Nafis Irtija | Curriculum Vitae

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Research Interests

Control System Design for Quantum Sensing; Embedded Systems; Hardware Software Co-design; Game Theory; Reinforcement Learning; Distributed decision making; Artificial Enabled Solutions; Network economics.

Education

Ph.D. in Computer Engineering **2020 - Present**
University of New Mexico
Advisor: Dr. Eirini Eleni Tsiropoulou

Master of Science in Computer Engineering **2020 - 2021**
University of New Mexico
CGPA: 4.22/4.00 **(With distinction)**
Advisor: Dr. Eirini Eleni Tsiropoulou

Master of Science in Electrical and Electronic Engineering **2016 - 2018**
University of Dhaka *Dhaka, Bangladesh*
CGPA: 3.61/4.00

Bachelor of Science in Electrical and Electronic Engineering **2012 - 2016**
University of Dhaka *Dhaka, Bangladesh*
CGPA: 3.80/4.00

Work Experience

Research Assistant **January 2020-Present**
Advisor: Dr. Eirini Eleni Tsiropoulou
Performance & Resource OpTimizatiOn in Networks (PROTON) Lab
In colaboration with Sandia National Laboratories in the NSF-funded project of Quantum Sensing (QSense)
Department of Electrical and Computer Engineering, University of New Mexico

Teaching Assistant
Department of Electrical and Computer Engineering, University of New Mexico
- *ECE131 Programming Fundamentals* **Spring 2020**
- *ECE530 Cloud Computing* **Spring 2021**

Lecturer **December 2018-December 2019**
Department of Electrical and Electronic Engineering
Bangladesh University of Business and Technology (BUBT)

Publications

Journal Papers

1. **Prospect-theoretic Demand Response Management in Smart Grid Systems**
   F. Sangoleye, N. Irtija, E. E. Tsiropoulou, and S. Papavassiliou, "Prospect-theoretic Demand Response Management in Smart Grid Systems" in IEEE Systems Journal, 2021. (Under Review).
2. **Energy Efficient Edge Computing Enabled by Satisfaction Games and Approximate Computing**
   Irtija, N., Anagnostopoulos, I., Zervakis, G., Tsiropoulou, E., Amrouch, H., Henkel, J., "Energy Efficient Edge Computing Enabled by Satisfaction Games and Approximate Computing" in IEEE Transactions on Green Communications and Networking, 2021.
3. **Truthful Decentralized Blockchain Oracles**
   Cai, Y., Irtija, N., Tsiropoulou, E. E., & Veneris, A. (2021). Truthful Decentralized Blockchain Oracles. International Journal of Network Management, e2179.
4. **Smart Energy Harvesting for Internet of Things Networks.**
   Sangoleye, F., Irtija, N., & Tsiropoulou, E. E. (2021). Smart Energy Harvesting for Internet of Things Networks. Sensors, 21(8), 2755.
5. **Contract-Theoretic Demand Response Management in Smart Grid Systems**
   Irtija, N., Sangoleye, F., & Tsiropoulou, E. E. (2020). Contract-Theoretic Demand Response Management in Smart Grid Systems. IEEE Access, 8, 184976-184987.

Conference Papers

1. **Reconfigurable Intelligent Surfaces enabling Positioning, Navigation, and Timing Services**
   Sahabul, M., Irtija, N., & Tsiropoulou, E. E. (2022). Reconfigurable Intelligent Surfaces enabling Positioning, Navigation, and Timing Services. In ICC 2022-IEEE International Conference on Communications. IEEE. (Under Review).
2. **Data Acquisition in Social Internet of Things based on Contract Theory**
   Sangoleye, F., Irtija, N., & Tsiropoulou, E. E. (2021, June). Data Acquisition in Social Internet of Things based on Contract Theory. In ICC 2021-IEEE International Conference on Communications (pp. 1-6). IEEE.
3. **Fatigue Detection Using Facial Landmarks**
   IRTIJA, N., SAMI, M., & AHAD, M. A. R. (2018). Fatigue Detection Using Facial Landmarks. In International Symposium on Affective Science and Engineering ISASE2018 (pp. 1-6). Japan Society of Kansei Engineering.

Achievements

ITPEC Examination Gold Award **October 2018**
Fundamental Information Technology Engineer Examination (ITEE-FE)
for achieving the highest score among all ITPEC countries.

Technical Skills

- **Programming Languages:** Python, C, C++, Matlab, Assembly.
- **Scripting Languages:** TCL, Bash.
- **Hardware description languages:** VHDL, Verilog.