May Itani

Associate Professor of Computer Science

Beirut Arab University | Nationality: Lebanese | Phone: (+961) 70 949133
Email: ma.itani@bau.edu.lb | mayitani78@gmail.com
LinkedIn: linkedin.com/in/may-itani | Google Scholar: Profile | ORCID: 0000-0002-0738-0822

EDUCATION

October 2011 - June 2017: PhD in Computer Science, Beirut Arab University. Dissertation: “Distributed Data Storage Optimization using Erasure Coding.”

October 2001 - February 2004: Master’s Degree in Computer and Communications Engineering, American University of Beirut. Thesis: “Cryptographic Algorithms on a Reconfigurable Computer System - MorphoSys: Algorithm Mapping and Performance Behavior.”

October 1995 - June 1999: Bachelor’s Degree in Electrical Engineering, American University of Beirut.

June 1995: Lebanese Baccalaureate II - Mathematics.

RESEARCH INTERESTS

Future wireless networks; optimization and heuristic methods; artificial intelligence; Internet of Things (IoT); digital twins; UAV-aided networks; distributed storage systems; parallel processing and cryptographic algorithms.

SKILLS

Languages: Arabic and English - excellent reading, writing, and speaking skills.

Teaching: Over 25 years of university-level teaching experience, including independently taught courses, coordinated courses, laboratories, and problem-solving/tutorial sessions.

Digital/Programming: Microsoft Word, Excel, PowerPoint; C, C++, Java, Python, Verilog, Assembly, MATLAB.

WORK EXPERIENCE

April 2025 - Present
Associate Professor of Computer Science - Beirut Arab University, Faculty of Science, Department of Mathematics and Computer Science

September 2020 - March 2025
Assistant Professor of Computer Science - Beirut Arab University, Faculty of Science, Department of Mathematics and Computer Science

Courses taught at Beirut Arab University include:

CMPS241 Introduction to Programming
CMPS244 Digital Systems Design with Verilog Programming
CMPS248 Discrete Structures I
GRAD306 Web Design
CMPS343 Computer Organization and Architecture
CMPS345 Discrete Structures II

CMPS346 Theory of Computation
BMIS403 Web Applications Design & Implementation
CMPS443 Senior Project I
CMPS444 Senior Project II
CMPS445 Concepts of Programming Languages
CMPS447 Computer Networks
CMPS453 Artificial Intelligence
CMPS455 Computer Security
CMPS642 Advanced Automata Theory and Formal Languages
CMPS680 Individual Studies
CMPS682 Research Techniques
CMPS715 Emerging Topics in Artificial Intelligence

Fall 2019
Part-time Faculty - American University of Beirut, Electrical and Computer Engineering Department
Programming for Engineers
Numerical Computing with MATLAB

Fall 2012 - Fall 2018
Part-time Faculty - Lebanese American University, Computer Science Department
Computer Organization and Assembly Language
Digital Systems Design with Verilog Programming

September 1999 - Fall 2011
Part-time Instructor - Beirut Arab University, Faculties of Science and Engineering
Teaching laboratories and problem-solving tutorial sessions.
Operations Research
Introduction to Programming using Java/C++
Data Structures (C++)
Object-Oriented Programming
Computer Organization and Assembly Language
Digital Systems Design with Verilog Programming
Theory of Computation
Computer Networks

September 2002 - February 2004
Graduate Assistant - American University of Beirut
Research and laboratory assistance.
Microprocessor Lab
Analog Electronics Lab
Feedback Control Lab

June 1998 - September 1998
Training Experience - Electrical Department - Khatib and Alami Consulting Company
Lighting design, power calculations, and load estimation.

AWARDS & SCHOLARSHIPS

Recipient of the Hariri Foundation scholarship for undergraduate study at the American University of Beirut.

Recipient of the Charli Kurban Award in Recognition of Outstanding Academic Record during graduate study at the American University of Beirut.

SEMINARS & WORKSHOPS

Amman, Jordan - November 28-30, 2022: Attended the Education Transformation workshop “Computer Science: Game Design & Programming” at Princess Sumaya University for Technology (PSUT), under the Erasmus+ ELEGANT project.

Beirut Arab University - February 2023: Presented in the Astronomy Event “Explore MARS Rover,” organized by ASME and the BAU Astronomy Club.

Beirut Arab University - March 7, 2023: Attended the Erasmus+ CBHE ELEGANT Project workshop “Enhancing Teaching, Learning and Graduate Employability through University-Enterprise Cooperation.”

Pisa, Italy - June 19-23, 2023: Attended an advanced course in Robotics & Artificial Intelligence at the University of Pisa (UNIPI), under the DeCAIR Erasmus+ project.

Beirut, Lebanon - July 2023: Attended the Erasmus+ ELEGANT Workshop on Advanced Security and Connectivity at MUBS University.

Beirut Arab University - January 2024: Presented a Computer Science Seminar Series talk on “Mathematical Modeling and Heuristic Optimization.”

Beirut Arab University - April 2024: Presented in the BAU Research workshop “The Future of Academia in Light of Artificial Intelligence.”

Attended Faculty of Science seminar-series activities during the academic year 2023-2024.

PUBLICATIONS

Google Scholar profile: https://scholar.google.com/citations?user=UTnzyFYAAAAJ

1. Khalaf, G., Itani, M., & Sharafeddine, S. (2026). “A UAV-Aided Digital Twin Framework for IoT Networks With High Accuracy and Synchronization.” IEEE Transactions on Network and Service Management, 23, 3013-3025. doi:10.1109/TNSM.2026.3670040.

2. Itani, M., & Abu Daher, L. (2026). “A Neuro-Evolutionary Approach for Emotion Recognition in Textual Data.” 8th International Conference on Smart Applications, Communications and Networking (SmartNets 2026), Rome, Italy.

3. Chamass, S., Abu Daher, L., & Itani, M. (2025). “An Optimized Approach for Detecting Osteoporosis Using Advanced Machine Learning and Genetic Algorithms.” IEEE Access, 13, 214009-214021. doi:10.1109/ACCESS.2025.3642471.

4. Loubany, A., Itani, M., & Sharafeddine, S. (2025). “From Age of Information to Age of Digital Twin: A Review on Synchronization Metrics for IoT Networks.” IEEE Access, 13, 131102-131119. doi:10.1109/ACCESS.2025.3591589.

5. Al-Sinji, L., Alayli, S., Mneimneh, M., Mansour, M. E. J., Al Breiki, H., & Itani, M. (2025). “A Comparative Study of Credit Card Fraud Detection with Reinforcement Learning.” Proceedings of the 3rd International Conference on Foundation and Large Language Models (FLLM 2025), 437-442. doi:10.1109/FLLM67465.2025.11391184.

6. Itani, M., & Sharafeddine, S. (2024). “Toward Industrial Metaverse: A High Fidelity Digital Twin for IIoT With Optimized Age-Accuracy Tradeoff.” IEEE Access, 12, 104242-104253. doi:10.1109/ACCESS.2024.3434630.

7. Naous, T., Itani, M., Awad, M., & Sharafeddine, S. (2023). “Reinforcement Learning in the Sky: A Survey on Enabling Intelligence in NTN-Based Communications.” IEEE Access, 11, 19941-19968.

8. Itani, M., Basheer, H., & Eddine, F. (2023). “Attack Detection in IoT-Based Healthcare Networks Using Hybrid Federated Learning.” 2023 International Conference on Smart Applications, Communications and Networking (SmartNets), 1-7. IEEE.

9. Basheer, H., & Itani, M. (2023). “Zero Touch in Fog, IoT, and MANET for Enhanced Smart City Applications: A Survey.” Future Cities and Environment, 9(1), Article 5.

10. Itani, M. (2023). “Towards Reliable V2X Service Using UAV-Aided Coded Content Caching.” 16th International Conference on Developments in eSystems Engineering (DeSE), 413-417. IEEE.

11. Itani, M., Abu Daher, L., & Hammoud, A. (2023). “Towards Digital Twins for Optimizing Metrics in Distributed Storage Systems - A Review.” BAU Journal - Science and Technology, 5(1), Article 9. doi:10.54729/2959-331X.1118.

12. Maad, M., Owaydate, A., Kojok, M., Aboudaher, F., Abu Daher, L., & Itani, M. (2022). “FAMAID: A Tool for Aiding People with Disability.” BAU Journal - Science and Technology, 4(1), Article 2. doi:10.54729/OBWC2027.

13. Itani, M., Sharafeddine, S., & ElKabani, I. (2018). “Dynamic Multiple Node Failure Recovery in Distributed Storage Systems.” Ad Hoc Networks, 72, 1-13.

14. Itani, M., Sharafeddine, S., & ElKabani, I. (2017). “Dynamic Single Node Failure Recovery in Distributed Storage Systems.” Computer Networks, 113, 84-93.

15. Itani, M., Sharafeddine, S., & Elkabbani, I. (2016). “Practical Multiple Node Failure Recovery in Distributed Storage Systems.” IEEE Symposium on Computers and Communication (ISCC), 901-907.

16. Itani, M., Sharafeddine, S., & Elkabbani, I. (2016). “Practical Single Node Failure Recovery Using Fractional Repetition Codes in Data Centers.” 30th IEEE International Conference on Advanced Information Networking and Applications (AINA), 762-768.

17. Diab, H., Itani, M., Damaj, I., & Kasbah, S. (2012). “Parallel Serpent under MorphoSys.” In Recent Advances in Computer Science and Information Engineering, Lecture Notes in Electrical Engineering, Vol. 127, 767-778. Springer. doi:10.1007/978-3-642-25769-8_107.

18. Damaj, I. W., Itani, M., & Diab, H. B. (2006). “Serpent Cryptography on Static and Dynamic Reconfigurable Hardware.” IEEE/ACS International Conference on Computer Systems and Applications (AICCSA), 680-684.

19. Itani, M., & Diab, H. (2004). “Reconfigurable Computing for RC6 Cryptography.” IEEE/ACS International Conference on Pervasive Services (ICPS 2004), 121-127.

20. Diab, H. B., & Itani, M. A. (2004). “Mars Cryptography on Dynamic Reconfigurable Systems.” International Conference on Applied Simulation and Modelling, Rhodes, 433-438.

21. Itani, M., & Diab, H. (2004). “Serpent Cryptography on Reconfigurable Hardware.” International Conference on Current Issues in Business and Information Technology, Haigazian University, Beirut, Lebanon.