

Curriculum Vitae

Mojtaba Golshani

Introduction:

I am Mojtaba Golshani assistant professor of physics at Shahid Bahonar university of Kerman, Iran. My research interests include "Quantum information", "Light propagation and localization in optical waveguide lattices", "Theoretical and numerical studies of laser-plasma interactions", and "Theoretical and numerical studies of lasers".

Personal Information

First Name: Mojtaba **Last Name:** Golshani **Gender:** Male **Date of Birth:** 3/25/1985 **Location:** Kerman, Iran

Nationality: Iranian **Email:** golshanimojtaba@Gmail.com , golshani@uk.ac.ir

Homepage: <http://academicstaff.uk.ac.ir/mgolshani>

Current Position(s):

- **Assistant Professor, Faculty of Physics, Shahid Bahonar University of Kerman, Kerman, Iran**

Educations

Ph.D. Student (Started 2009, Finished 2014)

Sharif University of Technology, Tehran, Iran

Ph.D. in Physics, 2009-2014, Total GPA: (19.33/20)

Research Field: Optics and Laser

Thesis Title: Transverse Localization in optical waveguide arrays

Supervisors: Prof. Abdollah Langari & Prof. Ali Reza Bahrapour, **Advisor:** Prof. Seyed Mohammad Mahdavi

M.Sc. (Started 2007, Finished 2009)

Sharif University of Technology, Tehran, Iran

M.Sc. in Physics, 2007-2009, Total GPA: (18.40/20)

Research Field: Optics and Laser

Thesis Title: Optomechanical Oscillations in Fabry-Perot Cavity with two mechanical degrees of freedom

Thesis Grade: (19/20)

Supervisor: Prof. Ali Reza Bahrapour

B.Sc. (Started 2003, Finished at 2007)

Sharif University of Technology, Tehran, Iran

B.Sc. in Physics, 2003-2007, Total GPA: (18.40 / 20)

Scientific Activities

- Participating at the Winter College on Optics: "Fundamentals of Photonics - Theory, Devices and Applications", ICTP, Trieste, Italy (Feb. 2014).
- Visiting ultrafast optics research group at the Friedrich Schiller University in Jena, Germany (4-15 Dec 2013).
- Visiting Max Planck Institute for the Physics of Complex Systems in Dresden, Germany (15-22 Dec 2013).
- Participating at the "Advanced Workshop on Nonlinear Photonics, Disorder and Wave Turbulence", ICTP, Trieste, Italy (15-19 July 2013).
- Participating in a four-hour workshop on "writing research papers" at Sharif University of Technology, Tehran, Iran (2013).
- Member of Optics and Photonics Society of Iran.
- Member of Physics Society of Iran.

Presentations

- Laser cooling and Trapping (Shahid Bahonar University of Kerman, Kerman, Iran) (2018)
- Impact of second-order coupling on light localization in quasiperiodic Aubry-Andre lattice (Institute for Research in Fundamental Sciences (IPM), Tehran, Iran) (2016)
- Waveguide Arrays (Shahid Bahonar University of Kerman, Kerman, Iran) (2015)
- Random Fiber Laser (Sharif University of Technology, Tehran, Iran) (2010)
- Negative Refractive Index Materials (Sharif University of Technology, Tehran, Iran) (2009)
- Controlling the speed of light pulses (Sharif University of Technology, Tehran, Iran) (2008)
- Genetic Algorithm (Shahid Rajaei Teacher Training University, Tehran, Iran) (2007)

Publications

Journal:

- "Impact of loss on the light propagation in 1D optical waveguide array in the presence of Kerr-type nonlinearity", M. Khazaei Nezhad, **M. Golshani**, D. Mirshamsi, Optics Communications 405 (2017) 387–393.
- "Dynamic localization of light in squeezed-like photonic lattices", M. Khazaei Nezhad, **M. Golshani**, S.M. Mahdavi, A.R. Bahrapour, A. Langari, Optics Communications 367 (2016) 299-304 (Invited Paper).
- "Electron acceleration by linearly polarized twisted laser pulse with narrow divergence", Mohammad Vaziri, **Mojtaba Golshani**, Sozha Sohaily, Alireza Bahrapour, Physics of Plasmas, 22, 033118 (2015).
- "Impact of loss on the wave dynamics in photonic waveguide lattices", **M. Golshani**, S. Weimann, Kh. Jafari, M. Khazaei Nezhad, A. Langari, A. R. Bahrapour, T. Eichelkraut, S. M. Mahdavi, A. Szameit, Phys. Rev. Lett. 113, 123903 (2014).
- "Transverse localization in nonlinear photonic lattices with second-order coupling", **M. Golshani**, A. R. Bahrapour, A. Langari, and A. Szameit, Phys. Rev. A, 87, 033817 (2013).
- "Phase transition to spatial Bloch-like oscillation in squeezed photonic lattices", M. Khazaei Nezhad, A. R. Bahrapour, **M. Golshani**, S. M. Mahdavi, and A. Langari, Phys. Rev. A, 88, 023801 (2013).

- "Effect of long-range correlated disorder on the transverse localization of light in 1D array of optical waveguides", M. Khazaei Nezhad, S.M. Mahdavi, A.R. Bahrampour, **M. Golshani**, Optics Communications 307 (2013) 39-45.
- "Effect of Kerr nonlinearity on the transverse localization of light in 1D array of optical waveguides with off-diagonal disorder", M. Khazaei Nezhad, **M. Golshani**, A.R. Bahrampour, S.M. Mahdavi, Optics Communications 294 (2013) 299-304.
- "Mode analysis of fiber Bragg grating random lasers in the presence of mode competition", Abbas Ghasempour Ardakani, **Mojtaba Golshani Gharyeh Ali**, Seyed Mohammad Mahdavi, Ali Reza Bahrampour, Optics & Laser Technology 44 (2012) 969–975.
- "Numerical study of random lasing in three dimensional amplifying disordered media", Abbas Ghasempour Ardakani, Ali Reza Bahrampour, Seyed Mohammad Mahdavi, **Mojtaba Golshani Gharyeh Ali**, Optics Communications 285 (2012) 1314–1322.
- "A theoretical multi-reflection method for analysis of optomechanical behavior of the Fabry–Perot cavity with moving boundary condition", A.R. Bahrampour, M. Vahedi, M. Abdi, R. Ghobadi, **M. Golshani**, S. Tofighi, B. Parvin, Optics Communications 284 (2011) 4789–4794.

International Conference:

- "Impact of higher-order coupling on Bloch oscillations in optical waveguide arrays", **M. Golshani**, Kh. Jafari, M. Khazaei Nezhad, A. R. Bahrampour, A. Langari and S. M. Mahdavi, Winter College on Optics: "Fundamentals of Photonics - Theory, Devices and Applications", ICTP, Trieste, Italy (Feb. 2014).
- "Effect of loss on transverse localization of light in 1D photonic lattices", **M. Golshani**, M. Khazaei Nezhad, A. R. Bahrampour, A. Langari and S. M. Mahdavi, 546. WE-Heraeus-Seminar: "Light in Disordered Photonic Media", Physikzentrum Bad Honnef, Germany (Dec. 2013).

National Conference:

- "Direction of the Friction-Force", Ezzatollah Rezaei, Kh. Jafari, **M. Golshani**, 18th Iranian Conference on Physics Education, Tabriz, Iran (September 2017).
- "Impact of second-order coupling on light localization in quasiperiodic Aubry-Andre lattice", Kh. Jafari, **M. Golshani**, M. Khazaei Nezhad, 23rd IPM Physics Spring Conference, Institute for Research in Fundamental Sciences(IPM), Tehran, Iran (May 2016).
- "Transverse localization in double ring optical waveguide array with off-diagonal correlated disorder", N. Daryakar, **M. Golshani**, M. Taraz and A. R. Bahrampour, The 22th Iranian Conference on Optics and Photonics and The 8th Iranian Conference on Photonics Engineering and Technology, Yazd, Iran (Jan. 2016).
- "Quantum correlations between path-entangled photons in double ring optical waveguides array with attractive diagonal defects", N. Daryakar, **M. Golshani**, M. Taraz and A. R. Bahrampour, 8th Statistical Physics Conference (soft condensed matter and complex systems), Isfahan University of Technology, Isfahan, Iran (December 2015).
- "Dynamic localization in modulated binary array of optical waveguides", Kh. Jafari, **M. Golshani**, M. Khazaei Nezhad, Annual Physics Conference of Iran, Ferdowsi University of Mashhad, Mashhad, Iran (August 2015).
- "Effect of long-range correlation on transverse localization in double ring optical waveguide array", N. Daryakar, **M. Golshani**, A. R. Bahrampour and M. Taraz, Annual Physics Conference of Iran, Ferdowsi University of Mashhad, Mashhad, Iran (August 2015).

- "The effect of higher-order coupling on Bloch oscillations in optical waveguide arrays", **M. Golshani**, Kh. Jafari, M. Khazaei Nezhad, A. R. Bahrapour, A. Langari and S. M. Mahdavi, The 20th Iranian Conference on Optics and Photonics and The 6th Iranian Conference on Photonics Engineering and Technology, Shiraz, Iran (Jan. 2014).
- "Transverse localization in 1D array of optical waveguides with diagonal correlated disorder", Kh. Jafari, **M. Golshani**, M. Khazaei Nezhad, A. Langari, A. R. Bahrapour, and S. M. Mahdavi, The 20th Iranian Conference on Optics and Photonics and The 6th Iranian Conference on Photonics Engineering and Technology, Shiraz, Iran (Jan. 2014).
- "Investigation of pumping rate evolution in one dimensional random lasers", A. Ghasempour Ardakani, **M. Golshani Gharyeh Ali**, M. Khazaei Nezhad, S. M. Mahdavi, A. R. Bahrapour, The 17th Iranian Conference on Optics and Photonics and The 3th Iranian Conference on Photonics Engineering, Kerman, Iran (Feb. 2011).
- "Theoretical investigation of random lasers in a three dimensional medium", A. Ghasempour Ardakani, **M. Golshani Gharyeh Ali**, S. M. Mahdavi, A. R. Bahrapour, The 17th Iranian Conference on Optics and Photonics and The 3th Iranian Conference on Photonics Engineering, Kerman, Iran (Feb. 2011).

Teaching Experiences

- **Teaching, Department of physics, Shahid Bahonar University of Kerman, Kerman, Iran (2014-until now):**

- "Special Topics (Electrodynamics 2)"
- "Quantum Optics"
- "Optical Design 1"
- "Fundamentals of Optics"
- "Optics 1"
- "Optics 2"
- "Geometrical Optics"
- "Applied Optics"
- "Optics"
- "Engineering Mathematics"
- "Digital Electronics"
- "General Physics 1"
- "General Physics 2"
- "Physics 3 (Chemistry)"
- "Mathematical Methods for Optics"
- "Computer Simulation in Optics and Laser"

- **Teaching, (2006-2013):**

- Department of science, Shahed University, Tehran, Iran, "General Physics 3" (2010).
- Department of science, Shahid Rajaei Teacher Training University, Tehran, Iran, "Introduction to Mathematica" (2010).
- Department of science, Shahid Rajaei Teacher Training University, Tehran, Iran, "Introduction to Fortran Programming" (2009).

- **Teaching Assistant:**

- Department of physics, Sharif University of Technology, Tehran, Iran, "Classical Electrodynamics2 (J. D. Jackson)" (2012).
- Department of science, Shahid Rajaei Teacher Training University, Tehran, Iran, "Statistical Mechanics (Morse)" (2012).
- Department of physics, Sharif University of Technology, Tehran, Iran, "General Physics 1 (Mechanics)"(2009).

- Department of physics, Sharif University of Technology, Tehran, Iran, "General Physics 2 (Electricity and Magnetism)" (2010).
- Department of physics, Sharif University of Technology, Tehran, Iran, "General Physics 2 Laboratory" (2010 - 2013).
- Department of science, Shahid Rajaei Teacher Training University, Tehran, Iran, "Mathematical Physics 2 (Arfken)"(2006).
- Department of science, Shahid Rajaei Teacher Training University, Tehran, Iran, "Classical Mechanics 1(Fowles, Cassidy)" (2006).
- Department of science, Shahid Rajaei Teacher Training University, Tehran, Iran, "Electromagnetic Theory 2 (Reitz, Milford)" (2006).

Computer Skills

Scientific Software Tools: MATLAB, Mathematica, Zemax, ICDL Skills

Programming Languages: Fortran

Languages

Persian Native

English Intermediate

Honors and Awards:

- Winner of The Fifth "Ali-Mohammadi Prize" for outstanding PhD dissertation written in Iran (2015).
- Ranked 1st (among all of the physics students in Iran) in the first stage of 12th Physics Olympiad, Iran (2007).
- Rank 2 in the Nationwide M.Sc. Entrance Exam in Physics, Iran (2007).
- Gifted student award ranked 1st (among 30 students) in B.Sc., Shahid Rajaei Teacher Training University, Iran (2007).
- Member of Iran's National Elites Foundation.

References

- Professor Ali Reza Bahrapour, Sharif University of Technology, Department of Physics, Tehran, Iran, Email: bahrapour@sharif.edu
- Professor Abdollah Langari, Sharif University of Technology, Department of Physics, Tehran, Iran, Email: langari@sharif.edu
- Dr. Mehdi Neek-Amal, Shahid Rajaei Teacher Training University, Department of Science, Tehran, Iran, Email: neekamal@srutu.edu
- Professor Seyed Mohammad Mahdavi, Sharif University of Technology, Department of Physics, Tehran, Iran, Email: mahdavi@sharif.edu