMC 2018), Venice, Italy, June 2018.
- 6th International Black Sea Conference on Communications and Networking (BlackSeaCom), Batumi, Georgia, June 2018.
- 25th International Conference on Telecommunications (ICT 2018), Saint Malo, France, June 2018.
- The 24th European Wireless (EW) 2018, Catania, Italy, May 2018.
- 2018 IEEE 87th Vehicular Technology Conference: VTC2018-Spring, Porto, Portugal, May 2018.
- 26th IEEE Signal Processing and Communications Applications Conference (SİU 2018), Izmir, Türkiye, May 2018.
- 2017 IEEE Global Communications Conference (GLOBECOM 2017), Singapore, Dec. 2017.
- 2017 IEEE/CIC International Conference on Communications in China (ICCC), Qingdao, China, Oct. 2017.
- 2017 IEEE 86th Vehicular Technology Conference: VTC2017-Fall, Toronto, Canada, Sept. 2017.
- 22nd IEEE International Symposium on Computer and Communications (ISCC 2017), Heraklion, Crete, July 2017.
- 5th International Black Sea Conference on Communications and Networking (BlackSeaCom), Istanbul, Turkiye, June 2017.
- 24th International Conference on Telecommunications (ICT 2017), Limassol, Cyprus, May 2017.
- 25th IEEE Signal Processing and Communications Applications Conference (SİU 2017), Antalya, Türkiye, May 2017.
- 2016 IEEE 84rd Vehicular Technology Conference: VTC2016-Fall, Montreal, Canada, Sep. 2016.
- 23rd International Conference on Telecommunications (ICT 2016), Thessaloniki, Greece, May 2016.
- 2016 IEEE 83rd Vehicular Technology Conference: VTC2016-Spring, Nanjing, China, May 2016.

Organization of Workshops

- Organizer, "Emerging Modulation Techniques Towards 6G Networks", *IIEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC 2025)*, Istanbul, Türkiye, Sep. 2025.
- Chair, "Reconfigurable Intelligent Surfaces for Future Wireless Communications", *2021 IEEE Global Communications Conference (GLOBECOM 2021)*, Madrid, Spain, Dec. 2021.
- Organizer, "Reconfigurable Intelligent Surfaces for Next Generation Wireless Communications", *IEEE/CIC International Conference on Communications in China*, Xiamen, China, July 2021.

Organization of Special Sessions

- "Special Session on Physical Layer Solutions for 6G", *IEEE International Symposium on Personal, Indoor and Mobile Radio Communications*, Istanbul, Türkiye, Sep. 2019.
- "Special Session on Visible Light Communications", *4th International Black Sea Conference on Communications and Networking*, Varna, Bulgaria, Jun. 2016.
- "5G and Beyond Wireless Communications Techniques", 2016 *IEEE Conference on Signal Processing and Communications Applications (SIU 2016)*, Zonguldak, May 2016.

Panel Chair/Panelist

- Panelist, "6G Vision, Research Activities, and Challenges - Academic Perspective", *6G Conference 2024*, Istanbul, Türkiye, Sep. 2024.
- Panelist, "6G Vision and Research Efforts Panel", *6G Workshop 2022*, Istanbul, Türkiye, Sep. 2022.
- Panelist, "Industrial Panel: Reconfigurable Intelligent Surfaces for 5G-Advanced", *2022 IEEE International Conference on Communications*, Seoul, South Korea, May 2022.
- Panelist, "6G Vision Panel", *6G Workshop 2021*, Istanbul, Türkiye, Sep. 2021.
- Panelist, "Beyond Massive MIMO Panel", *2021 Future of Wireless Workshop*, Sweden, Apr. 2021 (online).
- Panel Chair, "6G Vision Panel", *6G Workshop 2018*, Istanbul, Türkiye, Sep. 2018.

Plenary Talks and Keynotes

- "Noise-Driven Communication: A New Frontier for Future Networks", *2025 Workshop on Communication Networks and Power Systems*, Brazil, November 2025 (online).
- "Radical Technologies for Future Wireless Networks: Reconfigurable Intelligent Surfaces and Noise-Driven Communication", *the 32nd IEEE Conference on Signal Processing and Communications Applications*, Mersin, Türkiye, May 2024.
- "Past, Present, and Future of Communication Technologies", *Kabatas High School Career Days 2023*, Istanbul, Türkiye, Dec. 2023.
- "Noise-Driven Communication: In Pursuit of Unconditionally Secure and Low-Power Communication Networks for 6G and Beyond", *SATELLITE WORKSHOP on "Wireless Communication: 5G and Beyond" under the IEEE International Conference on Electronics Circuits & Systems 2023*, Istanbul, Türkiye, Dec. 2023.
- "Towards Networks with Extremely Low Power Consumption: From Intelligent Surfaces to Thermal Noise Communication", *6GIC-CLICK Workshop: Featuring Reconfigurable Intelligent Surfaces*, University of Surrey, Guildford, UK, Sept. 2022.
- "Reconfigurable Intelligent Surface-Empowered Communications for 6G Wireless Networks", *2022 Iran Workshop on Communication and Information Theory (IWCIT2022)*, Yazd, Iran, May 2022 (online).

- "Reconfigurable Intelligent Surface-Empowered Communications for 6G Wireless Networks", *KAUST Research Conference: Extreme Bandwidth Communication: From mmWave, THz to Optical Bands*, Thuwal, S. Arabia, March 2022 (online).
- "Present and Future of Reconfigurable Intelligent Surface-Empowered Communications", *2021 IEEE International Mediterranean Conference on Communications and Networking (MeditCom) - Workshop: Reconfigurable Intelligent Surfaces: A Technology Enabler to Catalyze 6G*, Athens, Greece, Sep. 2021 (online).
- "Back to the Future with Reconfigurable Intelligent Surfaces", *Carleton 6G Workshop Series*, Montreal, Canada, Apr. 2021 (online).
- "From Media-Based Modulation to Reconfigurable Intelligent Surfaces: Potential Candidates for 6G", *2021 Huawei Future of Wireless Workshop*, Sweden, Apr. 2021 (online).
- "Reconfigurable Intelligent Surface-Based Communications for Future Wireless Networks", *XXXVIII Brazilian Telecommunications Symposium (SBrT'2020)*, Santa Catarina, Brazil, Nov. 2020 (online).

Invited Seminars and Presentations

- "Emerging RIS Architectures and Applications: A Perspective for 6G and Beyond", *IEEE Patna Sub-Section*, Nov. 2025 (IEEE ComSoc Distinguished Lecture-online).
- "Emerging RIS Architectures and Applications: A Perspective for 6G and Beyond", *BD-RIS Webinar Series 2025*, Nov. 2025 (online).
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- Indian Institute of Science (India), External Reviewer, 2020.
- The Scientific and Technological Research Council of Türkiye-BİDEB, Advisor, 2019-...
- National Science Centre (Poland), Reviewer, 2018.
- Netherlands Organisation for Scientific Research (Netherlands), Proposal Reviewer, 2017.
- Istanbul Technical University ARI Teknokent, Proposal Reviewer, 2016-...
- The Scientific and Technological Research Council of Türkiye-TEYDEB, 1501/1507/1509/1511 Reviewer, 2016-...
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2. A. Yesilkaya, F. Miramirkhani, H. F. Alsan, **E. Basar**, E. Panayirci, M. Uysal,"Modelling of Visible Light Channels and Performance Analysis for Optical OFDM Systems (in Turkish)", *EMO Bilimsel Dergi*, vol. 5, no. 9, pp. 19-31, Jun. 2015.
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Best Readings

- M. Di Renzo, Y. Liu, **E. Basar** *et al.*, "Best Readings in Reconfigurable Intelligent Surfaces", Online: https://www.comsoc.org/publications/best-readings/reconfigurable-intelligent-surfaces Sep. 2020.

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  Citations: 18,907
  h-index: 56
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- Scopus/Scival
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  Field Weighted Citation Impact: 3.44
  Documents in Top 25% Journals: 78%
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  Academic-Corporate Collaboration: 4%
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  https://www.webofscience.com/wos/author/record/2028337
  ResearcherID: AAR-9977-2020
  Verified Reviews: 234
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  https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/8
  Yearly ranking: 15th/1,517th in Networking & Telecommunications/All Fields
  Career-long ranking: 128th/17,655th in Networking & Telecommunications/All Fields
  National (Finland) ranking: 4th (Yearly), 86th (Career-long)
- Research.com (Electronics and Electrical Engineering - 2025)
  https://research.com/u/ertugrul-basar
  National (Türkiye) ranking: 4th
  World ranking: 2587th

Computer Skills

LaTeX · MATLAB & Simulink · Mathematica · Microsoft Office · Multisim

Personal

- Born on 22 January 1985 in Üsküdar, İstanbul, Türkiye.
- Married with Dr. Merve Dogruyol Basar (2014).
- Father of Defne Alya (2020) and Azra Nil (2025).
- Lives in Harjuniitty, Nokia.
- Interested in Formula 1, Astronomy, Nature, History, Chess, Candles.