

## CV of the researcher

### Summary

Amar Bouafassa is an experienced researcher with a doctorate from the Sétif-1 University, Algeria. At the time of application, he has more than 10 years of research experience and teaching. He is the author of about 20 articles/conferences.

Dr. Bouafassa is an associate professor in the Department of Electronics, Electrical Engineering and Automation at the National Polytechnic School of Constantine, Algeria and has experience in the field of power electronics and control systems, working mainly in the following research lines: Power converters, power quality, control of nonlinear systems, and renewable energy.

Positions	
Oct. 2016- up to now	<b>Associate professor:</b> National Polytechnic School of Constantine, Algeria
Nov.2011-Nov. 2015	<b>PhD candidate:</b> Sétif-1 University, Algeria
Sep. 2014-Jun. 2016.	<b>Lecturer,</b> Sétif-1 University, Algeria

Education	
Nov. 2012-Nov.2015	<b>Doctorate,</b> Dep. of Electrical Engineering, Sétif-1 University, Algeria
Sep. 2009-Jun.2011	<b>Master's degree,</b> Dep. of Electrical Engineering, Sétif-1 University, Algeria
Sep. 2006-Jun. 2009	<b>Bachelor's degree,</b> Dep. of Electrical Engineering, Sétif-1 University, Algeria

PhD thesis	
Title	Unconventional Control of Uncertain Disturbed Nonlinear System
Supervisor	Prof. Lazhar Rahmani
Defense	5 <sup>th</sup> Nov 2015 at Sétif-1 University, Algeria

Teaching experience	
MSc courses	<ul style="list-style-type: none"> <li>• Renewable energy</li> <li>• Control and Stability of Power Systems</li> <li>• Power Electronics</li> <li>• Nonlinear Control</li> <li>• Programmable Logic Controller (PLC)</li> </ul>
Postgraduate courses	<ul style="list-style-type: none"> <li>• Control of Nonlinear Systems</li> </ul>

### Papers published in journals

- Salah Eddine Halledj, **Amar Bouafassa** . Anti-disturbance GITSMC with quick reaching law for speed control of PMSM drive. *Bulletin of Electrical Engineering and Informatics* , 2022, vol. 11(6):3228-3238.
- **Amar Bouafassa**, Luis M. Fernández-Ramírez. A DSP-based implementation of fuzzy logic and predictive current control for a Sheppard-Taylor power factor correction converter. *International Journal of Circuit Theory and Applications*, 2022, vol. 50(3): 812-826.
- **Amar Bouafassa**, Luis M. Fernández-Ramírez, Badreddine Babes. Power quality improvements of arc welding power supplies by modified bridgeless SEPIC PFC converter. *Journal of Power Electronics*, 2020, vol. 20:1445–1455.

- **Amar Bouafassa**, Lazhar Rahmani, Saad Mekhilef. Design and real time implementation of single phase boost power factor correction converter. *ISA Transactions*, 2015, vol.55: 267-274.
- **Amar Bouafassa**, Lazhar Rahmani, Abdelhalim Kessal, Badreddine Babes. Unity power factor converter based on a fuzzy controller and predictive input current. *ISA Transactions*. 2014, vol.53(6):1817-1821.

### Conferences papers

- Salah Eddine Halledj, **Amar Bouafassa**. Intelligent control of efficient bridgeless SEPIC PFC converter powered BLDC Motor. *1<sup>st</sup> International Conference on Autonomous Systems and their Applications (ICASA'22)*. 2022, Taref, Algeria.
- Salah Eddine Halledj, **Amar Bouafassa**. A Particle Swarm Optimization-trained artificial neural network of three stage maximum power tracking solar charge controller. *1<sup>er</sup> conference international Electrotechnique et Technologies Modernes*. 2022, Soukahres, Algeria, doi: 10.1250/conf.10.
- K. Benayad, T. Zabaïou and **A. Bouafassa**. Wide-Area Based SVC-Fractional Order PID Controller for Damping Inter-Area Oscillations. *6th IEEE International Energy Conference (ENERGYCon)*, 2020, pp. 610-615, doi: 10.1109/ENERGYCon48941.2020.9236492.
- **Amar Bouafassa**, L. Rahmani, B. Babes and R. Bayindir. Experimental design of a finite state model predictive control for improving power factor of boost rectifier. *IEEE 15<sup>th</sup> International Conference on Environment and Electrical Engineering (EEEIC)*, 2015, pp. 1556-1561, doi: 10.1109/EEEIC.2015.7165403.

### Book chapters published

- Kahla, S., Babes, B., Hamouda, N., Boutaghane, A., **Bouafassa, A.** (2021). Developing an Improved ANN Algorithm Assisted by a Colony of Foraging Ants for MPP Tracking of Grid Interactive Solar Powered Arc Welding Machine. In: Hatti, M. (eds) *Artificial Intelligence and Renewables Towards an Energy Transition. ICAIRES 2020. Lecture Notes in Networks and Systems*, vol 174. Springer, Cham. [https://doi.org/10.1007/978-3-030-63846-7\\_48](https://doi.org/10.1007/978-3-030-63846-7_48)

### Research project

Title: **Contribution to the control and stability of electro-energetic systems by integrating FACTS devices and renewable energies.**

Period: 2020-2024

Post: PI

Financial support: Algerian ministry of higher education and scientific research.

### Master's dissertation

1. Master's student: Abd Essalam AICHAOUI

Title: **Robust and intelligent controls of DC-DC converters.**

Year: June 2022.

Institution: National Polytechnic School of Constantine, Algeria

2. Master's student: Ahlem HASSANI

Title: **Design and control of arc welding power supplies.**

Year: June 2021.

Institution: National Polytechnic School of Constantine, Algeria

3. Master's student: Fadi Elislam NINI

Title: **Contribution to the control of physiological processes (Glycemia in Diabetes).**

Year: June 2020

Institution: National Polytechnic School of Constantine, Algeria

4. Master's student: Adnan AMROUSSE

Title: **Experimental realization using a dSPACE board of fractional control for a PV generator interconnected to an active power filter.**

Year: June 2019

Institution: National Polytechnic School of Constantine, Algeria

5. Master's student: Charafeddine BENBRAIKA

Title: **Control and stability of an electrical energy system.**

Year: June 2018.

Institution: National Polytechnic School of Constantine, Algeria

6. Master's student: Messaoud Zakaria ZEGGANE

Title: **Study and development of high performance MPPT control strategies for a grid-connected photovoltaic system.**

Year: June 2018.

Institution: National Polytechnic School of Constantine, Algeria