Curriculum Vitæ

Bechir Zalila — Engineer — PhD — Habilitation

Mar. Stat.	:	Married		**Date of Birth**	:	26 May 1981
Address	:	PO Box N 70, Chihia post office		**Nationality**	:	Tunisian
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@ pers.	:	bechir.zalila (at) gmail.com		**Asciinema**	:	http://asciinema.org/~bechir

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Scopus : http://www.scopus.com/authid/detail.uri?authorId=18234428400
Google Scholar : http://scholar.google.com/citations?user=enphWHcAAAAJ
Web of Science : http://www.webofscience.com/wos/author/record/IST-2173-2023

Positions

2024-present

Associate Professor.
Affiliation: teaching and research staff at DGIMA (Department of Computer Engineering and Applied Mathematics)
Location: ENIS (National Engineering School of Sfax)
Second year: (2024-present) in charge of the "Python Programming and M2M" module.
Second year: (2024-present) in charge of the "Embedded LINUX" module.

2011-2024

Assistant 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: (2017-2024) in charge of the "Python Programming and M2M" module.
Second year: (2019-2024) 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**. **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".*	SFAX/TUNISIA

Education and Degrees

2022	Habilitation in Computer Systems Engineering. **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.*	SFAX/TUNISIA
2005-2008 (3 years)	Ph.D. in Computer Science and Networks. **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.*	PARIS/FRANCE

2004-2005 (1 year)	Research Master's in Computer Science. **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.	PARIS/FRANCE

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 (3 years)	Engineering Degree. **Fields of study:** Software Engineering, System Architecture, Electronics, and Robotics **Location:** TELECOM Paris	PARIS/FRANCE
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 *Very Good* **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/libsimplified_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

▷ General Chair of the 1st workshop on RealTime Service oriented and EMbedded Systems, RT-SEMS'2024

▷ 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: RTSEMS'2024, 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: **LPI000250522**, 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 *with distinction, (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 Fundamentals to Using the Language	Online course accomplishment *(score 100%)* : https://www.fun-mooc.fr/courses/inria/41001S03/session03/info
FUN Introduction to Functional Programming 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-proccessors-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