Amirhossein Khalilian-Gourtani

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Personal Profile

Amirhossein is a Ph.D. candiate studying electrical engineering at New York University Tandon school of engineering. He received his M.Sc. degree from New York University in electrical engineering. His main research interests include Signal Processing, Machine Learning, Medical Signal Processing and Statistics, Convex and Non-smooth Optimization, and Numerical Analysis.

Education

Sep.2018– Present
Ph.D. in Electrical Engineering
New York University, NY, USA.
○ GPA: **4.0/4.0**

Sep.2016– Aug.2018
M.Sc. in Electrical Engineering
New York University, NY, USA.
○ GPA: **4.0/4.0**

Sep.2012– Aug.2016
B.Sc. in Electrical Engineering (Communications)
Isfahan University of Technology, Isfahan, Iran.
○ GPA:**19.21/20**

Honors and Awards

2018 **Ernst Weber Ph.D. Fellowship** from **New York University**.

2018 **Myron M. Rosenthal Award** for **Best M.Sc. Academic Achievement in Electrical and Computer Engineering** from **New York University**.

2017 **Samuel Morse M.Sc. Fellowship** from **New York University**.

2017 **Certificate of Merit** for **Academic Achievement** from **New York University Tandon School of Engineering**.

2016 **Graduate School of Engineering Scholarship** from **New York University.**.

2015 **Trophy** and **Scholarship** for **Academic Excellence** from **National Elites Foundation,** governed by Presidency of Islamic Republic of Iran.

Ranked 2nd, among undergraduate students of ECE Department, Isfahan University of Technology, Class 2016.

Ranked 1st, among students of Communication Engineering, ECE Department, Isfahan University of Technology, Class 2016.

2013-2015 **Awarded as an exceptionally talented student for 3 consecutive years ,** by Isfahan University of Technology.

Research Interests

● Signal Processing ● Machine Learning ● Convex and Non-smooth Optimization
● Medical Signal Processing and Statistics ● Numerical Analysis

Journal Publications

- A. Khalilian-Gourtani, S. Minaee, and Y. Wang. "Masked-RPCA: Moving Object Detection with an Overlaying Model", IEEE Open Journal of Signal Processing, vol. 1, 2020..
- M. Khoroushi, M. Sheikhi, A. Khalilian-Gourtani, and B. Soleimani. "Effect of root canal rinsing protocol on dentin bond strength of two resin cements using three different method of test", J Clin Exp Dent. 2016.

Conference Publications

- A. Khalilian-Gourtani, N. Gadgil, G. Su, and C. Fu. "Effective User-Guided Video Segmentation", in 3rd International Conference on Multimedia Information Processing and Retrieval (MIPR), IEEE, 2020.
- R. Wang, X. Chen, A. Khalilian-Gourtani, Z. Chen, L. Yu, A. Flinker, and Y. Wang. "Stimulus Speech Decoding from Human Cortex with Generative Adversarial Network Transfer Learning", in 2020 IEEE International Symposium on Biomedical Imaging (ISBI 20), IEEE, 2020.
- A. Khalilian-Gourtani, M. Tepper, V. Minden, and D. Chklovskii. "Strip the stripes: Artifact Detection and Removal for Scanning Electron Microscopy Imaging", in 44th International Conference on Acoustics, Speech, and Signal Processing (ICASSP), IEEE, 2019.
- A. Khalilian-Gourtani, Y. Wang, and J. Mamou. "Scanning Acoustic Microscopy Image Super-Resolution using Bilateral Weighted Total Variation Regularization", in 40th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), IEEE, 2018.

Patents

- A.Khalilian-Gourtani, N. Gadgil, G.-M. Su, "User-guided image segmentation methods and product," US Patent Application 62/944,847, Assignee: Dolby Laboratories Inc., November 2019.

Professional Experiences

Summer-19	Video Processing Research Intern at Dolby Laboratories Inc..
Summer-18	Summer Research Associate at Center of Computational Biology, Simon's Foundation, Flatiron Institute.
Summer-17	Volunteer Research Assistant at Langone Health, New York University.
Summer-14	Research Intern at SarvNet Telecommunication Inc..

Teaching Experiences

Spring-19	Teaching Assistant for Intro to Machine Learning, New York University, Lecturer: Prof. Rangan.
Fall-18	Teaching Assistant for Digital Signal Processing Lab, New York University, Lecturer: Prof. Selesnick.
Spring-18	Teaching Assistant for Image and Video Processing, New York University, Lecturer: Prof. Wang.
Fall-17	Graduate Assistant for Medical Imaging, New York University, Lecturer: Dr. Mamou.
Spring-16	Teacher Assistant for Circuit Theory I, Isfahan University of Tech, Lecturer: Prof. Saeedi.
Spring-15	Teacher Assistant, Signals and Systems Analysis, Isfahan University of Tech, Lecturer: Dr. Narimani.

Professional skills

Programming	MATLAB & SIMULINK, Python, PyTorch, AVR Codevision, C, Julia
CAD Tools	Orcad Pspice, CST Studio, Cisco Packet Tracer, Proteus
Miscellaneous	Microsoft Office, LaTeX, Fluent English, Teamwork skills, Learn quickly