Alain, Khaled CHAABAN

3344 Uqbah handalyah street, Jeddah, Saudi Arabia | Phone: (966) 54-0946629 | Email: chaaban.khaled@gmail.com | LinkedIn| Date of Birth: March 1978 | Citizenship: French

Associate professor with more than 18 years of expertise in conducting research activities, developing academic curricula, and participating to academic/industrial projects in the field of computer engineering and computer science. My expertise lies in the design, development and optimization of real-time and embedded software for a variety of computer systems applications, including robotics transportation systems. I have a deep understanding of industry standards and best practices, ensuring that projects meet the highest levels of quality and safety. As a passionate advocate for continuous learning and improvement, I have mentored several graduate Ph.D. and M.Sc. students , participated in the ABET program accreditation, curriculum development as well as quality assessment, and contributed to the broader community through publications and conference presentations.

Core Competencies

- Expertise in designing, developing, and evaluating educational programs.
- Mentorship of graduate and Ph.D. research projects.
- Reviewer and program committee member of several IEEE/ACM journals and conferences.
- Instructional leadership, best practices, and creative learning strategies.
- Leadership and Project management.
- Quality assurance procedures, program review, and accreditation processes.
- Professional written and verbal communication skills.

Technical Skills

- Programming: Python, C/C++, PHP, JavaScript, SQL
- Operating Systems: Unix/Linux, Real-Time Operating systems, MicroC-OSII, OSEK, Android system
- System Engineering: dSPACE, Automatic Code Generation, Matlab/Simulink/RTW, UML/SysML/MARTE
- Optimization: Genetic algorithms, MLP, Heuristics
- Data science: Pandas, Numpy, SciPy
- Machine Learning: AI Scikit-learn, TensorFlow
- Databases: SQL, MySQL, PostgreSQL
- Embedded Systems Development
- Communication and Networking: Embedded field buses, Wireless networks, Ethernet/Internet,
- Industrial Standards: ISO26262, DO178, AUTOSAR, IoT MQTT
- Tools: Latex, Git, SVN

Background and Scientific Experience

2015 – PRESENT: ASSOCIATE PROFESSOR | UMM AL-QURA UNIVERSITY| MAKKAH, SAUDI ARABIA

- Led quality assurance initiatives for academic programs, ensuring compliance with accreditation standards (ABET and NCAA).
- Defining the curriculum of the M.Sc. program in computer engineering and networking, aligning it with current industry trends and technological advancements.

- Participation to the design and launching of a new bachelor's program in data dcience, addressing the growing demand for data-driven expertise.
- Developed and delivered a diverse range of courses for graduate and undergraduate students, including Object-Oriented programming, web development, robotics, operating systems, networks, electronics circuits, and distributed systems.
- Funding granted for local research project (2023): Using Machine Learning to Learn an Optimization Process for Multi-modal Transportation Systems (40,000 SAR).

2007 – 2015: ASSOCIATE PROFESSOR | ESTACA ENGINEERING SCHOOL | LAVAL, FRANCE

- Chief manager of embedded systems team
- Delivered courses on real-time operating systems, real-time programming, control systems, and model-based engineering for undergraduate students.
- Contributed to industrial projects, including ELA (IRT-SystemX) and O4A-II (European project).
- Defined the curriculum for a new master's Program in embedded systems at the engineering school.

2013 – 2015: JOIN RESEARCHER | IRT-SYSTEMX | PARIS, FRANCE
- The academic lead for the "Multi-Core Embedded Systems" work package within the industrial ELA project (details: http://www.irt-systemx.fr/project/ela/).
- Prepared technical reports and project communications.
- Delivered technical training sessions to project members on automotive embedded systems.

2006 – 2007: ASSOCIATE RESEARCHER | CNRS, HEUDIASYC LAB. | COMPIEGNE, FRANCE
- Utilized contextual scheduling techniques for online diagnostics of distributed electronic functions at Renault Trucks.
- Contributed to ANR and European R&D projects: Diafore, Safespot, and RoadSense.
- Taught courses in C++, Java, VHDL/SystemC.

2002 – 2006: PH.D. THESIS IN "INFORMATION AND SYSTEMS TECHNOLOGIES" | UTC/CNRS, HEUDIASYC LAB. | COMPIÈGNE, FRANCE
Defended on June 16th, 2006 with highest honors.
Title: "A Distributed Real-Time Architecture For Advanced Vehicles".

2001 –2002: M.SC. IN "INFORMATION AND SYSTEMS TECHNOLOGIES" | UNIVERSITE DE TECHNOLOGIE DE COMPIEGNE (UTC) | FRANCE
Title: "Distributed real-time system for Multimedia applications".

1996 – 2001: ENGINEERING DEGREE IN "COMPUTER SYSTEMS AND TELECOMMUNICATIONS" | FACULTY OF ENGINEERING| LEBANESE UNIVERSITY

Scientific Responsibilities

- Team leader of embedded systems division at ESTACA engineering school (2013 to 2015)
- Reviewer and Program Committee (PC) member of several IEEE/ACM international journals and conferences.
- PI and partner of several funded research and industrial projects
- Member of different committees including French Society of Systems Engineering (AFIS) and INCOSE organization
- Supervision of several PhD and masters' projects

Distinction and Awards

- First prize, E-Learning Competition at UQU University, 2020
- Best paper award, PECCS 2015 conference, France
- CNRS BDI scholarship for PhD studies (2002-2005)
- CNRS BDI scholarship for M.Sc. studies (2002-2002)
- Chairman of "Information Systems and Applications" session at ITSC conference

Certifications

- Machine Learning, Stanford University, 2021
- Accredited trainer on e-learning systems (D2L), 2018
- Rapid embedded system prototyping, dSPACE, Paris 2008
- AUTOSAR concepts and methodology, Vector, Paris 2010
- Safety analysis and quality assurance: ISO26262 and DO178, Laval 2011
- Electrical/Electronic (E/E) Automotive Architecture, Vector, Stuttgart 2011

Publications

- h-index : 10
- 35 international publications
- 2 book chapters
- Number of citations : 323

Google Scholar: https://scholar.google.com/citations?user=B1hDTjMAAAAJ&hl=en