Curriculum Vitae

↑ Personal Data:

- Surname: Jamali
- Name: Ramin
- Date and Place of Birth: November 11, 1995; Tehran, Iran
- Nationality: Iranian
- Email: raminjamali@iasbs.ac.ir, raminjamali@outlook.com
- Address: Multi-dimensional Imaging and Detection Laboratory
  Department of Physics, Institute for Advanced Studies in Basic Sciences
  PO Box 45195-1159, Zanjan, Iran
- Tel: +98 911 227 9809 (WhatsApp)
  +98 24 3315 2280 (Office)

↑ Summary:

- I am a Ph.D. student of physics at the Institute for Advanced Studies in Basic Sciences (IASBS). I have been doing research in speckle tweezers for controlling of low and high refractive index micro-particles, measurement of depletion forces in colloids, and the various applications of optical trapping, speckle analysis and 3D microscopies.

↑ Research Interests:

- Speckle Tweezers; 3D Imaging and Microscopies; Depletion Forces in Colloidal Systems; Optical Manipulation.

↑ Education:

- M.Sc. in Optics, 2018-2021, Institute for Advanced Studies in Basic sciences (IASBS), Zanjan, Iran
  Supervisors: Dr. Ali-Reza Moradi and Dr. Jalal Sarabadani

  Thesis title: Investigation and Controlling of Colloidal Mixture by Speckle Tweezers
- B.Sc. in Physics, 2014-2018, University of Zanjan, Zanjan, Iran

↑ Awards and Honors:

- Selected PhD student of Ahmadi Roshan project (Elites Foundation), 2023
- Selected PhD student of Shahid Vezvaee project (Elites Foundation), 2023
- Selected PhD student of Shahid Vezvaee project (Elites Foundation), 2022
- Top student (1st rank, GPA:19.46/20), Ph.D., Institute for advanced Studies in Basic Sciences, Zanjan, Iran, 2019
- Top student (1st rank, GPA:18.33/20), M.Sc., Institute for advanced Studies in Basic Sciences, Zanjan, Iran, 2019
- Top student (1st rank, GPA:17.87/20), B.Sc., University of Zanjan, Zanjan, Iran, 2018
- Top student (1st rank, GPA:17.52/20), High School, Allameh Amini, Zanjan, Iran, 2014
- Top student (1st rank, GPA:19.90/20), Guidance School, Kharazmi, Zanjan, Iran, 2010
- Top student (1st rank, GPA:20/20), Elementary School, Ehsan, Zanjan, Iran, 2007

↑ Computer and Programming Skills:

- Scientific Softwares: Matlab, Mathematica, Maple, Latex, Comsol Multiphysics, LAMMPS (Large-scale Atomic/Molecular Massively Parallel Simulator)
- Programming Languages: C++ and Python
- Graphic Softwares: 3Ds Max, Google SketchUp, Adobe Photoshop, Adobe InDesign, ImageJ
- Electronic Softwares: Pspice, ProfiCAD
- Operating Systems : Linux (Ubuntu), Microsoft Office

↑ Activities:

- Teaching Assistant of Electronics, January 2023-2024
  Institute for Advanced Studies in Basic Sciences, Zanjan, Iran
- Teaching Assistant of Optics and Photonics II, January 2023-2024
  Institute for Advanced Studies in Basic Sciences, Zanjan, Iran
- Teaching Assistant of Modern Physics Laboratory, January 2023-2024
  Institute for Advanced Studies in Basic Sciences, Zanjan, Iran
- Teaching Assistant of Optics and Photonics I, January 2023-2024
  Institute for Advanced Studies in Basic Sciences, Zanjan, Iran
- Teaching Assistant of Optics and Photonics, January 2021-2022
  Institute for Advanced Studies in Basic Sciences, Zanjan, Iran
- Teaching Assistant of Modern Physics Laboratory, April 2022
  Institute for Advanced Studies in Basic Sciences, Zanjan, Iran
- Teaching Assistant of Electronics, January 2022
  Institute for Advanced Studies in Basic Sciences, Zanjan, Iran
- Teaching Assistant of Electronics Laboratory, January 2018-2022
  Institute for Advanced Studies in Basic Sciences, Zanjan, Iran
- Teaching Assistant of Electronics Laboratory, January 2015-2018
  University of Zanjan, Zanjan, Iran
- Teaching Assistant of Electromagnetics, February 2017-2018
  University of Zanjan, Zanjan, Iran
- Teaching Assistant of Electronics, October 2017-2018
  University of Zanjan, Zanjan, Iran

- Teaching Assistant of Optics and Laser, October 2017-2018
  University of Zanjan, Zanjan, Iran
- Teaching Assistant of Physics II (Electromagnetics), February 2016-2017
  University of Zanjan, Zanjan, Iran

↑ Involved Research Projects:

1. Speckle Tweezers in Liquid-Liquid Interface

   - Collaboration with Dr. ALi-Reza Moradi and Dr. Sabareesh K. P. Velu's group (Rathinam College of Arts and Science, India)

2. Controlling Collective Motion by Speckle Tweezers

   - Collaboration with Dr. ALi-Reza Moradi and Dr. Sabareesh K. P. Velu's group (Rathinam College of Arts and Science, India)

3. Acoustic Tweezers and Digital Holographic Microscopy

   - Collaboration with Dr. ALi-Reza Moradi and Professor Bahram Javidi's group (University of Connecticut, USA)

4. 3D Imaging Using Scanning Diffractometry with Speckle Pattern Analysis

   - Collaboration with Dr. ALi-Reza Moradi.

5. Revealing the structure deformation in multi-component lipids by dynamic speckle pattern analysis

   - Collaboration with Dr. Ahmad Darudi (University of Zanjan, Iran).

6. The Role of Magnetic Filed Effect on Morphology and Growth Rate of Myelin Figures

   - Collaboration with Dr. ALi-Reza Moradi.

7. Metamaterial Assisted Illumination Nanoscopy via Random Super-Resolution Speckles

   - Collaboration with Dr. ALi-Reza Moradi.

8. Phase Separation Detection of Binary Mixture of by Speckle Pattern Analysis

   - Collaboration with Dr. ALi-Reza Moradi.

↑ Publications-Journals:

* Corresponding Author

1. R. Jamali, V. Farzam Rad, M. Razaghi, Z. Mohamadnia, M. Khorasani and A. R. Moradi*, "Digital Holographic Microscopy of Spiropyran-Based Dynamic Materials," Under review in Journal of Microscopy

2. R. Jamali, A. Babaei-Ghazvini, E. Nazari, M. Panahi, I. Shahabi-Ghahfarrokhi, and A. R. Moradi*, "Surface characterization of biodegradable nanocomposites by dynamic speckle analysis," Accepted in Applied Surface Science Advances, 16 (100429), 2023

3. O. Pedram, R. Jamali, V. Farzam Rad*, R. Khamedi, E. Poursaeidi and A. R. Moradi, "Pitting corrosion evaluation by dynamic speckle pattern analysis," Sci. Rep. 26;13(1):8549, 2023

4. M. Panahi, V. Farzam Rad, Sh. Sasan, R. Jamali, A. R. Moradi and A. Darudi*, "Detection of intralayer alignment in multi-component lipids by dynamic speckle pattern analysis," Journal of Biophotonics, https://doi.org/10.1002/jbio.202200034, 2022

5. R. Jamali, F. Nazari, A. Ghaffari, S. K. P. Velu, and A. R. Moradi*, "Speckle tweezers for manipulation of high and low refractive index micro-particles and nano-particle loaded vesicles," Nanophotonics, 10 ,11, pp. 2915-2928 ,2021

6. M. Panahi, R. Jamali, V. Farzam Rad, M. Khorasani, A. Darudi, and A. R. Moradi*, "3D monitoring of the surface slippage effect on micro-particle sedimentation by digital holographic microscopy," Sci. Rep. 11, 12916, 2021

7. V. Farzam Rad, A. Babaei-Ghazvini, R. Jamali, I. Shahabi-Ghahfarrokhi, and A. R. Moradi*, "Digital holographic microscopy for real-time investigation of 3D microstructural dynamics of starch-kefiran based nanocomposite," Appl. Opt. 60(16), pp. 4706-4715, 2021

8. V. Farzam Rad, M. Panahi, R. Jamali, A. Darudi, and A. R. Moradi*, "Non-invasive in situ monitoring of bone scaffold activity by speckle pattern analysis," Biomed. Opt. Express 11(11), pp. 6324-6336, 2020

↑ Publications-Proceedings-International:

* Corresponding Author

1. R. Jamali, B. Olamaei, M. Soltanloo, S. E. H. Yeganeh, V. Farzam Rad, J. Esmkhani, and A. R. Moradi*, " Measurement of corrosion in power plant turbine rotors by digital holographic microscopy" Imaging Congress, hybrid , 14 - 17 August 2023

2. E. Nasimdoust R. Jamali, F. Amarloo, S. K. P. Velu, and A. R. Moradi*, " Controlling Spatial Distribution of Speckle Fields for Multi-Manipulation of Colloids" Optical Trapping and Optical Micromanipulation XIX, 21 - 24 August 2022

3. R. Jamali, F. Nazari, A. Ghaffari, S. K. P. Velu, and A. R. Moradi*, " Simultaneous Manipulation of Low and High Refractive Index Micro-particles by Speckle Tweezers" PSL Summer School on Soft and Living matter, July 2021

4. R. Jamali, F. Nazari, A. Ghaffari, S. K. P. Velu, and A. R. Moradi*, "Collective Manipulation of Low and High Refractive Index Micro-particles by Speckle Tweezers" International Virtual Conferance on " Novel nanomaterials for innovative reaserch ICNNIR, April 2021

↑ Publications-Proceedings-National:

* Corresponding Author

1. R. Jamali, and A. R. Moradi*, "Experimental Study of Liposome Aggregation" Proc. 26th Annual IASBS Meeting on Condensed Matter Physics, July 2021

2. R. Jamali, T. Ohadi, and A. R. Moradi*, "Investigating the Time Evolution of Color Distribution in a Variety of Surfaces" Proc. 26th Annual IASBS Meeting on Condensed Matter Physics, July 2021

3. M. Karimi, R. Jamali, A. Bayat*, Y. Abedini, Y. Ghaniun, "Building One Channel Sun-Photometer Using Light Emitting Diode " Proc. 26th Iranian Conference on Optics and Photonics and 12th Iranian Conference on Engineering Photonic (ICOP19 Vol.26), February 2020

4. R. Jamali* and S. Mollaei, "Time Evolution of Size Distribution for Oil Droplets on Water" Proc. 25th Annual IASBS Meeting on Condensed Matter Physics and School on Topological Phases of Matter, June 2019

5. A. Bayat*, R. Jamali and S. Mollaei, "Calculation of Rotational Inertia of Gyroscope and Measurement of Force Vector by Precession." Proc. 17th Zanjan Education Research Journal, July 2018

6. S. Mollaei, R. Jamali and A. H. Daroneh*, "Investigation of Self- Assembly of Aluminium Flakes on Water Surface" Proc. 24th Annual IASBS Meeting on Condensed Matter Physics and School on Topological Phases of Matter, June 2018

↑ Talks:

1. "Speckle Tweezers", NanoQIQO School on Optics and Photonics (SOP) 2023, Yerevan, Armenia, May 2023

2. "Investigation and Controlling of Colloidal Mixture by Speckle Tweezers", Optics Group Seminars, IASBS, Zanjan, Iran, June 2021

3. “Designing and Construction of a LED Sun Photometer”, University of Zanjan, Zanjan, Iran, June 2017

4. “Calculation of Rotational Inertia of Gyroscope and Measurement of Force Vector by Precession”, University of Zanjan, Zanjan, Iran, December 2016

↑ Schools and Conferences Attended:

1. NanoQIQO School on Optics and Photonics (SOP), Yerevan, Armenia May 15-20, 2023
2. PSL Summer School on Soft and Living matter, Paris, France July 5-9th, 2021
3. 26th Annual IASBS Meeting on Condensed Matter Physics, IASBS, Zanjan, Iran, July 7-9th, 2021
4. RSC Desktop Seminar Lecturship with Soft Matter, RSC webinars, April 29th, 2021
5. International Virtual Conferance on "Novel Nanomaterials for Innovative Reaserch ICNNIR, 29th & 30th April, 2021
6. One-day Online Workshop on Novel Features and Applications of Optical Manipulation, IPM, Tehran, Iran, September 8th, 2020
7. 26th Iranian Conference on Optics and Photonics and 12th Iranian Conference on Engineering Photonic, Kharazmi University (ICOP19 Vol. 26), February, 2020
8. 25th Winter School of Physics, IASBS, Zanjan, Iran, February, 2020
9. 25th Annual IASBS Meeting on Condensed Matter Physics, IASBS, Zanjan, Iran, June 13-14th, 2019
10. 24th Annual IASBS Meeting on Condensed Matter Physics, IASBS, Zanjan, Iran, June 13-14th, 2018
11. Workshop on Non-equilibrium Soft Matter, IPM, Tehran, Iran, April 11th, 2019
12. Center for Research in Climate Change And Global Warming (CRCC), University of Zanjan, Zanjan, Iran, December 2015
13. The First Workshop on The Regional Climate Model system (RegCM), December 2015

↑ Language Skills:

- Mother Tongue (Bilingual): Persian and Azeri
- English Language
  - Understanding
    Listening: C1
    Reading: C1
  - Speaking
    Spoken Interaction: B1
    Spoken Production: B1
  - Writing
    Writing Skills: B2

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user

- Good Communication Skills, Active Listening, Clarifying and Summarising
- Good Command of Quality Data Processing and Circuit Design

↑ Fu rther Activities:

- Persian Calligraphy
- Watching Movies & Series
- Graphic Design with 3Ds Max

↑ Referees:

Dr. Ali-Reza Moradi

Department of Physics, Institute for Advanced Studies in Basic Sciences (IASBS) PO Box 45195-1159, Zanjan,
Tel: +98 24 3315 2122 (Office)
Fax: +98 24 3315 2104
E-mail: moradika@iasbs.ac.ir, ar_moradi@yahoo.com
http://www.iasbs.ac.ir/ moradika

Dr. Jalal Sarabadani

School of Nano Science
Department of Physics, Institute for Research in Fundamental Sciences (IPM), Tehran, Iran
Tel: +98 21 2283 5061 (Office)
Fax: +98 21 2283 5058
E-mail: jalal@ipm.ir, jalal.sarabadani@gmail.com
http://www.ipm.ac.ir/personalinfo.jsp?PeopleCode=IP1800036r