Iman Khazrak

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Summary

- Publications: 12 (published: 7, under preparation: 5)
- GPA: 4 out of 4
- Second MSc in Applied Statistic, Bowling Green State University, Ohio, USA.
- First MSc and BSc in Physics, Arak University, Arak, Iran.

Education

- **MSc in Applied Statistic** | 2021 – present | **Bowling Green State University**, Ohio, USA.
- MSc in Physics | 2003 – 2007 | Arak University, Arak, Iran.
- BSc in Physics | 1999 – 2003 | Arak University, Arak, Iran.

Data Science Background

- **Machin Learning**:
  - Data Mining (Grade: **A**)
  - Time Series Analysis (Grade: **A**)
  - Regression Analysis (Grade: **A**)
  - Exploratory Data Analysis (Grade: **A**)
- **Programming**: Python, R, SQL
  - Data Science Programming (Grade: **110 out of 100**) | Python
  - Database Management (Grade: **A**) | SQL
- **Visualization**: Using Python and R.
  - Statistical Graphics (Grade: **A**) | Python, R
- **Math**:
  - Probability Theory (Grade: **A**)
  - Mathematical Statistics (Grade: **A**)
  - Sampling Design (Grade: **A**)
- **Software**: Latex, Microsoft Office, Google (Colab, Docs, Sheets, Slides).

Work Experience

2022-2023: Teacher Assistant, ASOR Department, Bowling Green State University, Ohio, USA

2021-2022: Research Assistant, Data Science program, Bowling Green State University, Ohio, USA

2021-2022: Teacher Assistant, Marketing Department, Bowling Green State University, Ohio, USA

2008-2017: Lecturer in Technical and Vocational University of Ahvaz, Fundamental Physics (I&II), Electromagnetics and Physics' lab (I)

2007-2015: Lecturer in Payame Noor University, Fundamental Physics (I&II), Electromagnetics (I), Quantum Mechanics

2006-2008: Lecturer in Azad University, Fundamental Physics (I&II) and Modern Physics

2004-2021: Physics Teacher, Ministry of Education, Iran

2003-2004: Research Assistant, Dept. of Physics, Faculty of Science, Arak University of Arak, Iran

2001-2002: The manager of Physical experiments of Physics Park, Arak, Iran

Publications

- Thermally induced phase mismatching in a repetitively pulsed Gaussian pumping KTP crystal: a spatiotemporal treatment. APPLIED OPTICS 54(15):4781-4788 (2015)

- Shaped-Dependent Optical Properties of InAs/GaAs Quantum Dots presented on XXVI IUPAP Conference on Computational Physics, Boston, Massachusetts, USA (August 2014)

- An Optimized Framework for FORTRAN Programming, Second National Conference on Computational Science. Iran Sep 2016

- OpenCL2.0 disadvantages in solving physical and engineering problems: Lack of complex data processing, incapable in defining multi-dimensional arrays, and incapable of defining pointer and dynamic variables, 2nd National Conference on Distributed Computing and Big Data Processing, Iran Nov 2016

- The advantages of FORTRAN over C++: A comparison of runtime and memory requirement for solving physics and engineering problems, Second National Conference on Computational Science, Iran Sep 2016

- Self-channeling of Femtosecond Laser Pulses in Air and it's Stability Factor– The First National Conference Optics and Laser Engineering-Iran (Nov 2009)

- Study of The Effect of Rough Surfaces on Contact Cross Section of Cu Surfaces-Iranian Physics Conference.449(2006)

Under Preparation Publications

- 1) "A depleted and numerical model for pulsed Gaussian wave type II second harmonic generation,"

- 2) "Heat coupled type II long-pulse second harmonic generation: a model for inclusion of thermal phase mismatching and thermal lensing"

- 3) "The efficiency changes of pulsed Gaussian second harmonic generation in KTP crystal: investigating the influences of pulse energy, laser spot size, cooling temperature by emphasizing the interaction length scale"

- 4) "Heat-pulsed second harmonic generation coupling: Reduction in RAM and run-time using algorithm optimization and parallel computing"

- 5) "Investigation of efficiency and field profile of Bessel-Gauss beams in pulsed second harmonic generation under thermal effects"

Honors and awards

- 2021-2023   Graduate Assistantship, Bowling Green state University, OH.

- 2022-2023   Additional Non-Residency Fee Scholarship, Bowling Green State University, OH.

- 2021-2022   Additional Non-Residency Fee Scholarship, Bowling Green State University, OH.

- 2016-2019   The Leader of Physics Teachers of Khuzestan Province.

- 2009-2010   The Best Physics Teacher of Year in the annual competition.

- 2007-2008   The Hard Worker Teacher of Year in the annual competition.

- 2003-2007   Graduated with Honor (MSc): Second Rank in M.Sc. Degree, Arak University, Arak, Iran.

- 2002-2003   Graduated with Honor (BSc): Second Rank in B.Sc. Degree, Arak University, Arak, Iran.

- 1999-2002   The First Rank (for 6 consecutive semesters) in B.Sc. program Arak University, Arak, Iran.

References

My Advisor & Professor: Dr. Yuhang Xu, Assistant Professor, Applied Statistics/Oper Res, Bowling Green State University, OH. Email: xuy@bgsu.edu | Tel: +1 (419) 372-2363

My Professor & I was her TA: Dr. Shuchismita Sarkar, Assistant Professor, Applied Statistics/Oper Res, Bowling Green State University, OH. Email: ssarkar@bgsu.edu | Tel: +1 (419) 372-2363

My Professor: Dr. Shuteng Niu, Assistant Professor, Computer Science, Bowling Green State University, OH. Email: sniu@bgsu.edu | Tel: +1 (419) 372-2363

My Mentor & Co-author: Dr. Ali Khaledi-Nasab, Research Scientist **@ Amazon Web Services (AWS)**, CA. Email: Alinsb@amazon.com | Tel: +1 (740) 331-1349 | Website: alikhaledi.com