Farouk ZOUARI
PhD in Electrical Engineering

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Address : Jumeirah Village Circle, Plaza residence 106b, Dubaï, UAE
Driver's license: Driving license for light vehicles
Date and place of birth: August 27, 1980, in Tunis, Tunisia
*Linguistic abilities***:** English, Arabic, French
Nationality: Tunisian
Marital Status: Single

Profile

- An enthusiastic and knowledgeable doctor in Electrical Engineering with over 13 years of teaching experience in Tunisian public and private universities.
- Researcher at the Automatic Research Laboratory (LARA), National Engineering School of Tunis, University of Tunis El Manar, with H-Index: 8. Research interests include applications of artificial intelligence to the design of control systems, delay systems, robust adaptive control, and unconventional control applications, such as epidemic systems, chain management. procurement and digital systems.
- Authored over 22 contributions in international prestigious journals and conferences indexed in Web of Science.
- Experience in teaching computer science courses such as Machine Learning, Machine language, Workshop on Operating Systems, Logical systems, Decision Support Systems and Image processing,
- Qualified in calculating the electrical load and power consumption with design experience, in a wide range of projects, including residential, commercial, institutional, public, and industrial buildings in accordance with international standards for Electrical Installation and Dubai Municipality regulations.
- A comprehensive knowledge of designing, developing, and maintaining electrical systems and components to required specifications, focusing on economy, safety, reliability, quality, and sustainability.
- Looking for a new stimulating position, with a future to use my existing knowledge, creative skills, and experience and foster my personal and professional development; in order to achieve the tasks and objectives of the university.

Education

PhD in Electrical Engineering, National School Engineers of Tunis, University of Tunis El Manar, Tunisia
Subject: On adaptive neural control of complex dynamic systems
Date of the defense: December 16, 2014
Mention: Right Honorable

Master in Automatic and Signal Processing, National School Engineers of Tunis, University of Tunis El Manar, Tunisia
Subject: Implementation of conventional and unconventional identification methods
Date of the defense: August 04, 2005
Mention: Very Good

National Diploma in Electrical Engineering, National School of Engineers of Tunis, University of Tunis El Manar, Tunisia
Subject: Algorithms for designing artificial neural networks
Date of the defense: June 22, 2004

Baccalaureate Diploma in Mathematics, Tunisia
Graduation Year: 1999

Teaching Experiences

Assistant Professor
Ministry of Higher Education and Scientific Research, University of Jendouba, Tunisia
Tunis- September 2018 to August 2021

- **Courses Taught:**
  - **-** Machine Learning   (Four semesters)
    Horaire :   03 Hours course per week (45 Hour Course Module)

  - **-** Machine language   (Two semesters)
    Horaire :   03 Hours course per week (45 Hour Course Module)

  - **-** Workshop on Operating Systems   (Five semesters)
    Horaire :   01.5 Hours course per week (22.5 Hour Course Module)

  - **-** Design and Validation of Real Time Systems   (One semester)
    Horaire :   01.5 Hours course per week (22.5 Hour Course Module)

  - **-** Performance Evaluation for Network Services   (six semester)
    Horaire :   03 Hours course per week (45 Hour Course Module)

  - **-** Computer and internet certificate   (Two semesters)
    Horaire :   1.5 Hours course per week (22.5 Hour Course Module)

Ministry of Higher Education and Scientific Research L'École Supérieure Privée des Technologies de l'information et de Management de l'Entreprise (TIME ESP/TIME Private Higher School)
Tunis-September 2014 to June 2016

▪ **Courses Taught:**
- Digital Electronics and Programmable Logic Circuits   (Four semesters)
  Horaire : 02 Hours course per week (30 Hour Course Module)

- Electrical circuits   (Three semesters)
  Horaire : 03 Hours course per week (45 Hour Course Module)

- Logical systems   (Two semesters)
  Horaire : 01.5 Hours course per week (22.5 Hour Course Module)

- Electronics   (Three semesters)
  Horaire : 03 Hours course per week (45 Hour Course Module)

- Project Management   (Three semesters)
  Horaire : 03 Hours course per week (45 Hour Course Module)

- Decision Support Systems   (Four semesters)
  Horaire : 03 Hours course per week (45 Hour Course Module)

- Robotics and Industrial Automation   (Three semesters)
  Horaire : 02 Hours course per week (30 Hour Course Module)

- Computer Certificates   (Two semesters)
  Horaire : 01.5 Hours course per week (22.5 Hour Course Module)

Assistant
Ministry of Higher Education, Scientific Research, and Information and Communication Technologies, University of Jendouba, Tunisia
Tunis-September 2007 to September 2014

▪ **Courses Taught:**
- Image processing   (Seven semesters)
  Horaire : 03 Hours course per week (45 Hour Course Module)

- Signal processing   (Five semesters)
  Horaire : 03 Hours course per week (45 Hour Course Module)

- Introduction to multimedia   (Six semesters)
  Horaire : 03 Hours course per week (45 Hour Course Module)

- Digital Signal Processing   (Four semesters)
  Horaire : 03 Hours course per week (45 Hour Course Module)

- Operating systems   (Five semesters)
  Horaire : 03 Hours course per week (45 Hour Course Module)

- Signal transmission   (Seven semesters)
  Horaire : 03 Hours course per week (45 Hour Course Module)

- Computer architecture   (Five semesters)
  Horaire : 03 Hours course per week (45 Hour Course Module)

- Robotics and Industrial Automation
  Horaire : 03 Hours course per week (45 Hour Course Module)

- General Computers   (Five semesters)
  Horaire : 03 Hours course per week (45 Hour Course Module)

- E-commerce   (Six semesters)
  Horaire : 03 Hours course per week (45 Hour Course Module)

- **Supervision of graduation projects :**
  Subject 1: Formal Development of Automated Systems
  Subject 2: Design and Implementation of a Dynamic Website
  Subject 3: Design and Implementation of a Practice Management Application
  Subject 4: Billing System

Experiences in Companies

Senior Electrical Engineer
Royal Tent Tents IND L.L.C
Dubai -August 2021 - Present:

Charged with several responsibilities:

- Involved in Infrastructure, cooling load calculations, preparing the A/C sections equivalent U -Value calculations (Wall sections) and A/C drawings as per Dubai Municipality rules and regulations
- Getting shop drawings and Material Approval from Clients and Consultants
- Giving Material approval to contractors
- Inspecting the Site works for HVAC, Plumbing, EOT Crane, Firefighting, Lighting, Fire alarm, Nitrogen system, and BMS works Related to MEP.

Site Electrical Engineer
Aymos
Dubai-February 2018 -June 2018

Charged with several responsibilities:

- Concept, Schematic, and Detailed Design for all electrical services in line with international standards, authorities' regulations, client requirements, and budget, and project circumstances.
- Managing the design teams and performing the coordination with other disciplines to achieve the project on time and fully coordinated.
- Attending meetings with authorities, developers, and construction teams.
- Design auditing to assess the level of design risk associated with a project when progressing from early design into technical design and construction stages

Technical Sales Engineer
Majid Electromechanical Company
Dubai- July 2016 to December 2017

Charged with several responsibilities:

- Responsible for identifying customer requirements
- Research appropriate solutions and cost estimates
- Responsible for communication with clients and entrepreneurs
- Preparation of product documentation and report writing

Business Hotel Company
Tunis-July 2004 to August 2007

Charged with several responsibilities:
- Responsible for the implementation and monitoring of all work related to electricity
- Responsible for the safety of electricians
- Supervision of trainees and engineers in end-of-studies projects in the company

Training

Engineer internship
Tunisian Company of Electricity and Gas
June 2003 to August 2003
Subject: Control of the electricity production cycle.

Engineer Internship
Tunisia Telecom Company
August 2002 to September 2002
Subject: Extension of telephone networks

Computer Skills

Operating systems: Dos, Windows, Linux, UNIX.

Programming:
- **Assemblers**: Intel (family of 80x86), Motorola (MC6800, MC68000)
- **Languages**: Fortran, Pascal, C/C++, Visual Basic, VB.NET, Java, Matlab
- **Internet** : ASP, ASP.NET, HTML, DHTML, VBScript, JavaScript
- **Data base**: Access, Visual FoxPro, MySQL, SQL Server
- **Modeling and design**: MERISE, UML

Software :
- **Scientists**: Matlab (+Simulink)
- **Design**: Revit, Autocad , 3ds max, Adobe Photoshop, PowerDesigner, Microsoft Visio
- **Electronic Simulation**: Orcad, Pspice, Simcad, Electronic Workbench
- **Networks** : Network Simulator, NS2 (maitrise), and Opnet modeler (connaissance)
- **Internet**: Visual Interdev, Visual Studio .NET , FrontPage
- **Office**: Packs Microsoft Office / Open Office, Latex, Zotero

Research Activities and Publications

Researcher within the Automatic Research Laboratory (LARA), National Engineering School of Tunis, University of Tunis El Manar.

https://orcid.org/0000-0002-3108-6447

https://publons.com/researcher/1736272/farouk-zouari/
Web of Science ResearcherID J-4525-2016
Total Times Cited : 180
H-Index: 7
Verified Reviews: 121

https://scholar.google.com/citations?user=-LCPTfYAAAAJ&hl=en
Citations : 263
H-Index: 8
i10-index: 6

Research Interests: Modelling, simulation, control theory, fractional-order systems, nonconventional applications of control: epidemic and biological systems, supply chains and financial systems, discretization procedures, intelligent adaptive controls, neural adaptive controls, applications of fixed-point theorems in control and stability.

13 Publications in International journals with reading committees

[P1]- **Farouk Zouari**, Asier Ibeas, Abdesselem Boulkroune, CAO Jinde, Mohammad Mehdi Arefi, " Neural network controller design for fractional-order systems with input nonlinearities and asymmetric time-varying Pseudo-state constraints, " Chaos, Solitons & Fractals, Vol. 144, pp. 1-40, 2021. [ISI Indexed, Impact Factor: 5.944, Quartile: Q1].

[P2]- **Farouk Zouari**, " Neural Network Based Adaptive Backstepping Dynamic Surface Control of Drug Dosage Regimens in cancer treatment, " Neurocomputing, https://doi.org/10.1016/j.neucom.2019.07.096, 2019. [ISI Indexed, Impact Factor: 4.072, Quartile: Q1].

[P3]- **Farouk Zouari**, Asier Ibeas, Abdesselem Boulkroune, Jinde Cao, Mohammad Mehdi Arefi, " Neuro-adaptive tracking control of non-integer order systems with Input Nonlinearities and time-varying Output Constraints, " Information Sciences, Vol. 485, pp. 170-199, 2019. [ISI Indexed, Impact Factor: 5.524, Quartile: Q1].

[P4]- Mohammed Haddad, **Farouk Zouari**, Abdesselem Boulkroune, Sarah Hamel, " Variable-structure backstepping controller for multivariable nonlinear systems with actuator nonlinearities based on adaptive fuzzy system, " Soft Computing, https://doi.org/10.1007/s00500-019-04233-7, 2019.[ISI Indexed, Impact Factor: 2.784, Quartile: Q2].

[P5]- Amina Boubellouta, **Farouk Zouari**, Abdesselem Boulkroune, "Intelligent fuzzy controller for chaos synchronization of uncertain fractional-order chaotic systems with input nonlinearities," International Journal of General Systems, Vol. 48, No. 3, pp. 211-234, 2019. [ISI Indexed, Impact Factor: 2.931, Quartile: Q1].

[P6]- **Farouk Zouari**, Asier Ibeas, Abdesselem Boulkroune, Jinde Cao, Mohammad Mehdi Arefi, " Adaptive neural output-feedback control for nonstrict-feedback time-delay fractional-order systems with output constraints and actuator nonlinearities," Neural Networks, Vol. 105, pp. 256-276, 2018. [ISI Indexed, Impact Factor: 5.785, Quartile: Q1].

[P7]-**Farouk Zouari**, Abdesselem Boulkroune, Asier Ibeas, "Neural Adaptive quantized output-feedback control- based synchronization of uncertain time-delay incommensurate fractional-order chaotic systems with input nonlinearities," *Neurocomputing,* Vol. 237, pp. 200-225, 2017. [ISI Indexed, Impact Factor: 4.072, Quartile: Q1].

[P8]-**Farouk Zouari**, Abdesselem Boulkroune, Asier Ibeas, Mohammad Mehdi Arefi, "Observer-based adaptive neural network control for a class of MIMO uncertain nonlinear time-delay non-integer-order systems with asymmetric actuator saturation," *Neural Computing and Applications*, Vol. 28, Supplement 1, pp 993–1010, 2017. [ISI Indexed, Impact Factor: 4.664, Quartile: Q2].

[P9]-Abdesselem Boulkroune, Sarah Hamel, **Farouk Zouari**, Abdelkrim Boukabou,Asier Ibeas, "Output-Feedback Controller Based Projective Lag-Synchronization of Uncertain Chaotic Systems in the Presence of Input Nonlinearities," *Mathematical Problems in Engineering*, Vol. 2017, Article ID 8045803, 12 pages, https://doi.org/10.1155/2017/8045803. [ISI Indexed, Impact Factor: 0.83, Quartile: Q3].

[P10]-**Farouk Zouari**, Kamel Ben Saad, Mohamed Benrejeb, "Robust Adaptive Control for a Class of Nonlinear Systems Using the Backstepping Method," *International Journal of Advanced Robotic Systems*, Vol. 10, DOI: 10.5772/54932, 2013. [ISI Indexed, Impact Factor: 0.952, Quartile: Q3].

[P11]- **Farouk Zouari**, Kamel Ben Saad, Mohamed Benrejeb, "Robust Neural Adaptive Control for a Class of Uncertain Nonlinear Complex Dynamical Multivariable Systems," *International Review on Modelling and Simulations*, Vol. 5, No. 5, pp. 2075-2103, 2012. [Scopus Indexed]

[P12]- **Farouk Zouari**, Kamel Ben Saad, Mohamed Benrejeb, "Lyapunov-Based Dynamic Neural Network for Adaptive Control of Complex Systems," *Journal of Software Engineering and Applications*, Vol. 5, No. 4, pp. 225-248, 2012

[P13]- **Farouk Zouari**, Kamel Ben Saad, Mohamed Benrejeb, "Adaptive Internal Model Control of a DC Motor Drive System Using Dynamic Neural Network," *Journal of Software Engineering and Applications*, Vol. 5, No. 3, pp. 168-189, 2012.

07 Communications in International Conferences :

[C1]- Loubna Merazka, **Farouk Zouari**, Abdesselem Boulkroune, "Fuzzy state-feedback control of uncertain nonlinear MIMO systems," 2017 *6th International Conference on Systems and Control (ICSC)*, Batna, Algeria, DOI: 10.1109/ICoSC.2017.7958730.

[C2]- Loubna Merazka, **Farouk Zouari**, Abdesselem Boulkroune, "High-gain observer-based adaptive fuzzy control for a class of multivariable nonlinear systems," 2017 *6th International Conference on Systems and Control (ICSC)*, Batna, Algeria,
DOI: 10.1109/ICoSC.2017.7958728.

[C3]- **Farouk Zouari**, Kamel Ben Saad, Mohamed Benrejeb, "Adaptive backstepping control for a single-link flexible robot manipulator driven DC motor," *2013 International Conference on Control, Decision and Information Technologies (CoDIT)*, *Hammamet, Tunisia*,
DOI: 10.1109/CoDIT.2013.6689656.

[C4]- **Farouk Zouari**, Kamel Ben Saad, Mohamed Benrejeb, "Adaptive backstepping control for a class of uncertain single input single output nonlinear systems *," 2013 10th International Multi-Conference on Systems, Signals & Devices (SSD), Hammamet, Tunisia*,
DOI: 10.1109/SSD.2013.6564134.

[C5]- Asier Ibeas, Ali Esmaeili, Jorge Herrera, **Farouk Zouari**, "Discrete-Time Observer-Based State Feedback Control of Heart Rate During Treadmill Exercise,*" 2016 10th* 20th International Conference on System Theory, Control and Computing (ICSTCC), October 13-15, Sinaia, Romania, DOI: 10.1109/ICSTCC.2016.7790721.

[C6]- Gerasimos Rigatos, Pierluigi Siano, Masoud Abbaszadeh, **Farouk Zouari**, " Nonlinear H-infinity control for optimization of the functioning of mining products mills,*" IECON* 2018 - 44th Annual Conference of the IEEE Industrial Electronics Society, October 21-23, Washington, DC, USA, DOI: 10.1109/IECON.2018.8592736.

[C7]- Gerasimos Rigatos, Pierluigi Siano, **Farouk Zouari**, Sul Ademi, " A nonlinear optimal control methoc for autonomous submarines' diving,*"* 2017 IEEE 26th International Symposium on Industrial Electronics (ISIE), June 19-21, Edinburgh, UK, DOI: 10.1109/ISIE.2017.8001393.

02 Book Chapters:

[B1]-**Farouk Zouari,** Amina Boubellouta, "Adaptive Neural Control for Unknown Nonlinear Time-Delay Fractional-Order Systems With Input Saturation" *IGI Global*, *Advanced Synchronization Control and Bifurcation of Chaotic Fractional-Order Systems*, pp. 54-98, 2018.

[B2]**-Farouk Zouari,** Amina Boubellouta, "Neural Approximation-Based Adaptive Control for Pure-Feedback Fractional-Order Systems With Output Constraints and Actuator Nonlinearities" *IGI Global*, *Advanced Synchronization Control and Bifurcation of Chaotic Fractional-Order Systems*, pp. 468-495, 2018.

Other information

Hobbies: Internet, Reading, racket sport

References

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