

# Nouha KHEDIRI

*Ph.D. in Computer  
Sciences*

Department of Information Systems  
FCIT, Northern Border University

☎ (+966) 530883312

✉ Nuha.khediri@nbu.edu.sa

 LinkedIn  ResearchGate



## PROFIL

I'm a Ph.D. in Computer Sciences and I'm Passionate about contributing my skills and expertise to drive the success of a dynamic company. With a proven track record of effectively self-managing independent projects and thriving as a collaborative team player, I am dedicated to achieving remarkable results. As an accomplished researcher and Software Developer, I excel in designing, installing, testing, and maintaining sophisticated software systems.

## Education

- 2017–2023 **PhD, Computer Science**, *University of Tunis El Manar, (FST)*, Tunisia.  
Project title: Towards Real-Time Intelligent Framework For Multimodal Emotion Recognition For Intelligent Tutoring System  
With the mention: Very Honorable
- 2009–2012 **Master Degree**, *University of Kairouan, (ISIGK)*, Tunisia.  
Project title: The implementation of a new approach to modularizing ontologies by exploiting the multi-core architecture  
With the mention: Very Good
- 2005–2009 **Bachelor's Degree in Computer Science**, *University of Manouba, (ESC)*, Tunisia.  
Project title: Design and modeling of a banking application as part of the installation of a Tunisian telecompensation system.  
With the mention: Pretty Good
- 2005 **Higher Secondary Examination**, *Sijoumi High School*, Tunis, Tunisia.  
Mathematical  
With the mention: Average

## Teaching Assistantship

Jan 2013- till today **Lecturer**, *Faculty of Computing and Information Technology, Northern Border University.*  
Rafha, KSA

### Teached Courses

#### **CPIT201 Introduction to Computing**

This course aims at qualifying the students of Computer Science and engineering students to know the basic principles of Computer programming, computer hardware, and software that will be the focus in their future studies.

#### **CPIT435 Need Assessment and Technology Evaluation**

The main objective of this course is to provide an understanding of the basic concepts of project management.

#### **CPIT345 Database Administration**

The main objective of this course is to enhance the student's knowledge and skills in database systems administration. The course focuses also on major issues in databases affecting the management and performance of database systems

#### **CPCS494 Internet of Things**

This course teaches students the impact of IoT and the emerging technologies of IoT.

#### **CPIS342 Data Mining & Warehousing**

After successful completion of this course, the student will be able to identify the key processes of data mining, data warehousing, and knowledge discovery process. Understand the basic principles and algorithms used in practical data mining and their strengths and weaknesses.

#### **CPIS351 Information System Analysis and Architecture Design**

This course is an introduction to systems Analysis and design. It provides a methodical approach to developing computer-based systems including systems planning, analysis, design, and implementation.

#### **CPIS352 Information System Applications Design and Development**

Students will read and analyze the frameworks and approaches for infrastructure management and system administration, along with emerging IT technologies within and beyond the corporation.

#### **CPIS357 Software Quality and Testing**

The objective of this course is to learn how to apply the principles of software quality by getting acquainted with quality attributes and components, quality standards, and the quality assurance framework. The course aims also to teach students various testing techniques, practice some testing frameworks, and how to document testing activities.

#### **CPIS434 Information System Strategies and Policies**

This course teaches the students how to interpret the role of the business manager in the MIS of the organization and how to demonstrate the IS Strategy Triangle in teamwork projects.

#### **CPIS498 Graduation Project 1**

Student will study how to analyze and design computer system solutions based on his learning during the previous levels and write effective work reports.

#### **CPIS499 Graduation Project 2**

Student will demonstrate his ability to implement computer system designed in project 1 based on his learning during the previous levels and write effective work reports.

## Publications

### Journal Articles

- 2024 Atef Gharbi, Mohamed Ayari, Akil Elkamel, Mahmoud Salaheldin Elsayed, Zeineb Klai, and **Nouha KHEDIRI**, *A Reinforcement Learning Framework for Decentralized Decision-Making in Smart Energy Systems*, In *The International Journal of Multiphysics*, 18(4), 649 - 657, (Rank Q4: SJR).
- 2024 Atef Gharbi, Mohamed Ayari, Akil Elkamel, Mahmoud Salaheldin Elsayed, Zeineb Klai, and **Nouha KHEDIRI**, *A Reinforcement Learning Framework for Scalable and Cost-Efficient Energy Management in Smart Grids*, In *The International Journal of Multiphysics*, 18(4), 658 - 666, (Rank Q4: SJR).
- 2024 Zeineb Klai, Atef Gharbi, Mohamed Ayari, Yamen El Touati, **Nouha KHEDIRI**, Eman H. Abd-Elkawy, Mahmoud Salaheldin Elsayed, Abdelhalim Hasnaoui, *Optimizing Electromagnetic Isolation in Antenna Systems: Advanced Simulation Techniques for Guard-Ring Structures*, In *Nanotechnology Perceptions*, 20No.7(2024) 1059–1072, (Rank Q4: SJR).
- 2024 Zeineb Klai, Atef Gharbi, Mohamed Ayari, Akil El Kamel, **Nouha KHEDIRI**, Eman H. Abd-Elkawy, Mahmoud Salaheldin Elsayed, Abdelhalim Hasnaoui, *Optimizing Isolation Performance in High-Frequency Systems: Evaluating the Impact of Interruption Techniques on BDL Layers for Enhanced Electromagnetic Coupling Control*, In *Nanotechnology Perceptions*, 20No.7(2024) 1035–1058, (Rank Q4: SJR).
- 2024 Albia MAQBOOL, Jihane BEN SLIMANE, **Nouha KHEDIRI**, Mohamed BEN AMMAR, Amani KACHOUKH, and Ahmad ALSHAMMARI, *Proactive Cyber Defense and Forensic Investigation Techniques for Drone Operation: A HOLISTIC APPROACH*, In *Journal of Theoretical and Applied Information Technology*, 2024, (Rank Q4: SJR).
- 2023 **Nouha KHEDIRI**, Mohamed BEN AMMAR, and Monji KHERALLAH, *A Real-time Multimodal Intelligent Tutoring Emotion Recognition System (MITERS)*, In *International Journal of Multimedia Tools and Applications*, 2023. (Rank Q1: SJR)
- 2023 **Nouha KHEDIRI**, Mohamed BEN AMMAR, and Monji KHERALLAH, *Deep-Learning Based Approach to Facial Emotion Recognition Through Convolutional Neural Network*, In *International Journal of Computer and Information Engineering*, 2023 Feb 20;17(2):132-6. (Best Presentation Award)
- 2015 **Nouha KHEDIRI**, and Montaceur ZAGHDOUD, *Survey of Uncertainty handling in Cloud Service Discovery and Composition*, In *International Journal on Cloud Computing: Services and Architecture*, IJCCSA 2015.

## In Conference Proceedings

- 2023 **Nouha KHEDIRI**, *Mohamed BEN AMMAR, and Monji KHERALLAH*, Multimodal Emotion Recognition System Through Three Different Channels (MER-3C), In: Blanc-Talon, J., Delmas, P., Philips, W., Scheunders, P. (eds) Advanced Concepts for Intelligent Vision Systems. ACIVS 2023. Lecture Notes in Computer Science, vol 14124. Springer, Cham. [https://doi.org/10.1007/978-3-031-45382-3\\_17](https://doi.org/10.1007/978-3-031-45382-3_17).  
(Rank B)
- 2022 **Nouha KHEDIRI**, *Mohamed BEN AMMAR, and Monji KHERALLAH*, A New Deep learning Fusion Approach for Emotion Recognition based on Face and Text, 14th International Conference on Computational Collective Intelligence, ICCCI2022, 28-30 September, Hammamet, Tunisia..  
(Rank B)
- 2021 **Nouha KHEDIRI**, *Mohamed BEN AMMAR, and Monji KHERALLAH*, Comparison of Image Segmentation using Different Color Spaces, 2021 IEEE 21st International Conference on Communication Technology, ICCT2021, October 13-16, 2021 in Tianjin, China..
- 2017 **Nouha KHEDIRI**, *Mohamed BEN AMMAR, and Monji KHERALLAH*, Towards an online Emotional Recognition System for Intelligent Tutoring Environment, The International Arab Conference on Information Technology, ACIT'2017, Yasmine Hammamet, Tunisia, December 22-24..

## Research Experience

- 2024 ***Advanced Technologies for Environment and Smart Cities***, ATES.
- 2017 – 2023 ***Probabilities and Statistics***, UR11ES76.  
Advisor : **Pr. Monji KHERALLAH**, *Professor, University of Sfax*, Tunisia

## Work experience

- 2019-till today **FCIT (Northern Border University)**, Coordinator of Information System Department.  
Rafha, KSA
- Jan 2009 – May 2009 **BFI (Tunis Group)** , System developer internship.  
Tunis, Tunisia  
*Supervisor:* Karim MILAD

## Certifications

- 07 February 2024 Activating the distanced e-learning strategy in the Blackboard environment
- 15 February 2023 Employing gamification in teaching through Blackboard
- 12 February 2023 Employing active learning strategies for the Blackboard system

- 04 December 2023 Employ the SafeAssign investigation tool to enhance the originality of student assignments and research
- 7 December 2022 IEEE Biometrics Webinar on Face Representation Attack Detection
- 22 May 2022 Formulating and measuring learning outcomes for academic programs
- 25 May 2022 The Web of Science, its components and databases and journals with an impact factor (IF)
- 22 March 2022 Requirements to qualify for program accreditation
- 2017 Certificate of Appreciation from ABET Accreditation

## Workshops and Awards

- 19-30 November 2022 Getting Certificate of Best Presentation Award for outstanding work presented at the International Conference on Image Analysis and Recognition
- 11 February 2020 Providing a Workshop on how to write a CV
- 9 January 2020 Presenting a Workshop on how to use a blackboard
- 17 September 2019 Presenting a Workshop on how to plan a project using MSProject2007
- 20 October 2016 Providing a student forum about activities committee

## Computer skills

- Programming Languages Python, R, C, C++, JAVA
- Web Technologies HTML 5, PHP, JSP, Javascript
- Database SQL, MySQL, Apache

## SKILLS

- Academic skills: Research and scientific writing, Latex, Microsoft Word, PowerPoint, Critical thinking
- Programming languages: Java, Python, HTML5/CSS3, PHP
- Databases: MySQL, Oracle
- Modeling Language: UML
- Exploitation Systems: Linux(Ubuntu), Windows, iOS
- Tools: Eclipse, Visual Studio Code, Android Studio, Google Colab, Anaconda

---

## Contacts for references

Pr. Monji Kherallah Full professor at University of Sfax and a member in Research Group of Intelligent Machines: REGIM. He received the Ing. Diploma degree and the PhD in electrical engineering, in 1989 and 2008, respectively from University of Sfax (ENIS), Tunisia. His research interest includes the following projects: "i-Bag", "i-House" and "i-Car". The techniques used are based on methods intelligent, such as neural network, logic fuzzy, genetic algorithm, etc. He is a reviewer of several international journals.

**Email:** Monji.kherallah@fss.usf.tn

Pr. Sadok Ben Yahia Full Professor at the Southern Denmark University (SDU) since September 2023. Before joining SDU, he was full professor at Technology University of Tallinn (TalTech) since January 2019. He obtained his HDR in Computer Sciences from the University of Montpellier (France) in April 2009 and since January 2019. He is the head of the Data Science Group in the IT School, and his research interests mainly focus on data-driven approaches for near-real-time Big Data analytics, e.g., urban mobility in smart cities (e.g., information aggregation & dissemination, traffic congestion prediction), Recommendation System. and fake content fighting.

**Email:** sadok.ben@taltech.ee

Dr. Mohamed Ben Ammar An Associate Professor in the Department of Information Systems at the Faculty of Computing and IT, Northern Border University, in Rafha, Saudi Arabia. He holds a Ph.D. in Engineering of Information Systems from Sfax University's National Engineering School of Sfax (ENIS) in Tunisia. His expertise in affective computing, intelligent tutoring systems, and multimodal emotion recognition holds the potential to revolutionize how we interact with machines, from emotionally intelligent virtual assistants to personalized learning experiences.

**Email:** mohammed.ammar@nbu.edu.sa

---

## Languages

Frensh, English, Arabic