Amirsalar Mansouri

Date of birth: **1991 January 16**
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Education

2014–Present Ph.D. in Electrical and Computer Engineering,
Department of Electrical & Computer Engineering, University of Nebraska- Lincoln, Lincoln, NE, USA
Current GPA: 3.542

2009–2013 B.Sc. in Electronic Engineering,
School of Electrical & Electronic Engineering, Iran University of Science & Technology, Behshahr, Iran
Total GPA: 14.38/20

2005–2009 Diploma in Physics and Mathematics Discipline
Allameh Helli High School, National Organization for Development of Exceptional Talents, Tehran, Iran,
Total GPA: 18.31/20

Research Interests

- **EEG**
- **Signal Processing**
- **Machine Learning**
- **Data mining**
- **Bioinformatics**
- **RNA-seq**

Research Experience

Fall 2014 – Present **Research Assistant, Advisor Dr. Khalid Sayood.**
Department of Electronic Engineering, University of Nebraska- Lincoln,
Topics: EEG analysis especially pattern recognition of states of brain transitions, RNA-Seq analysis

- Seizure Detection and Localizations using EEG signals by modeling the preictal to ictal EEG signals alterations.
- Network-based pattern recognition seizure localization.
- Unsupervised detection of a recent concussive injury impacts using a novel network-based monitoring approach.
- BCI pattern recognition to generalized brain responses to tasks.
- Preprocessing RNA-seq data.
- Analyzing human and viral genome expression.
- Associated pathway analysis of differentially expressed genes.

Fall 2020 – Present **Research Assistant, at AACT lab, Dr. Kevin Pitt.**
College of Education and Human Sciences, University of Nebraska- Lincoln,

- Collecting and Processing data
- Classifying the stimulated and non-stimulated conditions using feature extraction in time domain.
- Modeling electrodes correlations using Network-based pattern recognition

Spring 2013 – Spring 2014 **Research Assistant in Electronic Laboratory directed by Dr. Ali Kermani.**
Department of Electronic Engineering, Iran University of Science & Technology,
Measuring of Mind's Awareness,

- Design circuit for collecting, amplifying, and filtering brain signals
- Processing and classifying awareness level

Spring2011 – Spring 2012 Simulation of a complete minimum system (including RAM, ROM, LCD, etc.) in Proteus. Project of "Computer Structure and Microprocessors", Dr. Kermani, Fall 2012.

Group project of Simulating, Designing and Implementation of ECG Signals Analyzer, Dr. Ghonoudi, Behshahr, Iran, Spring 2012

Publications

Hierarchal Online Temporal and Spatial EEG Seizure Detection
Mansouri, Amirsalar, Sanjay Singh, and Khalid Sayood. "Hierarchal Online Temporal and Spatial EEG Seizure Detection." 2017 IEEE International Conference on Electro Information Technology (EIT) (May 2017). doi:10.1109/eit.2017.8053397.

Online EEG Seizure Detection and Localization
Mansouri, Amirsalar, Sanjay P. Singh, and Khalid Sayood. "Online EEG Seizure Detection and Localization." Algorithms 12.9 (2019): 176. doi.org/10.3390/a12090176

Bone Marrow Derived SH-SY5Y Neuroblastoma Cells Infected by Kaposi's Sarcoma Herpes Virus (KSHV) Display Unique Infection Phenotypes and Growth Properties (*in press*)
Kong, Xiaohong and Li, Dongmei and Mansouri, Amirsalar and Kang, Guobin and Sayood, Khalid and West, John and Wood, Charles. 2021. "Bone Marrow Derived SH-SY5Y Neuroblastoma Cells Infected by Kaposi's Sarcoma Herpes Virus (KSHV) Display Unique Infection Phenotypes and Growth Properties." *Journal of Virology* (American Society for Microbiology Journals). doi:10.1128/JVI.00003-21

A Routine EEG Monitoring System for Automated Sports-Related Concussion Detection (*Submitted*)
Mansouri, Amirsalar and Ledwidge, Patrick and Sayood, Khalid and Molfese, Dennis (2021).

Conferences/Workshop Attended

2017 IEEE International Conference on Electro Information Technology (EIT) (May 2017)
2017 American Epilepsy Society Annual Meeting (AES) (December 2017)
Workshop on NGS Data Analysis, MASTERING RNA-SEQ (April 2018)
2018 Midwest Big Data Summer School (July 2018)
2019 UNL Research Fair graduate session (April 2019)

Awards and Honors

2019 UNL Research Fair graduate session ECE department 2nd place (April 2019).

2017 College of Engineering Graduate Student Conference Travel Grant.

2002-2009 Member of the National Organization for Development of Exceptional Talents, Iran.

2006 Ranked 3rd in NODET's High Schools RoboCup Competition, HelliCup, Tehran, Iran.

2006 Ranked 2nd in Noshirvani University of Technology National RoboCup Competition, Babol, Iran.

2007 Ranked 2nd in NODET's High Schools RoboCup Competition, HelliCup, Tehran, Iran.

2007 Ranked 2nd in Junior Soccer league Iran Open International RoboCup Competition, Tehran, Iran.

Top Ranked Scores

ECEN 996 Computational Intelligence (A)	CSCE 872 DIGITAL IMAGE PROCES (A)
CSCE 872 DIGITAL IMAGE PROCES (A)	CSCE 874 INTRO DATA MINING (A-)
ELEC 996 Bayesian Networks (A+)	CSCE 878 INTRO MACHINE LRNG (A)
ELEC 863 DIGITAL SIGNAL PROC (B+)	ELEC 996 Bayesian Networks (A+)
ECEN 853 Biological Image & Signal Processing (A)	ELEC 863 DIGITAL SIGNAL PROC (B+)
SLPA 981 Neuroimaging & Language Disorders (A)	ELEC 852 BIOINFORMATICS (B+)

Teaching Experience

Fall 2014 - Present Teaching Assistant of Department of Electrical and Computer Engineering Department

ELEC 211 (Elements of Electrical Engineering I)	ECEN 216 (Electronics and Circuits II)
ECEN 220 (Introduction to Embedded systems)	ECEN 231 (Electrical Circuits I- Lab)
ELEC 222 (Introduction to Embedded Systems)	ECEN 304 (Signals and Systems I)
ECEN 307 (Electrical Engineering Laboratory I- Lab)	ELEC 462 (Communication Systems)

Summer 2015 Upward Bound Math Science
Teaching Robotics, introduction to electronics and the microcontroller and robotics.

Fall 2009
Spring 2010
Fall 2012 Teaching Assistant of School of Electrical & Electronic Engineering, Iran University of Science & Technology, Behshahr, Iran
Electronic II (Fall 2012), Computer Programming (Fall 2009 and Spring 2010)

Computer Skills

Programming Languages: MATLAB, Python (TensorFlow, NumPy, PyTorch, …), C++, Assembly, Pascal, Basic, Familiar with R, C#, HTML, PHP
Circuit Simulation and Analysis: PSpice, Proteus (ISIS), CodeVision AVR, Arduino
CAD Software: AutoCAD, Corel Draw
Operating System: Microsoft Windows, Mac OS, and Familiar with Linux (Ubuntu)
Typesetting: Microsoft Office, LaTeX

Language Skills

English, Farsi and familiar with Turkish and Arabic.

Voluntary Activities

Judging the UNL Research fair posters	Lincoln NE April 2019
The Valley Flood relief	Valley Nebraska April 2019
Walk to End Epilepsy	Lincoln NE May 2019

Extracurricular Activities

Biking, Learning & Playing Violin, Poems, Volleyball, Basketball, Camping, Thinking, …