

# Seyed Hamed Haghshenas

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## Contact Details

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## Personal Statement

I am a master's student in the department of Biomedical Engineering at George Washington University (GWU). I received my undergraduate degree in Applied Physics. I was involved in an experimental research project during my master's program and several computational projects through my undergraduate studies. I am competent in numerical simulations and computer programming in different languages.

## Publication

- J. George, **H. Haghshenas**, D. d'Hemecourt, W. Zhu, L. Zhang, and V. Sorger, "Scattering and absorption control in biocompatible fibers towards equalized photobiomodulation," Biomed. Opt. Express **8**, 1589-1597 (2017).

## Education

- **Master of Biomedical Engineering**  
George Washington University (GWU), USA      September 2015 – Expected June 2017
  - I. I have been working as a research student in Electromagnetic laboratory and Optics laboratory.
  - II. In the Electromagnetic Lab, I am improving the instrumentation of the Microwave Cavity test setup. My tasks are to improve the data acquisition system and available codes for post-processing of Q factor. Data acquisition, processing and visualization are implemented in Visual Basic (VB).
  - III. In Optics Lab, I collaborated in the Photobiomodulation project. I was involved in designing, constructing a 3D model in Autodesk Inventor, running simulations in COMSOL and fabricating an experimental Biocompatible PLA rings and PLA gold caps. Furthermore, I performed numerical calculations of light intensity and scattering in PLA rings accounting for bending losses, in Matlab. <http://sorger.seas.gwu.edu/group.html>
- **Bachelor of Applied Physics**  
Ferdowsi University of Mashhad (FUM), Iran      September 2010 - June 2015
  - I. I joined the astronomy research group investigating about Hot Accretion Flows around Black Holes since June 2014 until June 2015. I was mainly involved in the implementation of mathematical models using Fortran programming language in the Linux Ubuntu Operating System.
- **High school Diploma in Mathematics and Physics**      September 2009

## Honors and Awards

- Awarded the Graduate Merit Scholarship of 11,000\$ per semester from the ECE department of GWU for Fall 2016.
- Ranked **8000th** amongst nearly 340,000 participants in the Nation-Wide University Entrance Exam of 2010.

## Advance Courses

- Medical Measurements
- Applied Electromagnetics
- Anatomy and Physiology for Engineers
- Medical Imaging
- Signal Processing and Analysis
- Medical Instrumentation and Design
- Signals and Transforms in Engineering
- Microwave Engineering

## Skills and Abilities

### **Computer programming and simulation skills**

I am a fast self-learner and competent in different programming languages, visualization and simulation packages such as:

- **Programming languages:** MATLAB, FORTRAN PowerStation (FORTRAN 90), Net Beans IDE (Web Programming and Design), Java Platform, SQL servers, Adobe Dreamweaver, Visual Basic.
- **Numerical calculations:** Maple, Wolfram Mathematica
- **FEM:** COMSOL
- **Visualization:** Origin 6.0, Origin Pro 8.0
- **3D modelling:** SolidWorks, Autodesk Inventor Professional
- **DAQ:** Labview, NI Multisim
- Microsoft Office (Excel, Word, PowerPoint etc.), Linux OS (Ubuntu)

I have also successfully completed computer programming courses and summer schools at the Iran's Technical and Vocational Organization and acquired certificates in Java Platform and Web programming and Design.

### **Installing and troubleshooting different Hardware**

- Including CPU, Motherboard, Hard Drive, DAQ boards, etc.
- Configuring and implementing LAN (Local Area Network), WLAN.

### **Strong management skills**

- I successfully managed a team of translators in different international conferences and workshops.
- I was the head of Physics student committee at Ferdowsi University of Mashhad (FUM), Iran. I coordinated the collaboration of the committee with organizing the Annual Conference of Physics of Iran in FUM, 2014.

## Language Proficiency

- **English:** Fluent. Certificates:
  - IELTS (International English Language Testing System): overall band score of **7.5** out of 9 in Academic module of IELTS, 2014.
  - FCE (First Certificate in English), 2006.
  - CAE (Certificate in Advanced English), 2007.
  - CPE (Certificate of Proficiency in English), 2009
- **German:** Intermediate, A2 level. I studied German for few years and was the top student for four semesters.
- **Persian:** First Language.

## **Work History**

### **Senior IT Technician**

*SEAS Computing Facility, George Washington University* January 2016 – Present  
I am a part-time senior IT technician at the School of Engineering and Applied Science Computing Facility (SEAS CF), responsible for installing and repairing different operating systems, software and hardware, network devices on different computers and work stations.

*Columbian College of Art and Sciences, George Washington University* January – August 2016  
I was a part-time senior IT technician mainly in charge of web programming and design, updating professors' portals and the GWU language center website.

### **Farsi Tutor**

*Columbian College of Art and Sciences, George Washington University* January – August 2016  
During the academic year, I was a Farsi tutor helping students of Farsi course with their grammar, vocabulary and literature questions. I voluntarily helped the center to organize Iranian New Year ceremony and hold events about Iranian culture.

### **English Teacher**

*Parax Language Institute, Iran* November 2012-March 2015  
I started teaching English part-time at this institute when I entered the university. I taught English to teenagers and adults. I was also trained as an IELTS instructor and started teaching IELTS. I was promoted to the co-supervisor position at one of the branches. I taught English to adults in the FCE and CAE levels.

## **Interests**

I am a very active person and enjoy doing sport. I regularly go jogging and swim. I also like playing volleyball, soccer and basketball. At the high school I was a basketball player and used to play in different local clubs. I used to play piano and am passionate about music and art.

## **Referees**

**-Dr. Zhenyu Li** [zhenyu@gwu.edu](mailto:zhenyu@gwu.edu)  
Assistant Professor in the field of Biomedical Engineering, Faculty of SEAS, George Washington University, Washington, D.C., USA <http://www.bme.seas.gwu.edu/zhenyu-li>

**-Dr. Volker Sorger** [sorger@gwu.edu](mailto:sorger@gwu.edu)  
Assistant Professor in the field of Electrical Engineering, Faculty of SEAS, George Washington University, Washington, D.C., USA <http://sorger.seas.gwu.edu/>

**-Mr. Raoul Gabiam** [gabiamr@gwu.edu](mailto:gabiamr@gwu.edu)  
Director of the School of Engineering and Applied Science IT, George Washington University, Washington, D.C., USA

**-Dr. Shahram Abbassi** [abbassi@ipm.ir](mailto:abbassi@ipm.ir)  
Assistant Professor in the field Astrophysics, Faculty of Science, Ferdowsi University of Mashhad (FUM), Mashhad, Iran.

**-Dr. Seyed Majid Saberi Fathi** [saberifathi@um.ac.ir](mailto:saberifathi@um.ac.ir)  
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**-Dr. Kurosh Javidan** [javidan@um.ac.ir](mailto:javidan@um.ac.ir)  
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