



Name & Surname:

Navid Alaei-Sheini

Date of Birth:

22 September 1976.

 **Address, Suburb, State, Postcode:**

Shahid Chamran University of Ahvaz, Ahvaz, Khuzestan, Iran, 6135783151.

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PROFESSIONAL PROFILE:

Assistant Professor of Engineering Geology in Shahid Chamran University (SCU) of Ahvaz.

EDUCATION BACKGROUND:

Ph.D: Electrical Engineering- Electronic (2017), K. N. Toosi University of Technology, Tehran, Iran.

Thesis title:

Design, Fabrication and Characterization of Memristive Devices Based on Metal/TiO₂/Metal Structure.

MSc: Electrical Engineering- Electronic (2002), Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran.

Thesis title:

Fabrication of PtSi-Si Photodetector Array with Porous N-Type Silicon and Imaging with It.

BS: Electrical Engineering- Electronic (1999), K. N. Toosi University of Technology, Tehran, Iran.

TEACHING AND TRAINING EXPERIENCE:

Teaching Bachelor Courses:

Circuit Theory I, and II; Electronic I, and II; Digital Circuits I, and II; Pulse Circuits; Computer systems Architecture; Microprocessor Systems Design; Electronic Systems Design; Instrumentation.

Teaching Master and Ph.D Courses:

Seminar (Research Methods); Semiconductor Sensors; Metal-Oxides Semiconductors.

INTERESTS AND RESEACH FIELDS:

Electronic Sensors and Systems Design; Metal-Oxide Sensors; Digital and Analogue Industrial Systems design.

RESARCH ACTIVITIES:

PUBLICATIONS:

- 1-** Faramarz Hossein-Babaei and **Navid Alaei-Sheini**. "Electronic Conduction in Ti/Poly-TiO₂/Ti Structures." *Scientific Reports* 6 (2016).
- 2-** Faramarz Hossein-Babaei, Mehdi M. Lajvardi and **Navid Alaei-Sheini**. "The Energy Barrier at Noble Metal/TiO₂ Junctions." *Applied Physics Letters* 106.8 (2015): 083503, IF=3.3, SJR=1.8.
- 3-** Raissi, Farshid, and **Naveed A. Sheeni**. "Highly sensitive near IR detectors using n-type porous Si." *Sensors and Actuators A: Physical* 104.2 (2003).
- 4-** Faramarz Hossein-Babaei, **Navid Alaei-Sheini** and Mojtaba Jahangiri. "The ohmic contact between zinc oxide and highly oriented pyrolytic graphite." *Materials Letters* (2017).
- 5-** Faramarz Hossein-Babaei, **Navid Alaei-Sheini**, and Mehdi M. Lajvardi. "Oxygen Adsorption at Noble Metal/TiO₂ Junctions." *IOP Conference Series: Materials Science and Engineering*. Vol. 108. No. 1. IOP Publishing, 2016.

- 6- Zalpour, Moein, Gholamreza Akbarizadeh, and **Navid Alaei-Sheini**. "A new approach for oil tank detection using deep learning features with control false alarm rate in high-resolution satellite imagery." *International Journal of Remote Sensing* 41.6 (2020): 2239-2262.
- 7- Seraj, Zahra, Mohammad Soroosh, and **Navid Alaei-Sheini**. "Ultra-compact ultra-fast 1-bit comparator based on a two-dimensional nonlinear photonic crystal structure." *Applied Optics* 59.3 (2020): 811-816.
- 8- Haddadan, Fatemeh, Mohammad Soroosh, and **Navid Alaei-Sheini**. "Designing an electro-optical encoder based on photonic crystals using the graphene–Al₂O₃ stacks." *Applied Optics* 59.7 (2020): 2179-2185.
- 9- Boroomand Nasab, Bahareh, Abdolnabi Kosarian, and **Navid Alaei Sheini**. "Effect of Zinc Oxide RF Sputtering Pressure on the Structural and Optical Properties of ZnO/PEDOT: PSS Inorganic/Organic Heterojunction." *Journal of Optoelectrical Nanostructures* 4.3 (2019): 33-46.
- 10- Saeed Moghadam, **Navid Alaei-Sheini** and Shahin Bagherpour. "Gold and Silver Contacts on Tin Oxide Thin Films Produced by Spray Pyrolysis on SiO₂ Substrates." *Key Engineering Materials*. Vol. 605. Trans Tech Publications, 2014.
- 11- M. R. Havasi, M. J. Shiekhdavoodi, **N. A. Shini** and M. Sami, "Design, Development and Evaluation of a Digital Tractor Dynamometer." *Asian Journal of Agricultural Sciences*, (2012).

CONFERENCE PRESENTATIONS:

- 1- Navid Alaei-Sheini, and Mahsa Rohani. "Resistive Switching in Platinum/Titanium Dioxide Schottky Diode." *2019 27th Iranian Conference on Electrical Engineering (ICEE)*. IEEE, 2019.
- 2- Navid Alaei Sheini, and Mahsa Rohani. "Ag-doped titanium dioxide gas sensor." *IOP Conference Series: Materials Science and Engineering*. Vol. 108. No. 1. IOP Publishing, 2016.
- 3- F. Hossein-Babaei, Navid Alaei-Sheini, and Mehdi M. Lajvardi. "Oxygen adsorption at noble metal/TiO₂ junctions." *IOP Conference Series: Materials Science and Engineering*. Vol. 108. No. 1. IOP Publishing, 2016.
- 4- Ebrahim Farshidi, and Navid Alaei-Sheini. "A micropower current-mode sigma-delta modulator for biomedical applications." *2009 IEEE 17th Signal Processing and Communications Applications Conference*. IEEE, 2009.
- 5- Ebrahim Farshidi, and Navid Alaei-sheini. "A micropower current-mode pattern-matching classifier circuit using FG-MOS transistors." *2009 IEEE 17th Signal Processing and Communications Applications Conference*. IEEE, 2009.
- 6- Farshidi, Ebrahim, and Navid Alaei-sheini. "A systematic design procedure for floating-gate MOS based class-AB Log-domain filters." *2009 IEEE 17th Signal Processing and Communications Applications Conference*. IEEE, 2009.

RESEARCH PROJECTS:

- 1- Design and Fabrication of Digital Pulse-Oximeter, Current.**
- 2- Design and Implementation of Electronic System of an Inspection Robot for Boiler Walls, Current.**
- 3- Design and Fabrication a Computer based Processing and Monitoring System for Power Signals, 2009.**
- 4- Design and Fabrication a Laboratorial Turn-Ratio Meter for 1 Phase and 3 Phase Transformers with Computer Data Transferring capability, 2009.**

PROFESSIONAL MEMBERSHIPS:

Iranian Association of Electrical & Electronics Engineering (IAEEE), Since 2007.

Khuzestan Science & Technology Park, Since 2020.

LANGUAGES:

Persian (native)

English (good)

Arabic, and German (Elementary)