

Cuneyd Ozturk

Department of Electrical and Computer Engineering
Northwestern University, Evanston, IL 60208.

e-mail: cuneyd.ozturk@northwestern.edu

RESEARCH INTERESTS Satellite communication networks, coexistence between passive and active systems, statistical signal processing, reconfigurable intelligent surfaces and detection and estimation theory.

CURRENT EMPLOYMENT **Northwestern University**, Evanston, IL, United States
Postdoctoral Scholar, Department of Electrical Engineering and Computer Science.

EDUCATION **Bilkent University**, Ankara, Turkey

Ph.D. in Electrical Engineering, CGPA: 4.00 / 4.00 Jan. 2018 – June 2022.

- Advisor: Prof. Sinan Gezici
- Thesis Title: Estimation Theoretic Analyses of Location Secrecy and RIS-aided Localization Under Hardware Impairments

B.S. in Electrical Engineering, CGPA: 3.91 / 4.00 Sep. 2011 – June 2016

Minor in Mathematics, CGPA: 4.00 / 4.00 Sep. 2011 – June 2016

University of California Los Angeles (UCLA), Los Angeles, CA

M.S. in Electrical Engineering, CGPA: 3.82 / 4.00 Sep. 2016 – Dec. 2017

- Advisor: Prof. Suhas Diggavi

AWARDS AND HONORS

- Best Oral Presentation Award, Graduate Research Conference, Bilkent University, 2022.
- TUBITAK¹ Scholarship for PhD studies based on ALES (National GRE) and GPA scores.
- UCLA Departmental Fellowship (2016-2017): Full tuition waiver & stipend during the first year of PhD program.
- Bilkent University Academic Excellence Award, 2016.
- Bilkent University High Honor Student during B.S. Studies (all semesters), 2011-2016.
- Bilkent University Full Scholarship for the B.S. degree in the EEE Department, 2011-2016.
- Received the **8th rank** among 200000 university graduates in ALES (National GRE), 2015.
- First Prize in TUBITAK High School Mathematical Project Contest, 2011.
- Bronze Medal in International Silk Road Mathematical Olympiad, 2010.

JOURNAL PAPERS

1. **C. Ozturk**, F. Lind, D. Guo, R. Berry and M. Honig, “Pushing Spectrum Boundaries: Coexistence with Passive Sensing, (Working Paper).
2. **C. Ozturk**, D. Guo, R. Berry and M. Honig, “Downlink Spectral Efficiency of Low Earth Orbit Satellite Mega-Constellations,” **IEEE Journal on Selected Areas in Communications**, 2023 (Under Review).
3. **C. Ozturk**, M. F. Keskin, V. Sciancalepore, H. Wymeersch and S. Gezici, “RIS-aided Localization under Pixel Failures,” **IEEE Transactions on Wireless Communications**, 2023 (Under Review).
4. **C. Ozturk**, M. F. Keskin, H. Wymeersch and S. Gezici, “RIS-aided near-field localization under phase-dependent amplitude variations,” **IEEE Transactions on Wireless Communications**, vol. 22, no. 8, pp. 5550-5566, Aug. 2023, doi: 10.1109/TWC.2023.3235306.
5. E.M. Abadi, C. Goken, **C. Ozturk**, and S. Gezici, “Optimal Power Allocation and Optimal Linear Encoding for Parameter Estimation in the Presence of a Smart Eavesdropper,” **IEEE Transactions on Signal Processing**, vol. 70, pp. 4093-4108, 2022, doi: 10.1109/TSP.2022.3198180..

¹Turkish equivalent of NSF.

6. **C. Ozturk**, C. Goken and S. Gezici, "Parameter encoding for ECRB minimization in the presence of jamming," **IEEE Signal Processing Letters**, vol. 29, pp. 419-423, 2022, doi: 10.1109/LSP.2021.3134841.
7. **C. Ozturk**, and S. Gezici, "Eavesdropper and jammer selection in wireless source localization networks," **IEEE Transactions on Signal Processing**, vol. 69, pp. 4341-4356, July 2021.
8. **C. Ozturk**, H. M. Ozaktas, S. Gezici, and A. Koc "Optimal fractional Fourier filtering for graph signals," **IEEE Transactions on Signal Processing**, vol. 69, pp. 2902-2912, May 2021.
9. B. Dulek, **C. Ozturk**, and S. Gezici, "Optimal decision rules for simple hypothesis testing under general criterion involving error probabilities," **IEEE Signal Processing Letters**, vol. 27, pp. 261-265, Jan. 2020.
10. M. F. Keskin, **C. Ozturk**, S. Bayram, and S. Gezici, "Jamming strategies in wireless source localization systems," **IEEE Wireless Communication Letters**, vol. 8, no. 4, pp. 1141-1145, Aug. 2019.
11. **C. Ozturk**, B. Dulek and S. Gezici, "Convexity properties of detection probability for noncoherent detection of a modulated sinusoidal carrier," **IEEE Transactions On Vehicular Technology**, vol. 67, no. 12, pp. 12410-12415, Dec. 2018.

CONFERENCE PAPERS AND WORKSHOPS

1. **C. Ozturk**, D. Guo, R. Berry and M. Honig, "Downlink Spectral Efficiency of Low Earth Orbit Satellite Mega-Constellations," **Information Theory and Applications Workshop (ITA)**, San Diego, CA, USA, Feb 12-17, 2023, (Poster Presentation).
2. **C. Ozturk**, M. F. Keskin, H. Wymeersch and S. Gezici, "On the impact of hardware impairments on RIS-aided localization," **IEEE International Conference on Communications (ICC)**, Seoul, South Korea, May 16-20, 2022.
3. **C. Ozturk**, and S. Gezici, "Anchor placement in TOA based wireless localization networks via convex relaxation," **IEEE International Black Sea Conference on Communications and Networking (BlackSeaCom)**, Bucharest, Romania, May 24-28, 2021.
4. **C. Ozturk** and S. Gezici, "Eavesdropper selection strategies in wireless source localization networks", **IEEE International Conference on Communications (ICC)**, Dublin, Ireland, June 7-11, 2020.

INDUSTRIAL & **5G Platform Project, ASELSAN / TUBITAK**

Aug. 2018 – Aug. 2021

ACADEMIC

EXPERIENCE

A MATLAB library is implemented for 5G New Radio (NR) algorithms. In particular, algorithms for downlink synchronization, channel estimation using CSI-RS symbols and decoding of PUCCH symbols are developed.

Summer Intern

SESTEK Inc., Ankara, Turkey

Aug. 2015 – Sep. 2015

ASELSAN Inc., Ankara, Turkey

Aug. 2014 – Sep. 2014

Academic Service

Reviewer: IEEE Transactions on Signal Processing (TSP), IEEE Signal Processing Letters (SPL), and IEEE Sensors Journal.

Teaching Assistant Experience

Bilkent University

EEE-212: Microprocessors	Feb. 2018 – June 2018
EEE-431: Telecommunications I	Sep. 2018 – Jan. 2019
EEE-432: Telecommunications II	Feb. 2019 – June 2019
EEE-533: Random Processes	Sep. 2019 – Jan. 2020
EEE-391: Basics of Signals and Systems	Feb. 2020 – June 2020
EEE-431: Telecommunications I	Sep. 2020 – Jan. 2021
EEE-432: Telecommunications II	Feb. 2021 – June 2021
EEE-431: Telecommunications I	Sep. 2021 – Jan. 2022
EEE-432: Telecommunications II	Feb. 2022 – Present
EEE-539: Detection and Estimation Theory	Feb. 2022 – Present

SKILLS

Languages

Turkish (Native), English (Fluent)

Programming

MATLAB, VHDL, Java.

REFERENCES:

- [Sinan Gezici](#): Professor, Department of Electrical and Electronics Engineering, Bilkent University.
- [Michael Honig](#): Professor, Department of Electrical Engineering and Computer Science, Northwestern University.
- [Henk Wymeersch](#): Professor, Department of Electrical Engineering, Chalmers University of Technology.