ARASH TARKHAN

PERSONAL INFORMATION

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Persoal pages Department of Biostatistics at UW
Linkedin

EDUCATION

PhD student 2016-now : Department of Biostatistics, School Public Health, University of Washington

Master of Science 2013-2016: Department of Electrical Engineering, University of Washington

Master of Science 2008-2011: Department of Electrical Engineering, Sharif University of Technology

Bachelors of Science 2004-2008: Telecommunications, Department of Electrical Engineering, Amirkabir University of Technology

2008-2011: Power Systems, Department of Electrical Engineering, Amirkabir University of Technology

SKILLS

Courses Survival Data Analyses, Advanced Theory of Statistical Inference (a package of three courses), Categorical Variable Analyses, Causal Modeling, Computer Programming II (Java), Computing Tools in Research (A package of two courses), Data analysis, Design and Analysis of Experiments, Design of Medical Studies, Measure Theory, Non-parametric Regression, Optimization, Statistical Consulting, Statistical Inference I and II, Statistical Learning, Theory in Linear Models, Vaccines, Stochastic Processing in Engineering, System Identification and Adaptive Control, Regression Methods (a package of three courses), State Estimation, Kalman Filtering, Digital Signal Processing, Fundamental of Wireless Communications and Computer Communication Networks

Computer and programming Basic: C/C++

Intermediate: Python, Java

Advanced: R, Matlab, Latex, Linux, Microsoft Windows

RESEARCH PROJECTS

2017-now Methods for feature selection in down-selection of vaccine regimens based on multivariate immune response endpoints. Research advisor: Dr. Ying Huang (Fred Hutchinson Cancer Research Center)

2017-now Metabolites pathway analysis using graphical networks. Research advisor: Prof. Ali Shojaie (Department of Biostatistics, University of Washington)

2018-now Prior Knowledge constrained metabolites pathway analysis using graphical networks. Research advisor: Prof. Ali Shojaie (Department of Biostatistics, University of Washington)

2018-now Building very fast and accurate prediction algorithm. Research advisors: Dr. Ollivier Hyrien (Fred Hutchinson Cancer Research Center) and Prof. Alex

Luedtke (Fred Hutchinson Cancer Research Center and Department of Statistics, University of Washington)

2018-now Exercise engagement among amputees. Research collaborator: Dr. Mark Sederberg (Department of Rehabilitation, University of Washington)

2016-2017 Review of methods for high-dimensional causal structure learning: a review. Research advisor: Prof. Ali Shojaie (Department of Biostatistics, University of Washington)

2018-now Survival data analysis in neural network. Dr. Noah Simon (Department of Biostatistics, University of Washington)

2014-2016 Multi-view video transmission in multiple-input multiple output networks. Research advisor: Dr. Jenq-Neng Huang (Department of Electrical Engineering, University of Washington)

2015-2016 Feasibility of machine-to-machine (M2M) data transmission using current network infrastructures. Research advisor: Dr. Jenq-Neng Huang (Department of Electrical Engineering, University of Washington)

2011-2013 Feasibility of combined renewable energy resources in northern Iran. Joint work with Seyed Mehdi Hossei and Mohammad Dehghan (Department of Electrical Engineering, Sharif University of Technology)

2009-2011 Antenna Selection in Multiple-input Multiple-output Relaying Networks. Project advisors: Dr. Forouhar Farzaneh and Babak Khalaj (Department of Electrical Engineering, Sharif University of Technology)

2007-2008 Building a Prediction Model to Detect the Type of Faults in Power Transmission Lines. Project advisor: Dr. Hamidreza Amindavar (Department of Electrical Engineering, Amirkabir University of Technology)

WORK EXPERIENCES

June 24-present Summer intern in PHC Imaging Data group at Genentech, South San Francisco, CA

2017-present Graduate researcher at Fred Hutchinson Cancer Research Center, Seattle, A

2013-2016 Graduate research and teaching assistant with GPA 3.90, Department of Electrical Engineering, University of Washington
My teaching evaluation score was always above 4.8 out of 5

Jun. 2012-Feb. 2013 Researcher at Telecommunication Research Center

Project: Robust methods to receive and analyze GPS signals from satellites

Jun. 2008–Sep. 2008 Researcher at Hamrah-e-Aval

Project: Modeling the cellular coverage in city of Tehran

TEACHING EXPERIENCE

2016-now Department of Biostatistics, University of Washington

Teaching assistant for courses: Biostatistics, Applied Biostatistics, Data Analysis, and Medical Biometry.

2014-2016 Department of Electrical Engineering, University of Washington

Teaching assistant for courses: Discrete-time Signals and Systems, Advanced

Topics in Wireless Communications, Digital Telecommunication Systems, Wireless Communication, and Computer Networks.

Feb. 2012-Jun. 2012 — Tarbiat Moalem Institute

I was an instructor of renewable energy courses

Sep. 2011-Feb. 2012 — Ekbatan University

I was an instructor of electrical engineering courses

Sep. 2010-Jun. 2011 — Azad University

I was an instructor of electrical engineering courses

PUBLICATIONS

Feb. 2017 — Statistical Analysis and Data Mining, under revision

Journal, under revision

Title: Methods for high-dimensional causal structure learning: a review
Authors: Arash Tarkhan, Arjun Sondhi, Ali Shojaie

May 2019 — Submitted to AAAI 2020

Conference

Title: BigSurvSGD: Big Survival Data Analysis via Stochastic Gradient Descent
Authors: Arash Tarkhan and Noah Simon

August 2019 — Submitted to PM&R: The journal of injury, function and rehabilitation

Journal paper

Title: Exercise as a Vital Sign to Assess Physical Activity in Adults with an Amputation.
Authors: Mark Sederberg, Arash Tarkhan, et al.

April 2019 — Submitted to Biostatistics

Journal paper

Title: Methods for feature selection in down-selection of vaccine regimens based on multivariate immune response endpoints.
Authors: Arash Tarkhan and Ying Huang

August 2019 — PM&R journal of injury, function and rehabilitation

Journal paper

Brief Ultrasound-aided Teaching to Improve the Accuracy of Resident Musculoskeletal Palpation
Authors: Mark Sederberg, Arash Tarkhan, et al.

June 2019 — Accepted for presentation in AAPMR Annual Assembly, Nov 14-17, 2019

Abstract

Title: Exercise as a Vital Sign to Assess Physical Activity and Correlated Disease Burden in Adults with Amputation
Authors: Mark Sederberg, Arash Tarkhan, et al.

August 2019 — American Journal of Clinical Nutrition

Journal paper

Plasma metabolomics profiles suggest beneficial effects of a lowglycemic load dietary pattern on inflammation and energy metabolism
Authors: Sandi L Navarro; Aliasghar Tarkhan; Ali Shojaie; et al.

January 2019 — Presented at the AMSSM 28th Annual Meeting in Houston, TX on April 12-17, 2019

Abstract

Exercise as a Vital Sign to Assess Levels of Physical Activity in Adults with Amputation
Authors: Mark Sederberg, Aliasghar Tarkhan, et al.

Press releases: Newswise and Rehab Management

2017 International Conference on Communications

Conference

Optimal DASH-Multicasting over LTE
Authors: Jounsup Park, Aliasghar Tarkhan, Jenq-Neng Hwang

2016 International Conference on Research in engineering , Science and Technology

Conference

Title: Evaluation of Real Time Fault Detection Mechanism in Medium Voltage Distribution Substation Equipments Using of Image Processing Techniques
Authors: Tahereh Moharrami-Kalfati, Mohammad Dehghan, Aliasghar Tarkhan

2016 Iranian Journal of Veterinary Medicine

Journal

Title: Evaluation of Real Time Fault Detection Mechanism in Medium Voltage Distribution Substation Equipments Using of Image Processing Techniques
Authors: Tahereh Moharrami-Kalfati, Mohammad Dehghan, Aliasghar Tarkhan

2013 First Annual Symposium on Environment and Energy

Conference

Title: Local Use of a Renewable Energies in North of Iran
Authors: Robabeh Vajdy, Aliasghar Tarkhan, Seyed Mehdi Hosseini, Roghayeh Vajdy

2012 Second Annual Symposium on Renewable Energy

Conference

Title: Case Study of Hybrid Solar-Wind Energy System with Capability of Rainwater Collection in Urban Areas in North of Iran
Authors: Mohammad Dehghan, Aliasghar Tarkhan, Nasrin Sabet, Farshid Keynia

2011 First Annual Symposium on Renewable Energy, Iran

Conference

Title: Feasibility of Wind Power and Solar Energy Combination System for Use in South of Caspian Sea
Authors: Seyed Mehdi Hosseini, Aliasghar Tarkhan, Robabeh Vajdy

2011 International Conference on Computer Networks and Distributed Systems

Conference

Title: Efficient Suboptimal Transmit Antenna Selection for MIMO Relay Channels
Authors: Aliasghar Tarkhan, Forouhar Farzaneh, Babak Khalaj

2011 International Conference on Computer Networks and Distributed Systems

Conference

Title: "Mutual Coupling and Correlation Based Suboptimal Antenna Subset Selection in MIMO Systems
Authors: Aliasghar Tarkhan, Forouhar Farzaneh, Babak Khalaj

REVIEWER IN JOURNALS AND CONFERENCES

Journals 2016-now · International Journal of Digital Multimedia Broadcasting

AWARDS

2008 Ranked 41 in electrical engineering national exam for graduate school

2008 First place among about 140 students in Electrical Engineering Department in Power branch, Amirkabir University of Technology

2008 Third place among 140 students in Electrical Engineering Department in Communication branch, Amirkabir University of Technology

2006 Top student among all students in Electrical Engineering Department

2005 Top student among all students in Electrical Engineering Department

2004 third place in Wushu , Mazandaran province competition

OTHER INFORMATION

Languages

Farsi · Mothertongue

English · Intermediate (conversationally fluent)

Arabic · Basic

Hobbies Hiking · Writing · Camping · Singing · Dancing · cooking · Traveling · Gardening

August 29, 2019