

CONTACT INFORMATION

Northeastern University
Electrical Engineering Department
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EDUCATION

Northeastern University (NEU) 2022

Ph.D. Candidate, Electrical Engineering Department
GPA: 4.0/4.0

SUPERVISOR: Prof. Milica Stojanovic

COURSES: Introduction to Machine Learning, Analysis I (MATH), Advanced Machine Learning, Mathematical Statistics (MATH), Probability II (MATH), Information Theory, GNSS Signal Processing, Functional Analysis (MATH)

Northeastern University (NEU) Sep. 2016

M.Sc., Electrical Engineering Department
GPA: 4.0/4.0

THESIS: Channel Estimation for OFDM Systems

SUPERVISOR: Prof. Milica Stojanovic

COURSES: Linear Systems Analysis, Applied Probability and Stochastic Processes, Digital Communications, Modern Signal Processing, Adaptive and Statistical Signal Processing, Wireless Communications

University of Tehran Sep. 2011

B.Sc., Electrical Engineering Department
GPA: 15.00/20.00

THESIS: A Novel Method for Source Enumeration Using Direction of Arrival Estimation

SUPERVISOR: Prof. Ali Olfat

COURSES: Signals and Systems, Communications I, Communications II, Information Theory, Digital Transmission Systems, Synthesis and Design of Filters, Fields and Waves, Communications Circuits, Microwave I, Antennas I (Theory and Design)

JOURNAL PUBLICATIONS

- [J2] A. Tadayon and M. Stojanovic, "Iterative sparse channel estimation and spatial correlation learning for multichannel acoustic OFDM systems," *IEEE Journal of Oceanic Engineering*, vol. 44, no. 4, pp. 820–836, Oct. 2019.
- [J1] A. Tadayon and M. Stojanovic, "Low-complexity superresolution frequency offset estimation for high data rate acoustic OFDM systems," *IEEE Journal of Oceanic Engineering*, vol. 44, no. 4, pp. 932–942, Oct. 2019.

CONFERENCE PUBLICATIONS

- [C9] A. Tadayon, M. Taya, and M. Stojanovic, "On mitigating channel time variation effect in acoustic OFDM systems," in *Proc. IEEE 5th Underwater Communications and Networking Conference (UComms)*, Lercici, Italy, Aug. 2021, pp. 1–5.
- [C8] A. Tadayon and M. Stojanovic, "Coherent multicarrier receiver for mobile acoustic channels," in *Proc. IEEE 20th International Workshop on Signal Processing Advances in Wireless Communications (SPAWC)*, Cannes, France, Jul. 2019, pp. 1–5.
- [C7] M. Taya, A. Tadayon, and M. Stojanovic, "Mobile acoustic communications: Real data analysis of partial FFT demodulation with coherent detection," in *Proc. MTS/IEEE OCEANS 2018*, Charleston, SC, Oct. 2018, pp. 1–7.
- [C6] E. Demirors, J. Shi, A. Duong, *et al.*, "The SEANet project: Toward a programmable Internet of underwater things," in *Proc. IEEE 4th Underwater Communications and Networking Conference (UComms)*, Lercici, Italy, Aug. 2018, pp. 1–5.
- [C5] A. Tadayon and M. Stojanovic, "Exploitation of spatial coherence for reducing the complexity of acoustic OFDM systems," in *Proc. IEEE 4th Underwater Communications and Networking Conference (UComms)*, Lercici, Italy, Aug. 2018, pp. 1–4.
- [C4] A. Tadayon and M. Stojanovic, "Path-based channel estimation for acoustic OFDM systems: Real data analysis," in *Proc. 51st Asilomar Conference on Signals, Systems, and Computers*, Pacific Grove, CA, Oct. 2017, pp. 1759–1763.

- [C3] A. Tadayon and M. Stojanovic, "Frequency offset compensation for acoustic OFDM systems," in *Proc. IEEE OCEANS 2017*, Anchorage, AK, Sep. 2017, pp. 1–5.
- [C2] A. Tadayon and M. Stojanovic, "Iterative sparse channel estimation for acoustic OFDM systems," in *Proc. IEEE 3rd Underwater Communications and Networking Conference (UComms)*, Lerici, Italy, Aug. 2016, pp. 1–5.
- [C1] A. Tadayon and M. Stojanovic, "Estimation and tracking of time-varying channels in OFDM systems," in *Proc. 52nd Annual Allerton Conference on Communication, Control, and Computing (Allerton)*, Monticello, IL, Sep. 2014, pp. 116–122.

INVITED TALKS

- [T6] **Applied Research Laboratory (ARL), The University of Texas at Austin** Jun. 2020
High rate UWA multicarrier communication systems: Mitigating motion-induced Doppler effect
- [T5] **John Hopkins University Applied Physics Laboratory (APL)** May. 2020
High rate UWA multicarrier communication systems: Mitigating motion-induced Doppler effect
- [T4] **MIT Lincoln Lab** Apr. 2020
High rate UWA multicarrier communication systems: Mitigating motion-induced Doppler effect
- [T3] **NATO - STO CMRE** Feb. 2020
High rate UWA multicarrier communication systems: Challenges and remedies
- [T2] **Underwater Acoustic Signal Processing Workshop (UASP)** Oct. 2017
Coherent OFDM receiver for high data rate acoustic communication systems
- [T1] **NEU ECE PhD Student Seminar Series (NEPSSS)** Nov. 2016
OFDM for multicarrier modulation

EXPERIENCE

- Apple** Apr. 2021 - present
Cellular engineer
- Qualcomm** Aug. 2020 - Mar. 2021
Senior engineer in modem system group
- Bose** Summer 2020
Graduate intern
- Schlumberger-Doll Research** Summer 2018
Graduate intern
- MathWorks** Summer 2015-2017
Graduate intern
- Northeastern University** Fall 2014-present
Teaching assistant, holding recitation and office hours, and grading for
 - Applied probability and stochastic processes Fall 2014-2019
 - Wireless communications Spring 2015, 2017
 - Information theory (volunteer) Fall 2019
 - Wireless sensor networks Spring 2016
 - Supervised machine learning Spring 2020
- Florida Atlantic University** Fall 2011-Spring 2012
Research scholar, working on time-average Fourier telescoping under supervision of Prof. Rhodes
- Technical University of Munich** Summer 2006
Research scholar, working on surgical workflow modeling under supervision of Prof. Navab

PROFESSIONAL
ACTIVITIES

Journal Reviewer

- IEEE Journal of Oceanic Engineering 2016-2020
- IEEE Transaction on Vehicular Technology 2017, 2020
- IEEE Transaction on Wireless Communications 2017, 2019
- Ad Hoc Networks 2018-2019
- IEEE Journal of Internet of Things 2019
- EURASIP Journal on Advances in Signal Processing 2020
- IEEE Communication Letter 2020
- IEEE Signal Processing Letter 2020
- Journal of the Acoustical Society of America 2020

Conference Reviewer

- IEEE Signal Processing Advances in Wireless Communications (SPAWC) 2019
- Underwater Communications and Networking (UComms) 2020

Conference Organization

- MTS/IEEE OCEANS 2017
Session Chair of the Acoustic Telemetry and Communication session

PROFESSIONAL
MEMBERSHIP

IEEE

- 2007-present
- Eta Kappa Nu (HKN) 2014-presents
- Communication Society 2010-present
- Signal Processing Society 2011-preent
- Oceanic Engineering Society 2015-present
- Information Theory Society 2008-preent

TECHNICAL
SKILLS

Research Interests Statistical signal processing, digital communications

Programming MATLAB, Python, C++

Simulator Bellhop, Full VirTeX (acoustic channel simulators based on ray tracing)

Basic Knowledge: Git, L^AT_EX

CERTIFICATES

- Technion-edX** Sparse Representations in Signal and Image Processing Sep. 2020
- UCSD-Coursera** Algorithmic Toolbox Jun. 2016
- MIT-edX** Introduction to Computer Science and Programming Using Python Mar. 2015
- Caltech-edX** Learning From Data Dec. 2014
- EPFL-Coursera** Digital Signal Processing Jul. 2014
- Stanford-Coursera** Machine Learning Aug. 2013
- Brown University-Coursera** Coding the Matrix Oct. 2013
- Stanford-Coursera** Introduction to Mathematical Thinking Dec. 2012

HONORS AND
AWARDS

Excellence in review, IEEE Journal of Oceanic Engineering	2018-2019
Recipient of IEEE Signal Processing Society Travel Grant	2019
Recipient of College of Engineering Travel Grant	2019
Candidate for Best Student Paper Award at IEEE SPAWC	2019
Outstanding teaching award of college of engineering	2016
Excellent student in the electrical and computer engineering department	2011
Ranked 80 among 400000+ students in the nation-wide university entrance exam	2003
Ranked 3 among 400000+ students in the Islamic Azad university entrance exam	2003