

# Tasmeen Zaman Ornee

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EDUCATION	<b>Ph.D. Candidate in Electrical Engineering</b> Auburn University, AL Advisor: Yin Sun	Aug. 2018-Present
	<b>M.Sc. in Electrical Engineering, CGPA: 4.00</b> Auburn University, AL	Aug. 2022
	<b>B.Sc. in Electrical and Electronic Engineering, CGPA: 3.73</b> Rank: 34/214 Bangladesh University of Engineering and Technology (BUET), Bangladesh	Sep. 2017

RESEARCH INTERESTS	Communication Networks Information Theory Age of Information Reinforcement Learning Remote Estimation
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## PUBLICATIONS **Book Chapter:**

- **Tasmeen Zaman Ornee** and Yin Sun, “Age of Information and Remote Estimation” in *Age of Information: Foundations and Applications*. Bo Zhou, Walid Saad, Harpreet S. Dhillon, Nikolas Pappas, and Mohamed Abd-Elmagid eds. *Cambridge University Press (CUP)*, 2023.

## **Journal:**

- **Tasmeen Zaman Ornee** and Yin Sun, “Sampling and Remote Estimation for the Ornstein-Uhlenbeck Process through Queues: Age of Information and Beyond”, *IEEE/ACM Transaction on Networking*, 2021. (**Recommended for Fast-tracked Review**)

## **Conference publications:**

- **Tasmeen Zaman Ornee**, Md Kamran Chowdhury Shisher, Clement Kam, and Yin Sun, “Context-Aware Status Updating: Wireless Scheduling for Maximizing Situational Awareness in Safety-Critical Systems”, *IEEE MILCOM QuAVoI Workshop*, 2023.
- **Tasmeen Zaman Ornee** and Yin Sun, “A Whittle Index Policy for the Remote Estimation of Multiple Continuous Gauss-Markov Processes over Parallel Channels”, *ACM MobiHoc*, 2023.
- **Tasmeen Zaman Ornee** and Yin Sun, “Performance Bounds for Sampling and Remote Estimation of Gauss-Markov Processes over a Noisy Channel with Random Delay”, *IEEE SPAWC*, 2021. (**Invited Paper**)

- **Tasmeen Zaman Ornee** and Yin Sun, “Sampling for Remote Estimation through Queues: Age of Information and Beyond”, *IEEE WiOpt*, 2019. (**Best Paper Award**)
- Md. Kamran Chowdhury Shisher, **Tasmeen Zaman Ornee**, and Md. Farhad Hossain, “QoS aware user association in massive MIMO enabled hetnets for DTU and NDTU traffic”, *IEEE ICAEE*, 2017.

#### PREPRINTS & IN PROGRESS

- **Tasmeen Zaman Ornee**, Md Kamran Chowdhury Shisher, Clement Kam, and Yin Sun, “Context-Aware Status Updating in Safety-Critical Systems”, in preparation, 2023.
- **Tasmeen Zaman Ornee** and Yin Sun, “Remote Estimation of Gauss-Markov Processes over Multiple Channels: A Whittle Index Policy”, submitted to *IEEE/ACM Transactions on Networking*, 2023.
- Md Kamran Chowdhury Shisher, **Tasmeen Zaman Ornee**, and Yin Sun, “A Local Geometric Interpretation of Feature Extraction in Deep Feedforward Neural Networks”, 2022.

#### TEACHING

##### 1. Teaching Assistance:

##### Courses

- |                                                                        |             |
|------------------------------------------------------------------------|-------------|
| • ELEC-2120: Signals and Systems, Auburn University                    | Spring 2023 |
| • ELEC-2120: Signals and Systems, Auburn University                    | Fall 2022   |
| • ELEC-3810: Fundamentals of Electrical Engineering, Auburn University | Spring 2022 |
| • ELEC-2120: Signals and Systems, Auburn University                    | Fall 2022   |
| • ELEC-2120: Signals and Systems, Auburn University                    | Fall 2021   |

##### Roles

##### **ELEC-2120: Signals and Systems:**

Conducted lab lectures on linear Systems, convolution, Fourier series, Fourier transformation, and Laplace transformation both with TMS module and MATLAB. Graded the homeworks, quizzes, and labs for approximately 55 students.

##### **ELEC-3810: Fundamentals of Electrical Engineering:**

Graded the homeworks, quizzes, and exams for approximately 60 students.

## TALKS

1. Context-aware Status Updating: Wireless Scheduling for Maximizing Situational Awareness in Safety-critical Systems, **IEEE MILCOM-Workshop on QuAVol**, Boston, MA, USA, 30 Oct. 2023.
2. A Whittle Index Policy for the Remote Estimation of Gauss-Markov Processes over Multiple Channels, **ACM MobiHoc**, Washington, DC, USA, 25 Oct. 2023.
3. A Whittle Index Policy for the Remote Estimation of Gauss-Markov Processes over Multiple Channels, **University of Maryland**, College Park, MD, USA, 25 Oct. 2023.
4. A Whittle Index Policy for the Remote Estimation of Gauss-Markov Processes over Multiple Channels, **Middle East Technical University** (virtual), 19 Oct. 2023.
5. Context-aware Status Updating: Wireless Scheduling for Maximizing Situational Awareness in Safety-critical Systems, **Virginia Polytechnic Institute and State University** (virtual), 13 Oct. 2023.
6. A Whittle Index Policy for the Remote Estimation of Gauss-Markov Processes over Multiple Channels, **NASIT**, Poster Presentation, Philadelphia, PA, 23 June 2023.
7. A Whittle Index Policy for the Remote Estimation of Gauss-Markov Processes over Multiple Channels, **ITA**, Poster Presentation, San Diego, CA, 17 Feb. 2023.
8. Optimizing age of information with correlated sources **ACM MobiHoc**, on behalf of Vishrant Tripathi and Eytan Modiano, Seoul, South Korea, 18 Oct. 2022.
9. Sampling of Gauss-Markov Processes for Remote Estimation **Ph.D. General Examination**, Auburn University, Auburn, AL, 04 Oct. 2022.
10. Sampling of Gauss-Markov Processes over a Channel with Random Delay, **Auburn Research Symposium**, Poster Presentation, Auburn University, AL, April 2022.
11. Performance Bounds for Sampling and Remote Estimation of Gauss-Markov Processes over Channel with Random Delay, **IEEE SPAWC** (virtual), 2021.
12. Sampling for Remote Estimation through Queues: Age of Information and Beyond, **Wireless Seminar**, Auburn University, Auburn, AL, Sep. 2019.
13. Sampling for Remote Estimation through Queues: Age of Information and Beyond, **IEEE/IFIP WiOpt**, Avignon, France, June 2019.

## PROFESSIONAL MEMBERSHIP

- IEEE Graduate Student Member
- IEEE Information Theory Society Member
- IEEE Communication Society Member
- ACM SIGMOBILE Member

## AWARDS

North American School of Information Theory NSF Travel Grant	2023
100+ Women Strong Outstanding Graduate Student Award 2023	2023
100+ Women Strong Travel Fellowship Award	2023
ACM SIGMOBILE Student Travel Grant	2022
100+ Women Strong Travel Fellowship Award	2022
IEEE INFOCOM Student Conference Grant	2022
IEEE WiOpt Best Paper Award	2019
Dean's Award, BUET, Bangladesh	2017
Dean's Award, BUET, Bangladesh	2016
Dean's Award, BUET, Bangladesh	2015
HSC Scholarship (General), Government of Bangladesh	2012

Disciplined Student Award 2011-2012, Rajuk Uttara Model College	2012
Disciplined Student Award 2010-2011, Rajuk Uttara Model College	2011
SSC Scholarship (Talent), Government of Bangladesh	2010
Junior Scholarship (Talent), Government of Bangladesh, Position: 5th in Dhaka Board	2008
Primary Scholarship (Talent), Government of Bangladesh	2005

## SERVICES

### 1. **Reviewer for Journal Manuscript Submissions:**

Journal on Communications and Networks (JCN), 2023

IEEE Transactions on Networking (ToN), 2022, 2023

IEEE Transactions on Communications (TCOM), 2021, 2022, 2023

IEEE Transactions on Wireless Communications, 2020, 2022

IEEE Journal on Selected Areas in Communication AoI, 2020

### 3. **Reviewer for Conference Manuscript Submissions:**

IEEE INFOCOM, 2020, 2021, 2022, 2023

IEEE ITC, 2022

IEEE ISIT, 2022

IEEE INFOCOM AoI Workshop, 2019, 2020, 2022

IEEE SPAWC, 2021

IEEE WCNC, 2021

IEEE WCSP, 2019

4. Maintainer of an online paper repository on Age of Information, 2018-Present

See: <http://webhome.auburn.edu/ yzs0078/AoI.html>

5. Auxiliary Committee Member, Bangladesh Student Organization, Auburn University, 2021-2022.