



Elyas Nasimdoust


Physics Student




Personal Page
For Further Info

I am a hard-working Physics student working on Speckle tweezers and their application in soft matter physics and biology. I have also worked on phase-step diffractometry and the applications in 3D imaging as a second project in my master's degree. Also, I worked on Gravitational waves and investigated events of LIGO and VIRGO as a B.Sc. project. These projects made me an enthusiastic person which is passionate about doing experimental and theoretical research and excellent at working with equipment and presenting creative ideas to make experiments get done in a desirable and useful manner. I would love to carry on my research in an interdisciplinary environment working on challenging experimental projects in the fields of Multi-dimensional Imaging and Microscopy.

Contact

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 Elyas.nasimdost2



Research Interests

Experimental Optics:

- Object Trapping
 - o Speckle Tweezers
 - o Optical Tweezers
 - Multi-dimensional Imaging and
 - o Microscopies
 - o Digital Holography
 - o Super-resolution Microscopy
 - Colloidal Particles
 - Optical Manipulation
 - Biphotonic
 - Wavefront Engineering
 - Medical Physics
- and the Applications in Soft Matter, Biology, Fluidics, Metallurgy, Mechanical Engineering, Chemistry, etc.

Language

- Persian [Native]
- English [Fluent]

Skills

- Software
 - o Mathematica ●●●●●
 - o Maple ●●●●●
 - o LaTeX ●●●●●
 - o LabView ●●●●●
 - o ImageJ ●●●●●
 - o COMSOL ●●●●●
- Programming
 - o MATLAB ●●●●●
 - o Fortran ●●●●●
 - o HTML ●●●●●
 - o Python ●●●●●



Personal Information

- Full Name Elyas Nasimdoust
- Date of Birth 24 June, 1997
- Place of Birth Someh Sara, Iran
- Nationality Iranian
- Address Room No. 127 [Office] or Room No. 104 [Lab],
Department of Physics,
Institute for Advanced Studies in Basic Sciences (IASBS)
444 Prof. Yousef Sobouti Blvd.,
Zanjan 45137-66731, Iran



Education

- 2019 to Present** M.Sc. student of Physics, optics, and laser
Ranked 2nd Student (Based on GPA= 17.62 A)
Institute for Advanced Studies in Basic Sciences ([IASBS](http://iasbs.ac.ir)), Zanjan, Iran
- Thesis title:** Controlling the directed collective motion of particles with speckle field
- Laboratory** Multi-Dimensional Imaging and Detection Laboratory ([MDID](http://mdid.iasbs.ac.ir))
Supervisors: Dr. Ali-Reza Moradi (moradika@iasbs.ac.ir)
Dr. Sabareesh Velu (sabareesh.velu@gmail.com)
2019 - Now
- 2015 to 2019** B.S. in Atomic Physics
University of Guilan - Faculty of Sciences, Rasht, Iran
- B.Sc. Project** Investigating the evolution of the theory of gravity from Newton to Einstein, gravitational waves and their detection
Supervisor: Dr. Reza Saffari
- Extra Project** Free Electron Laser for Laser Physics Course
Supervisor: Dr. Mansour Eslami
2018 - 2019
- Extra Project** Spectroscopy NMR (Nuclear Magnetic Resonance) for Solid State Physics Course
Supervisor: Dr. Jamal Mazloom
2017 - 2018



Talk and Presentation

Everything about Dark Matter (Talk)

- Elyas Nasimdoust
- 173th Club Science and Astronomy, kooshyar guilani observatory, Rasht, Iran,
October 2017



Teaching Experience

Teaching Assistant

Optics and photonics Lab1, to continuous Ph.D. Students and M.Sc. students
Institute for Advanced Studies in Basic Sciences (IASBS), Zanjan, Iran
Teaching by: Dr. Rahman Nouroozi (rahman.mouroozi@iasbs.ac.ir)
Spring 2022 and Fall 2022

Teaching Assistant

Optics and photonics Lab2, to continuous Ph.D. Students and M.Sc. students
Institute for Advanced Studies in Basic Sciences (IASBS), Zanjan, Iran
Teaching by: Dr. Jafar Mostafavi Amjad (mostafavi@iasbs.ac.ir)
Fall 2020

Teaching Physics (Special Technique in Physics)

Chista Entrance Exam School, Someh Sara, Iran
2017 to 2019



Schools, Conferences and Workshops

Course Certificate for Introduction to Data, Signal, and Image Analysis with MATLAB

Vanderbilt University- Coursera online
December 19, 2022

International School on Modern Applications of Optics and Photonics

Yerevan State University, Yerevan, Armenia
29 August-03 September 2022

Course Certificate for Introduction to Programming with MATLAB

Vanderbilt University- Coursera online
9 July 2022

Course Certificate for Programming for Everybody (Getting Started with Python)

University of Michigan- Coursera online
27 July 2022

27th IASBS Physics Schools

Institute for Advanced Studies in Basic Sciences (IASBS), Zanjan, Iran
July 2022

26th IASBS Physics Schools

Institute for Advanced Studies in Basic Sciences (IASBS), Zanjan, Iran
July 2021

One-day Online Workshop on Novel Features and Applications of Optical Manipulation

School of Nano Science, Institute for Research in Fundamental Sciences (IPM), Tehran, Iran
September 2020

23rd meeting on research in astronomy at IASBS

Institute for Advanced Studies in Basic Sciences (IASBS), Zanjan, Iran
May 2020

25th IASBS Physics Winter Schools

Institute for Advanced Studies in Basic Sciences (IASBS), Zanjan, Iran
February 2020

workshop on techniques for working in the laboratory

Institute for Advanced Studies in Basic Sciences (IASBS), Zanjan, Iran
January 2020

22nd meeting on research in astronomy at IASBS

Institute for Advanced Studies in Basic Sciences (IASBS), Zanjan, Iran
May 2019

24th IASBS Physics Winter Schools

Institute for Advanced Studies in Basic Sciences (IASBS), Zanjan, Iran
February 2019

15th Iranian Conférences on Amateur Astronomy (ICAA)

University Of Guilan, Rasht, Iran
July 2017



Activities

FZF* Polarimetric microscopy for biomedical applications - Design and construction

Forouzan Zist Fanavaran (FZF) Company, Zanjan, Iran

Summer 2022- Now

* Forouzan Zist Fanavaran is a spin-off company of the MDID group located at IASBS Techno Park (www.fzf-co.ir).

Member of:

Optics and Photonics Society of Iran

2019 to present

The physics society of Iran

2015 to present

optical society of America

2020 to present

Physics Scientific Association in the University of Guilan

University of Guilan - Faculty of Sciences, Rasht, Iran

2015 - 2019

Secretary of the Astronomical Society in the University of Guilan

University of Guilan - Faculty of Sciences, Rasht, Iran

2017 - 2019

Organizing Committee of weekly Talk Program it called 'Caffe physics'

University of Guilan - Faculty of Sciences, Rasht, Iran

2015 - 2019

Organizing Committee & Graphic Designer of Astronomy Day

University of Guilan - Faculty of Sciences, Rasht, Iran

May 2018

Organizing Committee & Graphic Designer of Astronomy Day

University of Guilan - Faculty of Sciences, Rasht, Iran

May 2017

Organizing Committee National Physics Day

University of Guilan - Faculty of Sciences, Rasht, Iran

December 2018

Organizing Committee National Physics Day

University of Guilan - Faculty of Sciences, Rasht, Iran

December 2017

Organizing Committee National Physics Day

University of Guilan - Faculty of Sciences, Rasht, Iran

December 2016



Publications and Articles

1. Elyas Nasimdoust, Ramin Jamali, Faeze Amarloo, mahdi shafiei, Sabareesh K. P. Velu, Ali-Reza Moradi
Controlling the spatial distribution of speckle fields for multi-manipulation of colloids
Accepted SPIE Optical Trapping and Optical Micromanipulation XIX
 2. Faeze Amarloo, Elyas Nasimdoust, Ramin Jamali, Sabareesh K. P. Velu, Ali-reza Moradi
Speckle Tweezers for Bacteria Motion Control
Accepted as a poster presentation 16th NANOSCIENCE & NANOTECHNOLOGY CONFERENCE
 3. Morteza Jafari Siavashani, Elyas Nasimdoust, Parviz Elahi, and Ali-Reza Moradi
The effect of surface roughness on phase step diffractometry
Accepted as poster presentation SPIE Optical Sensing and Detection VII (PE110)
 4. Ramin Jamali, Vahideh Farzam Rada, Amin Babaei-Ghazvinib, MajidPanahi, Elyas NasimDoust, Ali-Reza Moradi,
'Deformation microstructural dynamics characterization of starch-kefiran-based nanocomposite by dynamic speckle analysis'
In preparation
 5. Morteza Jafari Siavashani, Elyas Nasimdoust, Parviz Elahi, Mohammad Taghi Tavassoli, Alireza Moradi
Diffraction from rough phase steps
under review in optics and lasers in engineering
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Hobbies

Watching Movies, Series and Documentaries, Following Car News, Swimming, Listening to Music, Travelling, mountaineering, Nature tourism, Photography, Driving, Science News,

References

Dr. Ali-reza Moradi

Assistant professors at IASBS

Home page: <https://iasbs.ac.ir/~moradika/>

Email: moradika@iasbs.ac.ir

Dr. Mansour Eslami

Assistant professors at the University of Guilan

Home page: <https://guilan.ac.ir/en/~meslami>

Email: meslami@guilan.ac.ir

Dr. Komeil babaei velni

Assistant professors at the University of Guilan

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