

Dr Ashkan Horri

BSc (Hons), MSc, PhD



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ACADEMIC QUALIFICATION			
2013 – 2017	PhD	Electrical Engineering Scholarship of Islamic Azad University, Science and Research Branch, Tehran. Iran	Distinction GPA: 90.65/100
2010 – 2012	MSc	Electrical Engineering Islamic Azad University, Arak, Iran	Distinction & First class GPA: 95.90/100
2006 – 2010	BSc	Electrical Engineering; Islamic Azad University Arak, Iran.	Merit GPA: 76.25/100

WORK EXPERIENCE	
2017 - Current	Assistant Professor in Electrical Engineering <i>Faculty of Engineering, Islamic Azad University</i> BSc, MSc, PhD levels
2014 – 2017 (3 years)	Research Associate <i>Faculty of Engineering, Islamic Azad University</i> BSc, MSc levels
	Responsible for teaching, material preparation, examination, marking, supervision, thesis examination and other administration duties for the following modules:

	BSc	Filter and Circuit Synthesis, Electronic III
	MSc	Semiconductor Devices, Quantum Electronics, VLSI
	PhD	Biosensor, Nano-Electronic, Integrated Data Converters
	Selective Supervisions:	
	PhD	<ul style="list-style-type: none"> - Vertical Tunneling Transistor based on hbcn materials (Current) - Design of Gas Sensor based on Borophene (Current)
	MSc	<ul style="list-style-type: none"> - Analysis of Graphene, Silicene, Germanene transistors based on Green Function (2018) - Simulation of Mos2 and WS2 field effect transistors (2017)

PROFESSIONAL QUALIFICATION/MEMBERSHIP

2013	Member of the Young and Elite Research Club, Iran.
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AREA OF INTEREST

- Nano-Electronic
- Semiconductor Devices
- Modeling and Simulation of Quantum Devices
- Quantum Electronic
- Digital Electronic
- VLSI
- Integrated Data Converters

AWARDS/RECOGNITION/HONORS

No.	Type	Title	Awarding Authority	Level/Medal	Year
1.	Research Recognition	Top Research Scientists	Islamic Azad University	National	2013
2.	Academic Recognition	High Score Student	Islamic Azad University	National	2012
3.	Research Recognition	Top Research Scientists	Iran, government	National	2012

SKILLS

PSPICE	
Programming	C, MATLAB, LaTeX

PUBLICATIONS

Journals:

- 1- **A. Horri**, R. Faez, M. Pourfath and G. Darvish; Modeling of a Vertical Tunneling Transistor Based on Graphene–MoS₂Heterostructure, *IEEE Transactions on Electron Devices*, vol. 64, no. 8, pp. 3459-3465, Aug. 2017. doi: 10.1109/TED.2017.2716938 (**Impact Factor: 2.62**)
- 2- **A. Horri**, R. Faez, M. Pourfath and G. Darvish; A computational study of vertical tunneling transistors based on graphene-WS₂ heterostructure, *Journal of Applied Physics* 121, 214503 (2017); <https://doi.org/10.1063/1.4984145> (**Impact Factor: 2.163**)
- 3- **A. Horri**, R. Faez, M. Pourfath, Numerical simulation of vertical tunneling transistor with bilayer graphene as source and drain regions, *physica status solidi*, vol.214, Issue 10, 2017, <https://doi.org/10.1002/pssa.201700155>
- 4- Ashkan Horri, Seyedeh Zahra Mirmoeini, Rahim Faez, Large Signal Circuit Model of Two-Section Gain Lever Quantum Dot Laser, *Chinese Physics Letters*, Volume 29, Number 11, <https://doi.org/10.1088/0256-307X/29/11/114207>
- 5- Ashkan Horri, Rahim Faez, “Small signal circuit modeling for semiconductor self-assembled quantum dot laser, “*Optical Engineering* 50(3), 034202 (1 march 2011) <https://doi.org/10.1117/1.35543994>
- 6- Horri, A., Mirmoeini, S.Z. & Faez, R. The noise equivalent circuit model of quantum-dot lasers *J Russ Laser Res* (2012) 33: 217. <https://doi.org/10.1007/s10946-012-9275-x>
- 7- Ashkan Horri, Seyedeh Zahra Mirmoeini, Rahim Faez, “Analysis of carrier dynamic effects in transistor lasers. “*Optical Engineering* 51(2), 024202 (13 march2012) <https://doi.org/10.1117/1.OE.51.2.024202>
- 8- A Horri, R Faez, HR Hoseini, A small signal circuit model of two mode InAs/GaAs quantum dot laser, *IEICE Electronics Express* 8 (4), 245-251,2011
- 9- A Horri, SZ Mirmoeini, Analysis of a Graphane p—n Junction Using the Green Function Method, *Chinese Physics Letters* 31 (8), 087301, 2014
- 10- A Horri, S Mirmoeini, R Faez, Analysis of Deep Level Trap Effects in Transistor Lasers., *Lasers in Engineering* (Old City Publishing) 25, 2013
- 11- A Horri, R Faez, Simulation of deep level traps effects in quantum well transistor laser, *Journal of Computational Electronics* 12 (4), 812-815, 2013

- 12- A Horri, R Faez, Large signal analysis of double quantum well transistor laser, Optical and Quantum Electronics 45 (5), 389-399, 2013
- 13- A Horri, SZ Mirmoeini, R Faez, Relative intensity noise study in two mode quantum dot laser, Optica Applicata 41 (4), 961—970, 2011

Conferences:

- 1- Proceeding of 5-th international congress on Nanoscience and Nanotechnology
Simulation of Graphane p-n junction Using Finite Difference Method