



Majid Ghadrdan Professor

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Education

- ✓ B.Sc, Electrical and Electronics Engineering,Sistan and Baluchestan University - 2010
- ✓ MS, Electrical and Electronics Engineering,Sistan and Baluchestan University - 2012
- ✓ PhD, Electrical and Electronics Engineering,Sistan and Baluchestan University - 2018

Courses

- | | |
|--|---|
| 1. Electronics II | 2. Electronics III Lab. |
| 3. Electrical Measurments | 4. pulse circuits Lab |
| 5. Pulse and Digital Circuits Lab | 6. Electronic Circuits |
| 7. Electronics II Lab. | 8. Electrical Circuits - I |
| 9. Electronic I Lab. | 10. Digital systems- |
| 11. Electronics I | 12. Semiconductor Device Fabrication Technology |
| 13. Logic Circuits | 14. Linear Integrated Circuits Design |
| 15. Electronics Physic | 16. Optical Electronics - |
| 17. Simulation of semi-conducting materials | 18. Nanophotonics I |
| 19. Pulse and Digital Circuits Lab | 20. Electronic I Lab. |
| 21. Linear Integrated Circuits Design | 22. Simulation of semi-conducting materials |
| 23. Electrical Circuits and Measurments Lab. I | 24. Quantum Electronics |

Thesis

Master Thesis

1. Design and Simulation of All-Optical Plasmonic Decoders

محدثه عابدي, [Majid Ghadrnan, Mojtaba Shahraki]

نیمسال دوم سال تحصیلی 1403-1404

2. Investigating factors affecting light management in the absorber layer of perovskite solar cells

امیر میر, [Majid Ghadrnan, Mojtaba Shahraki]

نیمسال اول سال تحصیلی 1403-1404

3. The investigation on enhance perovskite solar cells efficiency and stability through charge transport and interlayer modifications

رویا ازاده شهروئی, [Majid Ghadrnan, Mohammad Ali Mansouri Birjandi, Mojtaba Shahraki, Majid Rashidi Huyeh, Ahmad Khajeh, Hadi Esmaeeli Darmian]

نیمسال دوم سال تحصیلی 1403-1402

4. Design and Simulation of All-Optical Plasmonic Flip-Flop based on Graphene Switch

عطیه مهرگان, [Mohammad Ali Mansouri Birjandi, Majid Ghadrnan,]

نیمسال اول سال تحصیلی 1403-1402

5. Design and engineering of absorber layer in order to improve performance and efficiency in perovskite solar cells.

محسن یگانه فر, [Majid Ghadrnan, Mohammad Ali Mansouri Birjandi, Mojtaba Shahraki, Farahnaz Mohanna]

نیمسال دوم سال تحصیلی 1401

6. Design of optical waveguide and switch by deep learning

احسان ادیب نیا, [Mohammad Ali Mansouri Birjandi, Majid Ghadrnan, Pouria Jafari, Majid Rashidi Huyeh, Samira Noferesti, Saeed Tavakoli Afshari,]

نیمسال دوم سال تحصیلی 1401

7. assessing the potential of using solar energy to supply electricity to cities in the south of sistan and baluchestan province

عزیز اله دستوان, [Eisa Ebrahimzadeh Akbad, Majid Ghadrnan]

نیمسال دوم سال تحصیلی 99-00

Journals Papers

2025

1. Inverse design of octagonal plasmonic structure for switching using deep learning

Ehsan Adibnia, Majid Ghadrnan, Mohammad Ali Mansouri-Birjandi

Results in Physics Volume: (71) 1-108197 - 14-108197

2. Chirped apodized fiber Bragg gratings inverse design via deep learning

Ehsan Adibnia, Majid Ghadrnan, Mohammad Ali Mansouri Birjandi

OPTICS AND LASER TECHNOLOGY Volume: (181) 111766-1 - 111766-12

2024

3. Nanophotonic structure inverse design for switching application using deep learning

Ehsan Adibnia, Majid Ghadrnan, Mohammad Ali Mansouri Birjandi

Scientific Reports Volume: (14) 21094-1 - 21094-13

4. Efficiency Improvement of InGaP/SiGe tandem solar cell using Si_{0.18}Ge_{0.82} graded buffer regions

Mojtaba Shahraki, Majid Ghadrnan

Journal of Optoelectrical Nanostructures Volume: (9) 1 - 18

5. A deep learning method for empirical spectral prediction and inverse design of all-optical nonlinear plasmonic ring resonator switches

Ehsan Adibnia, Mohammad Ali Mansouri Birjandi, Majid Ghadrnan, Pouria Jafari

Scientific Reports Volume: (14) 5787-1 - 5787-17

2023

6. Plasmonic switch based on asymmetric cavities with embedding square of gold inside the cavities

Majid Ghadrnan, Mojtaba Shahraki, Mohammad Ali Mansouri Birjandi

Journal of Nanophotonics Volume: (17) 036004-1 - 036004-8

7. Prediction of Fiber Bragg Gratings Characteristics from Its Design Parameters Using Deep Learning

Ehsan Adibnia, Majid Ghadrnan, Mohammad Ali Mansouri Birjandi

International Journal of Optics and Photonics Volume: (17) 165 - 174

2022

8. Experiences of a Group of Faculty Members in University of Sistan and Baluchestan on Decreased Fraud Solutions for E-Tests

Mehri Mehrjoo, Mehrdad Mazaheri Dasht Arjandi, Mehri Rajaei, Hadi Esmaeeli Darmian, Farhad Shahraki,
Iranian Distance Education Journal Volume: (4) 9 - 20

2021

9. Wideband Absorption Enhancement in Laterally Oriented Core-Shell c-Si/a-Si Hexagonal Nanowire Arrays

Mojtaba Shahraki, Majid Ghadrdan

International Journal of Optics and Photonics Volume: (15) 19 - 26

Conferences Papers

2022

1. Design of plasmonic logic gates based on a plasmonic switch based on a square resonator ring

1st National Conference Soft Computing of Engineering Science in Industry and Society (ASEIS 2022)

, Mohammad Ali Mansouri Birjandi, Majid Ghadrdan

2020

2. lasmonic switch based on a pair of vertical cavities with embedding gold square nanostructures in the cavities

The 26th Iranian Conference on Optics and Photonics (ICOP 2020), and the 12th Iranian Conference on Photonics Engineering and Technology (ICPET 2020).

Majid Ghadrdan, Mojtaba Shahraki

3. Absorption Improvement in Core-Shell c-Si/a-Si Nanowire Array Solar Cells

The 26th Iranian Conference on Optics and Photonics (ICOP 2020), and the 12th Iranian Conference on Photonics Engineering and Technology (ICPET 2020)

Mojtaba Shahraki, Majid Ghadrdan

2013

4. Design and Simulation of All-Optical AND XOR Logic Gates Based on Nonlinear Kerr Effect in Photonic Crystal Ring Resonator

Majid Ghadrdan, Mohammad Ali Mansouri Birjandi

5. Design and Simulation of All Optical OR Logic Gate Based on Photonic Crystal

Majid Ghadrdan, Mohammad Ali Mansouri Birjandi

Executive activities

مشاوره دانشجویان کارشناسی

from 1403/11/06 - to 1404/04/06

مشاوره دانشجویان کارشناسی

from 1403/07/01 - to 1403/11/05

مشاوره دانشجویان کارشناسی

from 1402/11/21 - to 1403/04/04

مشاوره دانشجویان کارشناسی

from 1402/07/01 - to 1402/11/05