

Ehsan Sabbar

269-276-6380

1247 oak hill court, Apt 260
Toledo, OH-43614

[E-Mail]

Ehsan.sabbar@rockets.utoledo.edu

Professional Profile

Natural sciences with 4 years of professional work experience in physics and math, solid state physics, renewable energy, solar cells, computational physics, digital signal processing, and many projects related to electronics devices.

- C programming
- Linux
- Temperature-accelerated dynamics
- Solar cell tracker device
- Molecular dynamics
- Kinetic Monte Carlo
- Solar cell simulator
- Surface and thin-film physics
- Physics of nucleation and thin-film growth

Professional Accomplishments

Solid state research and teaching physics courses and math

- Outstanding instructor award from the Minister of higher education
- Ph.D. Scholarship by prime minister of Iraq for first student in Anbar province
- Awarded Teaching Assistantship (TA) position at the University of Toledo

Work History

- Adjunct instructor in physics department at Adrian Collage (part time) (August, 2018 – present) , Adrian, Michigan , USA
- Teaching Assistant in the Physics department at University of Toledo (2016 – present). Toledo , Ohio , USA
- Research Assistant in the physics department at Western Michigan University. Kalamazoo, MI, USA 05/02/2012 to 09/02/2012
- Instructor at Al Anbar University from 2009 to 2011, Al Anbar , Iraq
- Researcher in Renewable Energy Research Centre from 2009 to 2011, Al Anbar , Iraq
- Teaching Mechanics course for first year physics students.
- Teaching Quantum physics for third year physics students.
- Teaching math1 for 1st year engineering students.
- Areas of expertise include; electronics, controls, instrumentation, data collections systems.
- Instructor at Al-Maarf collage from 2008 to 2009.
- Teaching Math1 for 1st year computer science students.
- Teaching digital signal processing and semiconductors for third year electrical engineering students.
- Teaching Assistant in Physics department at Baghdad university from 2004 to 2008

Education

Ph.D , Physics department, Theoretical Physics
University of Toledo
Toledo, Oh

MASTER OF SCIENCE: Physics department
WESTERN MICHIGAN UNIVERSITY
Kalamazoo, MI

MASTER OF SCIENCE: Physics department, Experimental thin films of physics
Baghdad University
Baghdad, Iraq

Publications

Publications in Theoretical and Simulation physics

1. Mechanism of Formation of Stacking Fault Dislocations in the Cu/Cu(100), Ehsan Sabbar , Indiras Khatri, Yunsic Shim, and Jacques G. Amar, in preparation
2. Morphological transitions in Cu islands grown on strained Cu(100) , Ehsan Sabbar , Indiras Khatri, Yunsic Shim, and Jacques G. Amar, in preparation
3. Island nucleation and growth with anomalous diffusion in one-dimension : Ehsan H. Sabbar, and Jacques G. Amar ,Citation: The Journal of Chemical Physics 146, 074702 (2017); doi: 10.1063/1.4976137 .
4. Reversible island nucleation and growth with anomalous diffusion :Ehsan H.Sabbar , Jacques G.Amar ,Surface Science Volume 664, October 2017 , Pages 38-44.
5. Irreversible island nucleation and growth with anomalous diffusion in $d > 2$: Ehsan H. Sabbar, Nitun N. Poddar and Jacques G. Amar, Physica A: Statistical Mechanics and its Applications Volume 508, 15 October 2018 , Pages 567-576.

Publications in Experimental and Solar Cells physics

1. The Electrical Characterization of p-CdTe/n-Si (111) Heterojunction Diode, Advanced Materials Research Vol. 702 (2013) pp 236-241 © (2013) Trans Tech Publications, Switzerland doi:10.4028/www.scientific.net/AMR.702.236
2. Deposition of SeTe/Si Thin Film via Thermal Evaporation, American Journal of Condensed Matter Physics 2013, 3 (5): 119-122 DOI: 10.5923/j.ajcmp.20130305.01 <http://article.sapub.org/10.5923.j.ajcmp.20130305.01.html>
3. Fabricated Solar Cell from ZnO/a-Si/Polymers, Published in International Journal of Advanced Science and Technology Vol. 44, July, 2012. <http://www.sersc.org/journals/IJAST/vol44/9.pdf>
4. Performance Study of Variation Effect of Spacer Thickness on Si/Si_{0.5}Te_{0.5}-Based Resonant Interband Tunneling Diode, Published in Elixir Power Electronics Engineering journal 46 (2012) 8138-8140.
5. Electron transport mechanism of SnIn/c-Si Solar cell, Ehsan H. Sabbar 1 & Z. T.Mohammed Noori & Kadhim A. Adem Journal Of Wassit For Science & Medicine ISSN: 58161992 Year: 2011 Volume: 4 Issue: 2 Pages: 29-34
6. Study effect of annealing temperature on the structure properties of a-Se and electrical properties of a-Se/c-Si Heterojunction, Hussain Kh., Ehsan.H. Sabbar , Kadhim,A.Adem, Journal of physics, Iraq.Baghdad.(2009)
7. "Fabricated Solar Cell from a-Se/c-Si Thin Films, Ehsan, H.S , Hussain Kh, Journal of physics, Iraq. Baghdad.(2009)
8. Study of AC conductivity for Epoxy chopped carbon fiber, Ehsan, H. Sabbar and Mohammed Bashar , Journal of Waset.(2009)

Book

Electronic Transport Mechanism of Se/SiC Diodes

by [Ehsan Sabbar](#)

ISBN-13: 9783659212727

ISBN-10: 3659212725

Publisher: LAP Lambert Academic Publishing

Publish Date: August 2012