

# Curriculum Vitae

**Neda Jahangiri**

**Birth Date: 16 September 1985**

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## *Education*

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- High School Diploma; Efaf High school; Torbat-E-Jam; IRAN (1999-2002 ), GPA: 18.95/20
- B.Sc.; Physics, Ferdowsi University of Mashhad, Mashhad, IRAN (2003-2008), GPA: 14.0/20.
- M.Sc.; Photonics, Kerman graduate University of Technology (KGUT), Kerman, IRAN (2009-2012), GPA: 17.10/20.
- Ph.D.; Condensed Matter Physics, Shahid Beheshti University of Tehran (SBU), Tehran, IRAN (2013-2021), GPA: 17.06/20.
- Post Doc.; Center for Quantum Engineering and Photonics Technologies, Sharif University of Technology, Tehran, IRAN (2022-Until now).

## *Research Experiences*

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- M.Sc. Project: A Microsphere Stimulated Raman Spectroscopy for Non-Invasive measurement of Glucose in the Blood, (Thesis grade: 19.75/20).  
Supervisor: Pro. Alireza Bahrapour  
Supervisor: Dr. Majid. Taraz
- Ph.D. Project: A Coherent amplification of electromagnetic waves using hybrid connection of quantum dots with superconducting wire, (Thesis grade: Excellent).  
Supervisor: Dr. Farshad Ebrahimi  
Advisor: Dr. S. Mojtaba Tabatabaei

## ***Technical Reports***

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- N. Jahangiri, "sensor based on silver nanoparticle doped Microsphere Resonator ", 2007, Internal notes at Kerman graduate University of Technology.
- N. Jahangiri, "Biomedical Sensors based on Microcavity Resonators ", 2010, Seminar Report at Kerman graduate University of Technology.
- N. Jahangiri, "Plasmonic Single Photon Sources ", 2014, Internal notes at Shahid Beheshti University of Tehran.
- N. Jahangiri, "Surface Plasmon Amplification by Stimulated Emission of Radiation (SPASER): Classical & Semi-classical treatment ", 2015, Seminar Report at Shahid Beheshti University of Tehran.
- N. Jahangiri, "Coherent phenomena in open electron-hole-photon systems", 2016, Seminar Report at Shahid Beheshti University of Tehran.
- N. Jahangiri, "Characteristics of NIS refrigerators", 2022, Seminar Report at Sharif University of Technology.

## ***Awards and Honors***

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- 1<sup>st</sup> rank student in comprehensive exam(written score: 92/100, oral score: 90/100)
- Being accepted as a top(talented) student for Ph.D. Position in Shahid Beheshti University of Tehran
- 3<sup>rd</sup> rank student among all Photonics graduates entered in M.Sc. program in 2009.

## ***Teaching Experiences***

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- Lecturer: Electromagnetic I, Vahdat Higher Education Institute (semester I& II, 2021-2022).
- Lecturer: Basic Physics I &II, Torbat-E Jam University (semester I& II, 2020-2022).
- TA: Advanced Quantum Mechanics, Shahid Beheshti University, (semester I& II, 2015-2017).
- TA: Solid State Physics, Shahid Beheshti University,(semester II, 2015)
- TA: Modern Physics, Shahid Beheshti University, (semester II, 2014).
- Lecturer: Basic Physics Lab I, Shahid Beheshti University, (semester I, 2014).
- Lecturer: Basic Physics Lab I &II & III, Azad University of Technology (2011-2013).
- Lecturer: Basic Physics I & II & III, Azad University of Technology (2011-2013).

### ***Books/ Book chapters:***

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- Sensors and Biosensors, MEMS Technologies and its Applications Advances in Sensors: Reviews (chapter 17: Human blood analytes biochemical sensors based on microsphere stimulated Raman spectroscopy)

**Editor-in-Chief:** Prof., Dr. Sergey Y. Yurish,

**ISSN:** 1726-5479

**Publisher:** International Frequency Sensor Association (IFSA)

### ***Publications***

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- N. Jahangiri and S. M. Tabatabaei, Lasing in a coupled hybrid double quantum dot-resonator system, *Phys. Rev. B* 101, 115135(2020)(published).
- N. Jahangiri, Light Amplification without Inversion from Hybrid Quantum Dot-Resonator Circuit: Floquet Non-Equilibrium Green's Function Approach, *Phys. Status Solidi(b)* 258, 2000312-1(2020) (published).
- N. Jahangiri, A.R. Bahrapour, M. Taraz, Non-invasive Optical Techniques for determination of blood Glucose levels, *Iranian journal Of Medical Physics* 11(2 & 3), 224(2014)(published).
- A.R. Bahrapour, N. Jahangiri, M. Taraz, Development of a Non-invasive Micron Sized blood Glucose Sensor Based on microsphere Stimulated Raman Spectroscopy, *Sensors and Transducers* 147(12), 129(2012)( published).

### ***Participate in International and National Conferences***

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- N. Jahangiri, A.R. Bahrapour, M. Taraz , A microsphere Stimulated Raman spectroscopy for measurement of glucose in aqueous Solution, 1<sup>st</sup> MEFOMP International Conference of Medical Physics, Shiraz, Iran, November 2-4 2011,pp.100(published).
- N. Jahangiri, A.R. Bahrapour, M. Taraz ,Microsphere Optical Resonators for Noninvasive Blood Glucose Measurement, International Conference on Optics and Photonics, Venice, Italy , November 14-16, 2012.(accepted).
- N. Jahangiri, A. B. Bahrapour, M. Taraz,"A Microsphere Stimulated Raman Spectroscopy for the Measurement of Glucose in Aqueous Solution", 10<sup>th</sup> International Conference on Fiber Optics and Photonics, December 2010, Guwahati, India(accepted).

## ***Research Interest***

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- Quantum Electrodynamics with hybrid nano-circuits
- Quantum Transport
- Light-Matter Interactions and Quantum Optics
- superconducting and ferromagnetic proximity effects

## ***Computer Software Background***

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- Mathematica
- Fortran 90
- Python(Qutip)
- Comsol ( Electromagnetic Fields Problems)
- Orgin Pro.
- Latex
- Microsoft Office(Excel, Word, PowerPoint)

## ***References***

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Dr. Alireza Bahrampour

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University Of Technology,  
Tehran. IRAN

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Dr. Farshad Ebrahimi

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Shahid Beheshti University  
of Tehran, Tehran. IRAN

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