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Research Areas

Engineering and Technology

Academic Titles / Tasks

Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Electrical and Electronics Engineering, 2021 - Continues

Courses

Introduction to Electrical and Electronic Engineering, Undergraduate, 2022 - 2023

Engineering Design, Undergraduate, 2022 - 2023

Signals and Systems, Undergraduate, 2021 - 2022

Probability and Random Variables, Undergraduate, 2020 - 2021

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Unbiased federated learning in energy harvesting error-prone channels**
ÇAKIR Z., CERAN E. T.
Turkish Journal of Electrical Engineering and Computer Sciences, vol.31, no.3, pp.612-625, 2023 (SCI-Expanded)

II. **Reinforcement Learning Based Adaptive Blocklength and MCS for Optimizing Age Violation Probability**
Ozkaya A., Topbas A., Ceran Arslan E. T.
IEEE Access, vol.11, pp.122411-122425, 2023 (SCI-Expanded)

III. **Implementation and Evaluation of Age-Aware Downlink Scheduling Policies in Push-Based and Pull-Based Communication**
Oğuz T. K., Ceran Arslan E. T., Uysal E., Girici T.
Entropy, vol.24, no.5, 2022 (SCI-Expanded)

IV. **A Reinforcement Learning Approach to Age of Information in Multi-User Networks With HARQ**

Ceran E. T., Gunduz D., Gyorgy A.

IEEE JOURNAL ON SELECTED AREAS IN COMMUNICATIONS, vol.39, no.5, pp.1412-1426, 2021 (SCI-Expanded)

V. **Average Age of Information With Hybrid ARQ Under a Resource Constraint**

Ceran E. T., Gunduz D., Gyorgy A.

IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS, vol.18, no.3, pp.1900-1913, 2019 (SCI-Expanded)

VI. **Optimal energy allocation policies for a high altitude flying wireless access point**

Ceran E. T., Erkilic T., UYSAL BIYIKOĞLU E., GİRİCİ T., Leblebicioglu K.

TRANSACTIONS ON EMERGING TELECOMMUNICATIONS TECHNOLOGIES, vol.28, no.4, 2017 (SCI-Expanded)

VII. **Energy Packet Networks With Energy Harvesting**

Gelenbe E., Ceran E. T.

IEEE ACCESS, vol.4, pp.1321-1331, 2016 (SCI-Expanded)

Refereed Congress / Symposium Publications in Proceedings

I. **Deep reinforcement learning aided Rate-Splitting for Interference Channels**

Irkıçatal O. N., Yüksel Turgut A. M., Ceran Arslan E. T.

IEEE Global Communications Conference, Kuala-Lumpur, Malaysia, 4 - 08 December 2023, pp.1

II. **Optimization of AoII and QAoII in Multi-User Links**

Ayik M., CERAN ARSLAN E. T., Uysal E.

2023 IEEE INFOCOM Conference on Computer Communications Workshops, INFOCOM WKSHPS 2023, New Jersey, United States Of America, 20 May 2023

III. **Minimizing Age Violation Probability with Adaptive Blocklength Selection in Short Packet Transmissions**

Ozkaya A., Ceran Arslan E. T.

2022 30th Signal Processing and Communications Applications Conference (SIU), Karabük, Turkey, 15 - 18 May 2022, pp.1-4

IV. **Federated Learning with Channel and Energy Aware Scheduling**

Cakir Z., Ceran Arslan E. T.

2022 30th Signal Processing and Communications Applications Conference (SIU), Karabük, Turkey, 15 - 18 May 2022, pp.1-4

V. **When to Pull Data for Minimum Age Penalty**

Yavascan O. T., CERAN ARSLAN E. T., Cakir Z., UYSAL E., Kaya O.

19th International Symposium on Modeling and Optimization in Mobile, Ad hoc, and Wireless Networks, WiOpt 2021, Pennsylvania, United States Of America, 18 - 21 October 2021

VI. **Reinforcement Learning to Minimize Age of Information with an Energy Harvesting Sensor with HARQ and Sensing Cost**

Ceran E. T., Gunduz D., Gyorgy A.

IEEE Conference on Computer Communications (IEEE INFOCOM), Paris, France, 29 April - 02 May 2019, pp.656-661

VII. **Average Age of Information with Hybrid ARQ under a Resource Constraint**

Ceran E. T., Gunduz D., Gyorgy A.

IEEE Wireless Communications and Networking Conference (WCNC), Barcelona, Spain, 15 - 18 April 2018

VIII. **A Reinforcement Learning Approach to Age of Information in Multi-User Networks**

Ceran E. T., Gunduz D., Gyorgy A.

29th IEEE Annual International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), Bologna, Italy, 9 - 12 September 2018, pp.1967-1971

IX. **Energy packet model optimisation with approximate matrix inversion**

Ceran E. T., Gelenbe E.

2nd International Workshop on Energy-Aware Simulation, ENERGY-SIM 2016, Waterloo, Canada, 21 - 24 June 2016

X. **Age of Information under Energy Replenishment Constraints**
BACINOĞLU B. T., Ceran E. T., UYSAL BIYIKOĞLU E.
Information Theory and Applications Workshop (ITA), California, United States Of America, 1 - 06 February 2015, pp.25-31

XI. **Central or Distributed Energy Storage for Processors with Energy Harvesting**
Gelenbe E., Ceran E. T.
2015 Sustainable Internet and ICT for Sustainability (SustainIT), Madrid, Spain, 14 - 15 April 2015

XII. **Optimizing The Service Policy Of A Wireless Access Point On The Move With Renewable Energy**
Ceran E. T., Erkilic T., Uysal-Biyikoglu E., Girici T., Leblebicioglu K.
52nd Annual Allerton Conference on Communication, Control, and Computing Allerton, Illinois, United States Of America, 1 - 03 October 2014, pp.967-974

Metrics

Publication: 20
Citation (WoS): 459
Citation (Scopus): 571
H-Index (WoS): 9
H-Index (Scopus): 9