

# Alireza Kazemi

## PHD STUDENT • DEVELOPMENTAL PSYCHOLOGY

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“Yesterday I was clever, so I wanted to change the world. Today I am wise, so I am changing myself.” Maulana

## Research Interests

My main preoccupation is how the brain works. In particular, I am fascinated by *Memory, Learning, and Creativity*.

Subsequently, I am mostly interested in *Machine Learning, Image and Signal Processing, Intelligence, Decision making, and Computational Modeling*.

## Education



**University of California, Davis**

Davis, CA, USA

PH.D. IN PSYCHOLOGY

2017-Present

- *Supervisor:* Dr. Simona Ghetti.



**University of Tehran**

Tehran, Iran

M.SC. IN BIOMEDICAL ENGINEERING

2011-2014

- *Thesis Title:* Study on the Biofeedback Effects in Sleeping Procedure.
- *Supervisor:* Dr. Seyed Kamaledin Setarehdan.
- *Skills:* Higher Order Statistical Analysis, Signal Processing, Pattern Recognition, Machine Learning, High Performance Computing, C++, C# and MATLAB Programming, Hardware Design for Signal Acquisition.
- *Overall GPA:* 3.5/4



**Shahid Beheshti University**

Tehran, Iran

B.SC. IN ELECTRONIC ENGINEERING

2006-2011

- *Final Project:* Simultaneously Solving Schrodinger and Poisson Equations in Parallel Using Distributed Computing Methods and FDTD (Finite Difference Time Domain) to Simulate Quantum Electronic Devices.
- *Supervisor:* Dr. Mohammad Javad Sharifi.
- *Skills:* FDTD and FEM Methods, C/C++ Programming, Linux OS, Eclipse, Matlab, Distributed Computing, Object Oriented Programming, High-Performance Workstation Hardware and Technologies.
- *Last three years (93 Course Units) GPA:* 3.4/4 || *Overall GPA:* 2.9/4

## Professional Skills

### Methods and Algorithms

- Higher Order Statistical Analysis (HOSA)
- Discrete Time Signal Processing (DSP)
- Biological Signal Processing (BSP)
- Image Processing
- Neural Networks
- Neural Dynamics
- Pattern Recognition and Machine Learning Methods
- Artificial Intelligence and Modern AI
- Numerical Analysis
- Partial Differential Equations Solving
- Many-Core Processing: NVIDIA CUDA
- Object Oriented Programming
- Graphic User Interface Design
- Statistical Modeling

### Programming Languages

- MATLAB
- C/C++/C#
- CUDA
- MPI
- Java
- Python
- VHDL
- HTML

### Hardware

- Analogue to Digital Interfaces
- Analogue Amplifier and Filter Design
- Digital Circuit Design
- Motor Driver Design
- FPGA: Altera & Xilinx Families
- Microcontrollers: 8051, AVR & ARM Families

## Engineering Softwares

•EEGlab	•FieldTrip	•Simulink	•Octave (Linux)	•Orcad Pspise	•Atmel Studio
•BESA	•OpenCV	•MuPAD	•Scilab (Linux)	•Proteus VSM	•Keil $\mu$ vision
•Neuron	•VTK	•Maple	•Spyder (Linux)	•Multisim	•Altium
•Nengo	•GNUPlot	•Mathematica		•CodeVision	

## General Softwares

•Windows OS	•Linux OS	•Adobe Photoshop	•Inkscape
•Microsoft Office	•Open Office	•Adobe Illustrator	•Gimp
•Microsoft Visual Studio	•Eclipse	•Autodesk Autocad	•Latex

## Work Experience

### NR Sign Inc.

Vancouver, Canada

#### RESEARCHER

Sep. 2014 to Jan. 2017

- Researching on DC potential and SD (Spreading Depression) detection and evaluation in EEG signals that are acquired from rat and human brain (In Iranian branch of the company).

### Freelance

Tehran, Iran

#### DESIGNER & DEVELOPER

Jan. 2011 to Present

- Analogue and digital electronic hardware and software designer.

### Padra Trading and Technology Ltd.

Tehran, Iran

#### TECHNICAL ADVISOR

Feb. 2011 to Dec. 2011

- Working as technical advisor about instrumentation of electrical engineering laboratories in universities.

### Tehran Securities Exchange Technology Management Co.

Tehran, Iran

#### TECHNICAL SUPERVISOR (AS TRAINEE)

Jul. 2010 to Dec. 2010

- Trainee in technical supervision division. Maintaining hardwares of Iran's stock exchange server.

### Shahid Beheshti University

Tehran, Iran

#### TEACHER ASSISTANT AND PRIVATE TUTOR

Sep. 2008 to Sep. 2011

- For 6 semesters I was teacher assistant in Shahid Beheshti University, worked for Dr. Mazloom Nejad, in Digital Logic, Microprocessors, Instrumentation courses.
- In addition, I was private tutor for some of electronic engineering courses such as: electronics I, II and III, Digital Logic, Microprocessors, AVR, 8051, Computer Programming, Signals and Systems.

## Patents

### Anxiety Remover, Sedative and Sleeping Smart Device

Patents Of the Islamic Republic of Iran

Owner: Alireza Kazemi

Patent Number: 1394/02/13 - 85581

2015

## Publications

### PUBLISHED:

#### Optimal spin-state transition in singly occupied quantum dots network

Journal Of Applied Physics

Authors: M. Yaghouti, M. J. Sharifi and A. Kazemi. DOI

2013

## Certificates

### Quantitative Neuro-microscopical Course

3-Day Workshop

From: Aarhus University & Shahid Beheshti University

2016

### Advanced Workshop on Diffusion Tensor Imaging

3-Day Workshop

From: University Medical Center Utrecht

2016

### International Certificate of Professional Matlab Programming

170 Hours Training Course

From: Iran Technical & Vocational Training Organization.

2010

### Introductory to Nanotechnology

16 Hours Training Course

From: Nanotechnology Research Center of Shahid Chamran

2008

### Graduated from ILI (Iran Language Institute) in English

19 levels in 5-Year

From: The first ranked foreign language institute in Iran

Graduation Date: Aug. 2004