

Curriculum Vitae: Dr. Nadia Ayari

Personal Data

Field	Detail
Name	Nadia Ayari
Department	Physics
Nationality	Tunisian
Official Email	Nadia.alayari@nbu.edu.sa
Phone	+966 0509330715

Language Proficiency

Language	Read	Write	Speak
English	Fluent	Fluent	Fluent
Arabic	Native	Native	Native
French	Fluent	Fluent	Fluent

Academic Qualifications

Date	Academic Degree	Place of Issue	Address
2015	Ph.D. in Electronics	University of Tunis El Manar	Tunisia
2007	Master's in Microelectronics Systems	University of Monastir	Tunisia
2005	Bachelor's in	University of	Tunisia

	Electronics	Monastir	
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PhD, Master or Fellowship Research Title

Degree	Research Title
PhD	IDDQ-Based Fault Detection and Design Optimization of Low-Power CMOS RF Circuits
Master	Design and Implementation of Low-Noise Amplifiers for Microelectronic Systems

Professional Record

Job Rank	Place And Address of work	Date
Assistant Professor	Physics Department, College of Science, Northern Border University, KSA	2015–Present
Lecturer	Higher Institute of Applied Science and Technology (ISSATS), Sousse, Tunisia	2007–2015
Lecturer	Electronics Training Center, Sousse, Tunisia	2005–2007

Management Position (Academic Committees and Leadership Roles)

Administrative position	The disk (Location/Department)	Date
Physics Department Coordinator	Physics Department, College of Arts and Sciences in Turaif, NBU	2024–2025

Physics Department Council	Physics Department Council, College of Arts and Sciences in Turaif, NBU	2021–2023
Physics Department Supervisor	Department of Physics, College of Science and Arts, NBU	2015–2018

Scientific Achievements (Published Refereed Scientific Research)

Research Title	Publisher and Date of Application/Publication
"Nanoelectronics: Fabrication and Characterization of Graphene-Based Transistors"	Journal of Information Systems Engineering and Management, vol. 10, no. 43s, 2025, https://doi.org/10.52783/jisem.v10i43s.8460
"Simulation of the magnetic and magnetocaloric effect by means of theoretical models in La _{0.52} Dy _{0.15} Pb _{0.33} MnO ₃ compound"	journal of Applied Physics137(12) ,26 March, 2025, J. Appl. Phys. 137, 125106 (2025); doi: 10.1063/5.0255604
"Exploring Statistical Physics Principles for Superior Pefloxacin Extraction from Water via Halloysite Nanotubes: Stereographic and Topographic Evaluation"	Microporous and Mesoporous Materials, Volume 383, 1 February 2025, https://doi.org/10.1016/j.micromeso.2024.113427
"Optimization of Radiation Dose Exposition in Medical Imaging via Variation of X-Ray Tube Outputs Parameters"	Journal of Applied Physics137(12) ,26 March, 2025, J. Appl. Phys. 137, 125106 (2025); doi: 10.1063/5.0255604
"Study of Solar Motion and Galactic Kinematical Characteristics Using Recent Gaia Data"	Astron. Rep. 68, 80–88, 2024. https://doi.org/10.1134/S106377292470001X
"Advanced Convolutional Neural Network and Long Short-Term Memory Model for Real-Time Spam Detection in Internet of Things Devices"	J. Electrical Systems , Vol. 20 No. 10s .pp 6114-6135, 2024. https://doi.org/10.52783/jes.6573 , issn: 1112-5209

"A home hospitalization system based on the Internet of things, Fog computing and cloud computing"	Elsevier in Informatics in Medicine Volume 20, 2020
"Internet Of Things (IoT) in Healthcare System"	International Journal of Computer Science and Network Security, VOL.22 No.5, May 2022. https://doi.org/10.22937/IJCSNS.2022.22.5.104
"An Electric Wheelchair Monitoring System based on the Internet of Things and Fog computing"	International Conference on Signal, Control and Communication (SCC), Tunis, Tunisia, pp. 86-90, 2021. , https://doi.org/10.1109/SCC53769.2021.9768341
"A 1.2 V, CMOS Differential Low Noise Amplifier with Low Noise Low Power for Bluetooth Receiver"	International Journal of Advancements in Computing Technology, Vol. 6, No. 2, pp. 119 ~ 125, 2014.
"Iddq Testing Based Technique for Parametric and Catastrophic Faults in RF Circuits"	International Journal of Advancements in Computing Technology, ISSN: 2005-8039 Vol 6, No. 4, July 2014, pp. 44~53
"RF Bluetooth LNA Test Cost Reduction For Catastrophic and Parametric Faults"	International Journal of Inventive Engineering and Sciences (IJESE) Blue Eyes Intelligence Engineering and Sciences Publication (BEIESP) ISSN: 2319-9598, Volume-1, pp. 112-116, Issue-6, 2013.
"A low power low noise CMOS amplifier for Bluetooth applications,"	2013 International Conference on Applied Electronics, Pilsen, Czech Republic, 2013, pp. 1-4. https://ieeexplore.ieee.org/document/6636510

Scientific Achievements(Current Research)

Research Title
Testing and Autotesting of Electronic, RF, Analog, and Mixed-Signal Circuits
E-health Applications and the Internet of Things (IoT)

Intelligent Embedded Systems and Deep Learning Applications
Design and Simulation of Electromagnetic Components and Solar Cells

Scientific Achievements (Contribution to Scientific Conference and symposia)

Conference Title	Place And Date of the Conference	Extent of Contribution
2nd International Conference on Signal, Control and Communication (SCC)	Tunis, Tunisia, 2021	Presented research paper (IoT and Fog computing)
International Conference on Applied Electronics	Pilsen, Czech Republic, 2013 & 2011	Presented research papers on low-power CMOS and MDAC design
First Conference of Heads and Supervisors of Academic Departments	Northern Border University 2023	Attendance and active participation

Scientific Achievements(Membership and Committees participating in)

1	Member, Examinations Committee, College of Arts and Sciences in Turaif, NBU (2023–2025).
2	Member, Quality and Academic Accreditation Committee, Physics Program, NBU (2021–2023).
3	Member, Field Training Office, College of Arts and Sciences in Turaif, NBU (2022–2024).
4	Member,Academic Advising Committee, , Committee,
5	Member, Female Students Affairs Committee and Equivalency
6	Alumni Committee
7	Department Curricula and Strategy Committee

Teaching Activities(Undergraduate)

Course	Course Number	Extent of Contribution
Electronic Circuits	PHYS210	Theory /pratical
Electronic Circuits 1	PHYS 317	Theory /pratical
Electronic Circuits 2	1101413	Theory /pratical
Electromagnetic	PHYS 213	Theory /pratical
Classical Mechanics	PHYS 212	Theory
Nuclear Physics	1101461	Theory
Laser Physics	1101413	Theory
General Physics 1	PHYS101	Theory /pratical
Introduction to Medical Physics	PHYS103	Theory /pratical
General Physics 3	PHYS203	Theory /pratical
Graduation Project	1101492	Theory /pratical
Semiconductors	1101472	Theory

Teaching Activities (academic advising for Student)

Stage	Number of Students	Form	To me (Date Range)
Undergraduate (College of science Arar Physics department)	(15)	Academic Advising Committee Member	2025
Undergraduate (College of science and Arts , Turaif Physics department)	(80)		2015-2024

Administrative Tasks and Community Service (Volunteer Work)

The Side	Volunteer Type	Form	To me (Date Range)
29th School in Arar	Awareness Lecture	"Be the Digital Leader" lecture	(15/10/2025)
College of Science in Arar	Educational Organization	Organizing an exhibition of practical experiments	(7-8/5/2025)
College of Engineering, Arar	Lecture	Contributing to the future cycle of renewable energy and its role in achieving Vision 2030	(14/10/2025)
Participation in World Nutrition Day activities	Awareness Lecture and activities	Participation in World Nutrition Day activities	(7-9/11/2023)
12th School in Turaif	Community Engagement	Field Visits and awareness lectures to schools/charities	(1/11/2023)
College of Science and Arts in Turaif	World Students' Day	Ativities	(14/11/2023)