

CURRICULUM VITAE

Boudour Ammar Ep Cherif

Degree : Assistant professor at National Engineering School of Sfax (ENIS), University of Sfax, Tunisia

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UNIVERSITY DIPLOMAS

July 2023 : Research University habilitation in Computer Systems Engineering

Février 2014 : Phd in Computer Systems Engineering at Enis, Tunisia

Subject : A novel recurrent neural network learning model for a biped walking simulator, supervised by Pr. Adel M. Alimi, honorable mention

August 2006 : Master Automatic Industrial Computer, REGIM-Lab (REsearch Group on Intelligent Machines), ENIS, Tunisia,

Subject: 3D simulation of the lower trunk of a bipedal robot, supervised by Pr. Adel M. Alimi, very good mention

June 2005 : National Diploma in Computer Engineering, Option: Computer Science at ENIS

June 2000 : Baccalaureate Mathematics, School Monji Slim, Sfax

PROFESSIONAL EXPERIENCE

Since 2015 : Assistant Professor, National Engineering School of Sfax(ENIS), University of Sfax, Department of Computer Science and applied Mathematics (DGIMA)

2011-2015: Assistant, National Engineering School of Sfax (ENIS), University of Sfax Department of Computer Science and applied Mathematics (DGIMA)

2006-2011: Contractual Assistant, National Engineering School of Sfax (ENIS, University of Sfax Department of Computer Science and applied Mathematics (DGIMA) and Electrics

TEACHING

Academic year	Courses	Level
2022-2023	Optimisation	2 nd level ENIS
	Quality Management	3 rd level ENIS
	Human Machine Interface	1 st year bachelor's degree in Business Intelligence at the International Polytechnic Higher School (ESPIN), Sfax
	Machine Learning	2 nd level, Professional Master Computer Science, ESPIN
May 2022	Basics of Convolutional Neural Networks	Teaching mobility as part of the ERASMUS+ project in the Department of Computer Science, master 2 Software Engineering and Artificial Intelligence at the University of Malaga, Spain
July 2022	Training Session "Diving Deep into Deep Learning"	Conference Information Technologies and Smart Industrial Systems (ITSIS), Paris France
2020-2021	Optimisation and operational research	2 nd level ENIS
	Advanced Deep learning and swarm algorithm au	Master IASRIA : Advanced Engineering in Robotic Systems and Intelligence in collaboration between the Virtual University of Tunis (UVT) and the National School of Engineering of Tunis (ENSIT)
	Mobile location and navigation	2 nd level Master Embedded Systems ENIS
2019-2020	Introduction to Artificial Intelligence	1st level ENIS
	Certification Huawei	2 ^{ème} année ENIS

SUPERVISION OF MASTERS

Supervision and participation in the defense of several research and professional master's thesis at ENIS, ENSIT and the virtual university, on the following themes:

Computer vision for the verification and quality control of water connectors, machine learning for the detection of epilepsy disease, battery charge estimation using deep learning.

Supervision of research masters

2019 Sihem Sioui, « Proposal for an intelligent irrigation system for plants », Master Embedded

Systems supported on 26 February 2019, mention very well.

Supervision of professional masters

2021 Amir Bouzidi, « Recognition of emotions using EEG signals”, between Virtual University of Tunis (UVT) and the National School of Engineers of Tunis (ENSIT), mention very well

Supervision of engineering degree projects

14 PFEs from ENIS Department of Computer Science and applied Mathematics (DGIMA)

Co-Supervision of Phd dissertations

4 defended theses

- Rahma Fourati, “Learning in Reservoir Computing for EEG-based Emotion Recognition”, 2021
- Naima Chouikhi, “Evolutionary echo state network-based approach for data analytics”, 2020
- Hajer Brahmi, “Novel Neural Networks learning models and applications”, 2017
- Zeineb Fki, “Towards efficient deep neural networks for medical data analysis”, 2023

2 Phd in progress

- Adel Hamid Aliwi Haliki, “Novel channel selection mechanism for improved classification in various motor imagery paradigms EEG-Based brain-computer interface”, 2nd year Thesis
- Ali Hussein Ali Al-Janabi, “A Machine Learning Approach for Network Intrusion Detection System”, 2nd year Thesis

PROJECTS

2023 Member of the project from KSA, Princess Nourah bint Abdulrahman University

- “Deep Neural Networks for Predicting Solar radiation in Mena Region”
- “Stability and synchronization of memristor-based oscillatory neural networks with mixed delay”
- “Temporal-Spatial Transformer Based Motor Imagery Classification for Brain Computer Interface”

2022 Member of the project from KSA, Princess Nourah bint Abdulrahman University

- “Comparative study of prediction models for irrigation management”,
- “Vigilance detection and deep learning”
- “Evolutionary Multiobjective Optimisation via Variational Autoencoder based Problem Transformation”

2019-2021: Coordinator of the research project PAQ-Collabora « Intelligent irrigation management: case of the olive tree «Zitounetna»

2019-2020 Coordinator of the project PAQ-4C : “Implementation of training sessions and certification measures for the employability of ENIS graduates”

2019-2021 Member of the project PAQ-PRICE “Actions of training for students, teachers and ENIS staff”

2020 Member of the IDEE program: Innovation, Economic Development and Employment, mission of accompaniment and coaching of advisors of the 4C (Center for Careers and Certification of Skills) between the German organization for international cooperation (GIZ) and the Ministry of Higher Education and Scientific Research (MESRS).

PARTICIPATION IN UNIVERSITY LIFE

2018-2020 Director of 4C-ENIS center

2019 ENIS representative for cooperation with the University of Chemnitz, Germany

2018 ENIS representative for cooperation with the International Centre for Management and Economics Fraunhofer Leipzig, Germany.

ORGANIZATIONAL SKILLS AND COMPETENCIES

2023

-International Program Committee for Cognitive Human-machine Interaction in The IEEE 22th International Conference on Cyberworlds (CW2023) Sousse, Tunisia, 03-05 October 2023

-Track chair of Artificial Intelligence and related Applications in IEEE International Conference on Artificial intelligence & Green Energy October 12-14, 2023 in Sousse, Tunisia

-Program Committee chair of the IEEE Afro-Mediterranean Conference of Artificial Intelligence (AMCAI), December 13-15, 2023, Hammamet, Tunisia

- Member of the Scientific Committee of the conference SSD2023-22-21-20 session chair of Biomedical Systems (<https://ssd-conf.org/scientific-committee-csp/>), the IEEE International Multi-Conference on Systems, Signals & Devices (SSD) March 2022, Tunisie

-Chair of the last five editions of the workshop IDSS (Intelligent Decision Support Systems)

-Proctor of more than 20 teams for the international competition IEEE Xtreme 2018-2023

- Organization of the I-Protect V4 workshop (honorary chair)

2022

-Organizer of the event « Intelligent Medical Systems and Security »

-Publication and session manager of International Conference on Information Technologies

and Smart Industrial Systems (ITSIS), 15-17 Juillet 2022, Paris France

2021

-Member of the program committee of the Workshop on Intelligent Machines : Theory & Applications (WIMTA' 34) et « keynote speaker »

2020

- Talk at the company show in Sfax entitled « Machine learning in Industry»

2019

-Member of International Program Committee of the conference : 5th international Conference on Nanotechnology for instrumentation & measurement

(www.tuchemnitz.de/etit/messtech/nanofim/)

-Member of the scientific committee of the Iot conference and the Workshop IoT & Smart City, 28-29-30 November, 2019, ENIS

-Participation to the 1st school on innovative pedagogy, 18-20 October 2019

-Coordinator of the Industrial-Academic Forum: meeting between industrialists, teachers and students: 20 April 2019

- Coordinator of the organization of the Industrial-Academic Forum: meeting between industrialists and teachers, 23 February 2019

-Evaluator of the World Robot Olympiad Tunisia qualification

-Communication Chair of Deep learning Spring School, Theory, Tools & Applications

2016

-Participation to the training session « Project Management H2020 »

-Participation of the IEEE World Congress on Computational Intelligence and représentation the Tunisia CIS Tunisie à Vancouver Canada on July 2016.

2015

-Participation to the Computational Intelligence School: Theory and applications

-Participation to the event Orange Summer Droid Code

PUBLICATIONS

Papers in international journals

1. A. Hameed, R. Fourati, B. Ammar, A. Ksibi, A. S. Alluhaidan, M. B. Ayed, H. K. Khleaf, Temporal-spatial transformer based motor imagery classification for BCI using independent component analysis, Biomedical Signal Processing and Control, Volume 87, Part A, 2024, 105359, ISSN 1746-8094, <https://doi.org/10.1016/j.bspc.2023.105359>.

2. H. Brahmi, B. Ammar, A. Ksibi, F. Cherif, G. Aldehim, A. M. Alimi, Finite-time complete periodic synchronization of memristive neural networks with mixed delays. Sci Rep 13, 12545 (2023). <https://doi.org/10.1038/s41598-023-37737-2>

3. Z. Fki, B. Ammar and M.B. Ayed, Towards Automated Optimization of Residual Convolutional Neural Networks for Electrocardiogram Classification. Cogn Comput (2023). <https://doi.org/10.1007/s12559-022-10103-6>

4. N. Chouikhi, B. Ammar, A. Hussain and A. M. Alimi, Novel Single and Multi-Layer Echo-

State Recurrent Autoencoders for Representation Learning, Journal of Engineering Applications of Artificial Intelligence, 114, 105051, **2022, Q1(sjr ranking) link:** [Engineering Applications of Artificial Intelligence \(scimagojr.com\)](https://www.scimagojr.com/journalsearch.php?q=19700177034&tip=sid&clean=0)

5.R. Fourati, B. Ammar, J. Sanchez-Medina and A. M. Alimi, "Unsupervised Learning in Reservoir Computing for EEG-based Emotion Recognition," in IEEE Transactions on Affective Computing, **2020**, doi: 10.1109/TAFFC.2020.2982143. **Q1(sjr ranking) link:** <https://www.scimagojr.com/journalsearch.php?q=19700177034&tip=sid&clean=0>

6. N. Chouikhi, B. Ammar, A. Hussain and A.M. Alimi, Bi-level multi-objective evolution of a Multi-Layered Echo-State Network Autoencoder for data representations, Neurocomputing 341, 195-211, **2019, Q1 (sjr ranking), link:** <https://www.scimagojr.com/journalsearch.php?q=24807&tip=sid&clean=0>

7. B. Ammar, H. Brahmi and F. Chérif, On the weighted pseudo-almost periodic solution for BAM networks with delays, Neural Processing Letters 48 (2), 849-862, 2018, **Q2 (sjr ranking), link:** <https://www.scimagojr.com/journalsearch.php?q=24806&tip=sid&clean=0>

8. N. Chouikhi, B. Ammar, N. Rokbani and A.M. Alimi, PSO-based analysis of Echo State Network parameters for time series forecasting, Applied Soft Computing 55, 211-225, 2017, **Q1 (sjr ranking), link:** <https://www.scimagojr.com/journalsearch.php?q=18136&tip=sid&clean=0>

9. H. Brahmi, B. Ammar, F. Cherif and A.M. Alimi, Stability and exponential synchronization of high-order Hopfield neural networks with mixed delays", International Journal Cybernetics and Systems, pp. 1087-6553, 2016, ISSN: 0196-9722, **Q2 (sjr ranking), link:** <https://www.scimagojr.com/journalsearch.php?q=12931&tip=sid&clean=0>

10. H. Brahmi, B. Ammar, F. Cherif and A. M. Alimi, A. Abraham, Asymptotically almost automorphic solution of high order recurrent neural networks with mixed delays, International Journal of Computer Science and Information Security 14 (7), 284, 2016, ISSN 1947-5500, **Q4 (sjr ranking), link:** <https://www.scimagojr.com/journalsearch.php?q=19400156805&tip=sid&clean=0>

11. B. Ammar, F. Cherif and A.M. Alimi, "Existence and uniqueness of pseudo-almost periodic solutions of recurrent neural networks with time-varying coefficients and mixed delays", IEEE Transactions on Neural Networks, Volume: 23 Issue:1, On page(s): 109 - 118, Jan. 2012, **Q1 (sjr ranking), link:** [IEEE Transactions on Neural Networks and Learning Systems \(scimagojr.com\)](https://www.scimagojr.com/journalsearch.php?q=19400156805&tip=sid&clean=0)

Chapters in books

1. H. Brahmi and B. Ammar, "Deep learning and intelligent robots in government", Handbook of Research on Applied Artificial Intelligence and Robotics for Government Processes, Pages: 1-34
[DOI: 10.4018/978-1-6684-5624-8.ch001](https://doi.org/10.4018/978-1-6684-5624-8.ch001)

2. N. Rokbani N., Ammar B. and Alimi M. A., « Toward Intelligent Biped-Humanoids Gaits Generation, Humanoid Robots », Ben Choi (Ed.), ISBN: 978-953-7619-44-2, InTech, 2009.

COMMUNICATIONS

1. R. Fourati, B. Ammar, Y. Jin and A. M. Alimi, "EEG feature learning with Intrinsic Plasticity based Deep Echo State Network," *2020 International Joint Conference on Neural Networks (IJCNN)*, **2020**, pp. 1-8, doi: 10.1109/IJCNN48605.2020.9207464. (Class A)
2. Z. Fki, B Ammar, MB Ayed, Machine learning with Internet of Things data for risk prediction: Application in ESRD, *12th International Conference on Research Challenges in Information*, **2018**, ISSN: 2151-1357, (Class B)
3. Z. Fki, B. Ammar, M. B Ayed, Risk Prediction in Smart Home Care, *IEEE 32nd International Conference on Advanced Information Networking*, pp 866-873, Paris, **2018**, (Class B).
4. R. Fourati, B. Ammar, C. Aouiti, J. Sanchez-Medina, A.M. Alimi, Optimized Echo State Network with Intrinsic Plasticity for EEG-Based Emotion Recognition, *International Conference on Neural Information Processing*, 718-727, **2017**, (Class A).
5. H. Brahmi, B. Ammar, F. Cherif and Adel M. Alimi, Pseudo almost periodic solutions of impulsive recurrent neural networks with mixed delays, *World Congress on Computational Intelligence (WCCI), International Joint Conference Neural Networks (IJCNN)*, pp 464-470, 2016, (Class A).
6. N. Chouikhi, R. Fdhila, B. Ammar, N. Rokbani and A. M. Alimi, Single- and Multi-Objective Particle Swarm Optimization of Reservoir Structure in Echo State Network, *World Congress on Computational Intelligence (WCCI), International Joint Conference Neural Networks (IJCNN)*, pp 440-447, 2016, (Class A).
7. N. Chouikhi, B. Ammar, N. Rokabni and A.M. Alimi, A Hybrid Approach Based on Particle Swarm Optimization For Echo State Network Initialization, *IEEE System Man and Cybernetics*, Hong Kong, Page(s): 2896-2901 2015 (Class B).
8. N. Ghribi, B. Ammar, A. M. Alimi, "Regimdroid: Framework for customize Android platform to act as a brain for telepresence robot", *14th International Conference on Computer and Information Science*, Page(s):113-118, **2015** (Class C).
9. Brahmi H., Ammar B, Chérif F., Alimi M. A., "On the Dynamics of the High Order Type of Neural Networks with Time Varying Coefficients and Mixed Delay", *IEEE International Joint Conference on Neural Networks*, Page(s):2063-2070, 2014.
10. N. Ghribi, B. Ammar, A. M. Alimi, Architectural Proposal for a Mobile Telepresence Robot, *REGIMTEL, International Conference of Soft Computing and Pattern Recognition*, Page(s): 359-364, 2014.
11. B. Ammar, N. Chouikhi, A.M. Alimi, F. Cherif, N. Rezzoug, P. Gorce, "Learning to Walk Using a Recurrent Neural Network with Time Delay », *Artificial Neural Networks and Machine Learning (ICANN)*, Page(s): 511-518, 2013.
12. F. Cherif, H. Brahmi, B. Ammar, A.M. Alimi, "Exponential Synchronization of a Class of RNNs with Discrete and Distributed Delays », *Artificial Neural Networks and Machine Learning (ICANN)*, Page(s):74-81, 2013.
13. A. Ksibi, B. Ammar, A. Ben Ammar, C. Ben Amar and A.M. Alimi, "REGIMRobvid:

Objects and scenes detection for Robot vision 2013”, Conference and Labs of the Evaluation Forum (CLEF), Spain, september 2013.

14. H. Brahmi, B. Ammar, A.M. Alimi, “Intelligent path planning algorithm for autonomous robot based on recurrent neural networks”, International Conference Advanced Logistics and Transport (ICALT), pp.199, 204, 29-31, May 2013.

15. S. Bousnina, B. Ammar, N. Baklouti, A.M. Alimi, “Learning system for mobile robot detection and tracking”, International Conference on Communications and Information Technology (ICCIT), Page(s): 384-389, June 2012.

16. B. Ammar, N. Rokbani, A.M. Alimi, “Learning System for Standing Human Detection”, IEEE International Conference on Computer Science and Automation Engineering (CSAE 2011), Page(s): 300 – 304, Shanghai 10-12 June 2011.

17. B. Ammar, A. Wali, A.M. Alimi, “Incremental Learning Approach for Human Detection and Tracking“, 7th International Conference on Innovations in Information Technology (Innovations’11), Page(s): 128-133, Abu Dhabi 25-27 April 2011.

18. N. Rokbani, E. Benbousaada, B. Ammar and A.M. Alimi, “Biped Robot Control Using Particle Swarm Optimization”, IEEE System Man & Cybernetics, Page(s): 506-512, Istanbul 10-13 Oct. 2010.

19. B. Ammar, N. Rokbani, A.M. Alimi and M.M. Ben Khelifa M. M., "Human walkers detection and localization", IEEE 3rd International conference on signals, circuits and systems, Medenine 6-8 Nov. 2009.

20. N. Rokbani, E. Benbousaada, B. Ammar and A.M. Alimi, “From gaits to ROBOT, A Hybrid methodology for A biped Walker”, Clawar2009, Page(s): 685-692, 2009.

21. N. Rokbani, A.M. Alimi, B. Ammar, “Architectural Proposal for a Robotized Intelligent humanoid, IZiman”, IEEE International Conference of Automation and Logistics, Page(s):1941–1946, Jinan 18-21 Aug. 2007.

PEER-REVIEWER

Since 2015 Review of several conference papers like *Information Technologies and Smart Industrial Systems (ITSIS)*, *IEEE International Multi-Conference on Systems, Signals & Devices (SSD)* and journals *Engineering Applications of Artificial Intelligence*, *Neurocomputing and Biomedical Signal Processing and Control*.