

Curriculum Vitæ

Bechir ZALILA — Engineer — Doctor

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Positions

2011-present

Associate Professor.

SFAX/TUNISIA

Affiliation: teaching and research staff at DGIMA (Department of Computer Engineering and Applied Mathematics)

Location: ENIS (National Engineering School of Sfax)

Second year: (2017-present) in charge of the “Python Programming and M2M” module.

Second year: (2019-present) in charge of the “Embedded LINUX” module.

First year: (2020-2021) in charge of the “Graph Theory” module.

Second year: (2018-2021) in charge of the “Software Maintenance” module.

Third year: (2018-2019) in charge of the module “Problem Solving and Advanced Programming”.

Third year: (2018-2019) in charge of the module “Advanced Programming in C++”.

Second year: (2011-2017) responsible for the modules “Distributed Software Engineering” and “Real-Time Systems and Scheduling”.

Second and Third years: (2011-2017) in charge of “Advanced Software Engineering” (ASE) option and the modules “Software Maintenance” and “Architecture Description Languages”.

First year: (2013-2014) in charge of the module “UNIX Environment”.

Third year: (2011-2012) in charge of the track (old regime) “Distributed Systems Engineering” (DSE) and the module “Development Platforms for Distributed Applications”.

First year: (2011-2012) in charge of the module “Structured Programming”.

2009-2011

University Assistant.

SFAX/TUNISIA

Affiliation: teaching and research staff at DGIMA (Department of Computer Engineering and Applied Mathematics)

Location: ENIS (National Engineering School of Sfax)

First year: (2009-2011) in charge of the module “Structured Programming”.

Second year: (2009-2011) in charge of the module “Distributed Software Engineering”.

Third year: (2009-2011) in charge of the specialty “Distributed Systems Engineering” (DSE) and the modules “Development Platforms for Distributed Applications” and “Software Maintenance”.

Education and Degrees

- 2022** Habilitation in Computer Systems Engineering. Sfax/TUNISIA
Topic: ARCHITECTURAL MODELING AT THE SERVICE OF EMBEDDED DISTRIBUTED REAL-TIME SYSTEMS - CONTRIBUTIONS TO DYNAMIC CONFIGURATION, FAULT TOLERANCE, OPTIMIZATION, AND FORMAL VERIFICATION.
- Habilitation defended on May 28, 2022.
Location: ENIS (National Engineering School of Sfax)
Jury Members.
Mohamed ABID, Professor, National Engineering School of Sfax, President.
Rafik BOUAZIZ, Emeritus Professor, Faculty of Economic Sciences and Management of Sfax, Referee.
Leila BEN AYED, Professor, National School of Computer Sciences, Referee.
Khalil DRIRA, Research Director, National Centre for Scientific Research, Examiner.
Mohamed JMAIEL, Professor, Digital Research Centre of Sfax, Examiner.
- 2005-2008** Ph.D. in Computer Science and Networks. PARIS/FRANCE
(3 years) **Topic:** CONFIGURATION AND DEPLOYMENT OF EMBEDDED DISTRIBUTED REAL-TIME APPLICATIONS USING AN ARCHITECTURE DESCRIPTION LANGUAGE.
- Thesis defended on November 07, 2008.
Grade *Very Honorable*
Location: TELECOM Paris (École Nationale Supérieure des Télécommunications)
Jury Composition.
Jacques MALENFANT, Professor, Pierre & Marie Curie University, President.
Yvon KERMARREC, Professor, TELECOM Bretagne, Referee.
Lionel SEINTURIER, Professor, University of Lille 1, Referee.
Peter FEILER, Research Director, Carnegie Mellon University, Examiner.
Franco GASPERONI, Managing Director, AdaCore, Examiner.
Laurent PAUTET, Professor, TELECOM Paris, Thesis Director.
Jérôme HUGUES, Lecturer, TELECOM Paris, Co-director of thesis.
- 2004-2005** Research Master's in Computer Science. PARIS/FRANCE
(1 year) **Specialization** DSA (*Distributed Systems and Applications*).
Track ERTS (*Embedded or Real-time Systems*).
Topic: OPTIMIZATION, DETERMINISM, AND ASYNCHRONISM IN CORBA STUBS AND SKELETONS FOR REAL-TIME DISTRIBUTED SYSTEMS.
- Master's defended on September 15, 2005.
Grade *Fairly Good*
Location: UPMC (Pierre & Marie Curie University (Paris VI))
Jury Composition.
Fabrice KORDON, Professor, Pierre & Marie Curie University, President.
Bertrand DUPOUY, Lecturer, TELECOM Paris, Examiner.
Laurent PAUTET, Professor, TELECOM Paris, Supervisor.
- 2002-2005** Engineering Degree. PARIS/FRANCE
(3 years) **Fields of study:** Software Engineering, System Architecture, Electronics, and Robotics
Location: TELECOM Paris

2000-2002 (2 years)	Preparatory Education for Entrance Exams to Grandes Écoles of Engineering. Specialization: MP* Location: IPEST (Preparatory Institute for Scientific and Technical Studies)	LA MARSA/TUNISIA
1993-2000 (7 years)	Secondary Education. Baccalaureate in Mathematics obtained with grade <i>Very Good</i> Location: Secondary School April 9, 1938	SFAX/TUNISIA

Advanced Industrial Trainings and Reinforcement Sessions

- ▷ 2018-2021: Professional trainings delivered to engineers at **Sofia Academy** in the following areas:
 - ▷ Algorithms and C programming
 - ▷ System Programming under Linux (POSIX)
 - ▷ Fundamentals of Linux System
 - ▷ Embedded Linux
 - ▷ Yocto
 - ▷ Android System (AOSP)
- ▷ 2021: Workshop and reinforcement session delivered to engineers at **Habemus! Solutions** in the following area:
 - ▷ Yocto
- ▷ 2021: Professional training delivered at the **Sfax Technopole** in the following areas:
 - ▷ Fundamentals of the Linux system
 - ▷ Shell Scripts under Linux
 - ▷ Embedded Linux
 - ▷ System Programming under Linux (POSIX)
- ▷ 2022: Professional training delivered at the training center **ESPS** for the account of **Primatec Engineering** in the following area:
 - ▷ Embedded Linux
- ▷ 2023: Professional training delivered to engineers at **Segula Technologies** in the following areas:
 - ▷ Embedded Linux
 - ▷ Yocto
- ▷ 2023: Professional training delivered at the training center **ESPS** in the following area:
 - ▷ Embedded Linux

Development Activities

- ▷ Developer of a simplified graphical library in **C** (https://github.com/BechirZalila/libssimplified_graphics) to enhance engagement and understanding among students learning programming in this language.

- ▷ Designer and implementer of an environmental monitoring system for the **Celavie** project, using **Raspberry Pi** technology and **ThingsBoard**.

Scientific Research Activities

Research Projects

- ▷ **Coordinator** of the Young Researchers Encouragement Program project (**21PEJC D3P8**): “*Development of a secure smart greenhouse*”, 2022-2024
- ▷ **Member** of the research project team **DAAD**: “*AirFit: Air Quality Analytics for Personalized Health Recommendations*”, 2023-2025
- ▷ **Member** of the research project team **DAAD**: “*OLIVIA: Intelligent Data Analytics for Optimizing Water Supply of Olive Trees*”, 2020-2022
- ▷ **Member** of the Young Researchers Encouragement Program project team (**21PEJC D3P3**): “*A Blockchain-based Secure Telemedicine IoT Platform*”, 2022-2024
- ▷ **Member** of the Young Researchers Encouragement Program project team (**19PEJC 09-12**): “*Smart Agriculture based on Green Energy (SmartAGE)*”, 2019-2021

Organization of Scientific Events

- ▷ Member of the Organizing Committee of the 17th International Conference on Internet and Systems Risks and Security, CRiSIS’2022
- ▷ Member of the Organizing Committee of the 16th National Symposium on Methods for Adaptive Distributed Software, METHODICA-2022
- ▷ Member of the Organizing Committee of the 1st Tunisian-Algerian Conference TACC’2021
- ▷ Member of the Organizing Committee of the 11th National Symposium on Methods for Adaptive Distributed Software, METHODICA-I-2014
- ▷ Member of the Organizing Committee of the 22nd IEEE International Conference WETICE’2013
- ▷ Member of the Organizing Committee of the 10th National Symposium on Methods for Adaptive Distributed Software, METHODICA-I-2013
- ▷ Member of the Organizing Committee of the 9th National Symposium on Methods for Adaptive Distributed Software, METHODICA-II-2012
- ▷ Member of the Organizing Committee of the 8th National Symposium on Methods for Adaptive Distributed Software, METHODICA-I-2012
- ▷ Member of the Organizing Committee of the 7th National Symposium on Methods for Adaptive Distributed Software, METHODICA-II-2011
- ▷ Member of the Organizing Committee of the 6th National Symposium on Methods for Adaptive Distributed Software, METHODICA-I-2011
- ▷ Member of the Organizing Committee of the 5th Francophone Conference on Software Architectures, CAL’2011
- ▷ Member of the Organizing Committee of the 10th International Conference on New Technologies of Distribution, NOTERE’2010
- ▷ Member of the Organizing Committee of the 5th National Symposium on Methods for Adaptive Distributed Software, METHODICA-II-2009
- ▷ Publicity Chair for the following conferences: NOTERE’2010, RSP’2010, RSP’2009

Scientific Activities

- ▷ Member of the Program Committee of the 3rd Tunisian-Algerian Conference TACC'2023
- ▷ Member of the Program Committee of the 2nd Workshop on Architecture Centric Virtual Integration (ACVI15)
- ▷ Member of the Program Committee of the 13th International Conference on Software Engineering Research, Management and Applications (SERA'2015)
- ▷ Member of the Program Committee of the 12th International Conference on Software Engineering Research, Management and Applications (SERA'2014)
- ▷ Member of the Program Committee of the Francophone Conference on Software Architectures (CAL'2014)
- ▷ Member of the Program Committee of the 19th IEEE International Conference on Engineering of Complex Computer Systems (ICECCS'2014)
- ▷ Member of the Program Committee of the 1st Workshop on Architecture Centric Virtual Integration (ACVI14)
- ▷ Member of the Program Committee of the 18th IEEE International Conference on Engineering of Complex Computer Systems (ICECCS'2013)
- ▷ Member of the Program Committee of the 17th IEEE International Conference on Engineering of Complex Computer Systems (ICECCS'2012)
- ▷ Reviewer for the 16th IEEE International High-Level Design Validation and Test Workshop (HLDVT'2011)
- ▷ Member of the Program Committee for the international symposium "Distributed Architecture modeling for Novel Component based Embedded systems" (DANCE'2011)
- ▷ Member of the Program Committee for the international workshop "Self-Healing Process Aware Information Systems" (SH-PAIS'2011)
- ▷ Reviewer for the "International Journal of Concurrency and Computation" (IJCC'2011)
- ▷ Reviewer for the "ACM Transactions on Design Automation of Electronic Systems" (TODAES'2010)
- ▷ Member of the Program Committee of the 22nd IEEE International Symposium on Rapid System Prototyping (RSP'2011)
- ▷ Member of the Program Committee of the 6th IEEE International Workshop UML & AADL (UML&AADL'2011)
- ▷ Member of the Program Committee of the 21st IEEE International Symposium on Rapid System Prototyping (RSP'2010)
- ▷ Member of the Program Committee of the 20th IEEE International Symposium on Rapid System Prototyping (RSP'09)
- ▷ External Reviewer for the following conferences and symposiums: CAL'2010, DANCE'2010, ECSA'2010, NOTERE'2010, OPODIS'2010, CAL'2012, MVDA'2012

Associative Activities

- ▷ Founding member and secretary of the ACM-Tunisia association for the year 2012-2014
- ▷ Secretary of the Tunisian Chapter of ACM for the year 2011-2012
- ▷ President of the Tunisian Chapter of ACM for the year 2010-2011

Insight into Student Life

- ▷ Member of the selection jury for the best projects during the 2nd Olivia'2022 competition organized by IEEE ENIS Student Branch as part of the Olivia research project.

Certifications

Certified LPIC-1	ID: LP1000250522 , Verification code: n8u5uqd4np , Verification URL: https://cs.lpi.org/caf/Xamman/certification
Certified Novell	Novell Certified Linux Administrator
Certified Novell	Data Center Technical Specialist
Coursera Cryptography I	Online course accomplishment <i>with distinction</i> , (score 100%) : https://www.coursera.org/course/crypto
Coursera Algorithms: Design and Analysis, Part 1	Online course accomplishment (score 98%) : https://www.coursera.org/course/algo
Coursera Algorithms: Design and Analysis, Part 2	Online course accomplishment (score 93.6%) : https://www.coursera.org/course/algo2
Coursera Machine Learning	Online course accomplishment (score 100%) : https://www.coursera.org/account/accomplishments/records/X5XKNCD89GN6
FUN Fundamentals for Big Data	Online course accomplishment (score 91%) : https://www.fun-mooc.fr/courses/MinesTelecom/04006S04/session04/info
FUN Python: From Fun- damentals to Using the Language	Online course accomplishment (score 100%) : https://www.fun-mooc.fr/courses/inria/41001S03/session03/info
FUN Introduction to Functional Program- ming in OCaml	Online course accomplishment (score 100%) : https://www.fun-mooc.fr/courses/parisdiderot/56002S02/session02/info
Coursera Introduction to Programming (in C++)	Online course accomplishment (score 99.7%) : https://www.coursera.org/learn/initiation-programmation-cpp
Coursera Introduction to Object-Oriented Programming (in C++)	Online course accomplishment (score 100%) : https://www.coursera.org/learn/programmation-orientee-objet-cpp
Coursera FPGA Design for Embedded Systems	Online course accomplishment (score 94%) : http://www.coursera.org/learn/intro-fpga-design-embedded-systems http://www.coursera.org/learn/fpga-hardware-description-languages http://www.coursera.org/learn/fpga-softcore-processors-ip https://www.coursera.org/account/accomplishments/records/E2LLRWSP68DH https://www.coursera.org/account/accomplishments/records/YXW5CZ3CJMY5 https://www.coursera.org/account/accomplishments/records/5U7GSY5ML8SJ

Skills

Computer Science

- ▷ Foundations of software development in multiple languages including Ada, Python, C, C++, JAVA...
- ▷ GNU/Linux, Embedded GNU/Linux, AOSP
- ▷ STM32 programming
- ▷ System programming under GNU/Linux
- ▷ System programming under Android
- ▷ Design of embedded systems (FPGAs)
- ▷ Real-time programming (Ada), embedded programming (Ada, C), distributed programming (CORBA)
- ▷ Parallel programming (Nvidia CUDA)
- ▷ Functional programming (OCaml and Haskell)
- ▷ Cryptography, fundamentals of computer security
- ▷ Computer systems architectures and modeling
- ▷ Theory of languages and compilation
- ▷ Software maintenance (Make, Autotools, CMake, SVN, GIT, GDB)
- ▷ Synchronous languages (LUSTRE, ESTEREL)
- ▷ Advanced distributed algorithms
- ▷ Model verification (Model Checking)
- ▷ Robotics: basic concepts

Systems

- ▷ GNU/LINUX, AOSP
- ▷ MACOS X
- ▷ MS Windows

Languages

Arabic	Native speaker
French	Bilingual
English	Bilingual. TOEFL obtained in June 2004, score: 617 (admission threshold: 550)
German	Beginner

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