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| <b>Contact Information</b> | Henry Ford Health System<br>Department of Radiation Oncology,<br>One Ford Place, STE 4D, Detroit, MI-48202  | +1(248)320-1550<br>gi8052@wayne.edu<br>nzakari1@hfhs.org |
| <b>Objective</b>           | To ameliorate human health through cross-disciplinary activities which are in the vanguard of new approaches to rationally understand diseases progression by integrating the engineering science with biomedical science and clinical practice.  |  |
| <b>Research Interests</b>  | <ul style="list-style-type: none"> <li>• MRI, Sequence Development, Image Processing, Image Reconstruction</li> <li>• Medical Physics, Medical Imaging, Radiation Oncology</li> <li>• Neuroimaging, functional Magnetic Resonance Imaging (fMRI)</li> <li>• MR-Safety and Electromagnetic</li> <li>• Cardiovascular MRI</li> </ul>  |  |
| <b>Education</b>           | <b>Wayne State University</b><br>M.Sc., Biomedical Engineering - Biomedical Imaging Track<br>Start: Sept. 2017- Jul. 2019; Over all GPA: 3.8/4 <ul style="list-style-type: none"> <li>• <b>Thesis:</b> <i>Contrast Mechanisms for Tumor Imaging at 0.35T</i></li> <li>• <b>Advisor:</b> E. Mark Haacke, Ph.D</li> <li>• <b>Co-Advisor:</b> Carri Glide-Hurst, Ph.D</li> </ul><br><b>Amirkabir University of Technology</b><br>B.Sc., Biomedical Engineering - Bioelectric<br>Start: Sept. 2012- Apr. 2017; Over all GPA: 16.35/20 - 3.3/4 <ul style="list-style-type: none"> <li>• <b>Thesis:</b> <i>Assessment of fMRI Phase Images by means of Averaged BOSS Technique</i></li> <li>• <b>Advisor:</b> Abbas N. Moghaddam, Ph.D</li> </ul> |  |
| <b>Work Experience</b>     | <b>Research Assistant</b><br>Department of Radiation Oncology<br>Henry Ford Health System<br>Supervisor: Carri Glide-Hurst, Ph.D  | Oct. 2019 – Present                                      |
| <b>Publications</b>        | <ol style="list-style-type: none"> <li>1. Niloufar Zakariaei, Yongsheng Chen, Siamak Nejad-Daravani, E. Mark Haacke, Carri Glide-Hurst. " <i>Rapid Multi-Contrast Brain Imaging at 0.35T to Facilitate Tumor Response Assessment and Functional Adaptive Radiation Therapy</i>", AAPM, 2019</li> <li>2. Vahid Ghodrati, Niloufar Zakariaei, Abbas N. Moghaddam. " <i>Peripheral Nerve Stimulation Considerations in the Presence of the Foreign Metallic Objects</i>", ISMRM, 2015.</li> </ol>  |  |
| <b>Research Experience</b> | <b>Research Assistant</b><br>MR Research Facility, MRC<br>Department of Radiology, Wayne State University<br>Supervisor: E. Mark Haacke, Ph.D   | Sept. 2017 – Jul. 2019                                   |

**Research Assistant** Jun. 2014 – Apr. 2017  
 Advanced Medical Imaging Research (AMIR) Lab, Amir Lab  
 Department of Biomedical Engineering, Amirkabir University of Technology  
 Supervisor: Abbas N. Moghaddam, Ph.D

**Teaching Experience**

**Teaching Assistant**

- Introduction to Biomedical Engineering  
 Instructor: Abbas N. Moghaddam fall 2015
- Brain Physiology and Cognition  
 Instructor: Shahriar Gharibzadeh fall 2016

**Selected Research Projects**

- Advanced Digital Image Processing  
 A User Interface Design to Denoise Extremely Corrupted Images  
*Instructor: Xiaoyan Han, Ph.D* Spring 2018
- Math and Programming in Engineering  
 A User Interface Design for Medical Images Segmentation  
*Instructor: Richard Genik, Ph.D* Spring 2018
- Medical Imaging  
 A New Method for Early Microaneurysm Detection in Diabetic Retinopathy  
*Instructor: Mohammad Mehrmohammadi, Ph.D* Fall 2017
- MR Imaging for Neurovascular Diseases  
 The application of Perfusion Imaging of the Brain in Neurodegenerative Disease  
*Instructor: E. Mark Haacke, Ph.D* Fall 2017
- MRI  
 Safe Mode Region Modification to Prevent the Peripheral Nerve Stimulation During MR-Scanning in the Presence of Paramagnetic Objects  
*Instructor: Abbas N. Moghaddam, Ph.D* Spring 2016
- Microprocessor Lab  
 Setting up a 128\*64 Graphical LCD by ST7920 Driver  
*Instructor: Ali Saeidi, Ph.D* Fall 2015
- Electrical Measurement  
 Design a Sudoku Table and Solve it with Back Track Technique by LabView  
*Instructor: Amirhossein Rezaei, Ph.D* Fall 2015
- Biological Optimization  
 Implementation of Ant Colony Optimization  
*Instructor: Sajjad Jafari, Ph.D* Fall 2015
- Logic Circuits Lab  
 Designing and Implementation a Game for Evaluating Hand-Eye Coordination on FPGA for Every Person  
*Instructor: Safa Rafeivand, Ph.D* Spring 2015
- Microprocessor  
 Programming an AVR microcontroller to Monitor the Temperature and Control a Stepper Motor Using a Keyboard

*Instructor: Farshad Almasganj, Ph.D*

Spring 2015

- C++ Programming  
Implementation of Othello Game  
*Instructor: Farnaz Ghassemi, Ph.D*

Spring 2013

## Honors

- **Best In Physics (BIP)** award from AAPM. BIP presentations are those scoring highest in the abstract review process and judged by the Scientific Program Directors to reflect the highest level of scientific quality and innovation 2019
- Member of Tau Beta Pi Honor Society 2018
- Honorary Admission to the Graduate Program of Biomedical Engineering Department Amirkabir University of Technology 2016
- Ranked Top 0.5 percent in the National Entrance Exam among all Iranian Students in Mathematics and Physics 2012
- Semi-finalist of the National Math Olympiad 2011
- Semi-finalist of the National Olympiad in Informatic 2011

## Experience

- Research Intern in Computational Modelling Lab, **Institute for Cognitive and Brain Sciences (ICBS)**, Shahid Beheshti University Summer 2015
- Software Educator: LT spice, MATLAB Fall 2014
- Software Educator: PSPICE/ OrCad Spring 2014

## Computer Skills

- **Programming Languages:** C/C++, MATLAB, Python, R
- **Engineering Software:** Simulink, PSPICE/OrCad, LTspice, Altium Designer, Proteus, Keil uVision, LabView, CodeVisionAVR, AVR and ARM Assembly
- **Technical Simulators:** FSL, SPM, AFNI, Maxwell Ansoft, Simpleware, ImageJ
- **Operating Systems:** Microsoft Windows, Linux (Ubuntu User)
- **Other software:** Microsoft Office, Photoshop,  $\LaTeX$

## Language Skills

- **English:** Fluent
- **Persian:** Native
- **Arabic:** Elementary

## Volunteer Experiences

- **Civil Rights Activist:** Michigan Section Leader of a Grass Roots Organization to Foment Movements Against Inhumane Policies
- **Media Content Producer:** Social Media Chair of the Graduate Teaching Assistants of Wayne State University (Subset of American Federation of Teachers)
- **Educationist:** Provider of a Free Educational System for Children in Deprived Areas

## Hobbies

- Amateur Theater (Perform, Direct)
- Playing Violin
- Photography
- Calligraphy

## References

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