

## FELLA BOULGAMH

Lecturer

**Faculty of Exact and Natural Sciences Faculty, University of Oum El Bouaghi, Algeria**

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### ◆ PROFIL

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An energetic professional with successful experience as a Researcher, Teacher and Engineer, specializing in Electronics, electronic compounds characterization, modelization and system identification and specially experimental results analysis. Excellent individual contributor and innovator. Trilingual language skills.

### ◆ EDUCATIONAL BACKGROUND

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| 1989 | <b>Bachelor's</b> degree, Mathematics.   |
| 1994 | <b>Engineering</b> Degree in Electrical and Electronics Engineering (Bachelor), specialized in Instrumentation Engineering, <b>First Class Honors Degree</b> .<br><b>Thesis title:</b> <i>Test Structure characterization (Schottky diodes and PN Junctions) Treated in Rapid Thermal Furnace –JIPELEC- with Thermocouple.</i>           |
| 1995 | <b>DEA</b> , Master by course in Electrical and Electronics / Electronic Compounds, <b>First Class Honors Degree</b>   |
| 1996 | <b>Magister</b> Degree in Electrical and Electronics Engineering ( <i>Master</i> ), specialized in Electronic Compounds, <b>First Class Honors Degree</b> .<br><b>Thesis title:</b> <i>Contribution to the Electrical Characterization of Semiconductor Materials –Theoretical Models-</i> (Supervisor Prof. REMRAM Mohamed)             |
| 2018 | <b>PhD (Doctorat)</b> Degree in Electrical and Electronics Engineering ( <i>Master</i> ), specialized in Electronic Compounds, <b>First Class Honors Degree</b> .<br><b>Thesis title:</b> <i>A Study of Electrical Behavior of Silicon Multicristalline Semiconductors – Grain Boundaries Effect -</i> (Supervisor Prof. REMRAM Mohamed) |

### ◆ PROFESSIONAL EXPERIENCE

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#### TEACHER

- Prepare and write teaching materials, outlines for courses and lesson plans, develop course content, Conduct course and program evaluation or review
- Discuss students' ideas and aspirations, answer their questions and provide guidance, encouragement and assistance

- Mentor, coach and counsel students, instruct students in their areas of expertise
- Demonstrated excellent organizational and presentation skills, ensuring attention to detail, flexibility, tact, diplomacy. Demonstrated ability to work independently, meeting schedule demands.
- Demonstrated oral communication, working with others, computer use, problem solving, job task planning and organizing, writing, reading text, document use, finding information, critical thinking, decision making and continuous learning
- Demonstrated ability to work under pressure.

## **COURSES**

University of Constantine, Algeria  
1995 – 1998

1. **Physics** for the 1st year Technology
2. **Waves and Vibration** for the 2<sup>nd</sup> year Technology.

Science and Applied Science Faculty, University of Oum El Bouaghi, Algeria  
1997 – 2019

1. **Industrial Electronics**, for the 3rd class on Electrical Engineering.
2. **Basics of Electronics**, for the 1st class on Electrical Engineering.
3. **Electrical Measurements**, for the 3rd class on Electrical Engineering.
4. **Mathematics** (Analysis and Algebra) for the 1st class Technology.
5. **General Electricity**, for the 1st class Technology.
6. **Applied Physics**, for the 1st class on Electrical Engineering.
7. **Electrical Engineering Materials**, for the 3rd class and 5th graduates on Electrical Engineering
8. **Automatic Systems and Régulation**, for the 4th class graduates on Electrical Engineering.
9. **Introduction to the theory of signal and linear automatic systems**, for the 3rd class graduates in Electronics.
10. **Electronic functions**, for the 4th class graduates in Electronics.
11. **Signal Processing and Information Theory**, for the 3th class graduates on Industrial Computing.
12. **English** for the 5th class and 5th graduates on Electronics, Master I on Electrical Engineering and post graduate students on Electrical Command.
13. **Automatic**, for the 3th graduates on Electronics-Electrical Engineering-Automatic (EEA).
14. **Communication**, for Master I on Electrical Engineering and Post graduate students (Magister) on Command.
15. **Introduction to Image Processing**, for Master II on Industrial Computing.
16. **Introduction to Pattern Recognition**, for Master II on Industrial Computing.
17. **Research Methodology**, for Master II on Industrial Computing.
18. **Analog Electronics**, for the 3th class graduates LMD on Mécatronics.
19. **Power Electronics**, for the 3th class graduates LMD on Mécatronics.
20. **Discrete-Time-Systems**, for the 3th graduates on Electronics-Electrical Engineering-Automatic (EEA).
21. **Antenna and Wave Propagation**, for the 3th class graduates on Electrical Engineering.

22. **Combinational and Sequential Logic**, for the 2<sup>nd</sup> graduates on *Electro-mechanics*.
23. **Micro Electro Mechanical Systems (MEMS)**, for Master II on *Electrical Engineering*.
24. **Introduction to Artificial Intelligence**, for Master I on *Electrical Command and Electrical Power Networks*.
25. **Signal Processing** for the 3<sup>th</sup> graduates and Master I on *Industrial Maintenance and the 2<sup>nd</sup> graduates*.
26. **Industrial Automation**, for the Master I on *Industrial Computing*.

Faculty of Exact and Natural Sciences Faculty, University of Oum El Bouaghi, Algeria  
2019 – until now

1. **Signal Processing : Fundamentals and Applications**, for Master I on *Applied Physics*.
2. **Insulator Materials and High Voltage**, for Master I on *Applied Physics*.
3. **Analog Electronics**, for Master I on *Applied Physics*.
4. **Physics II**, for Licence I *Mathematics and Computer science*.
5. **Telecommunications systems, RF devices and microwaves** : for Master II on *Applied Physics*.

## **SUPERVISOR**

I supervised more than 30 thesis engineering, Licence, Engineering and Master degrees in different fields :

- Automatic systems and regulation,
- Signal Processing,
- Analog and Digital Electronics,
- Power Electronics,
- Electrical Measurements,
- Photovoltaic Systems,
- Transmission-Reception systems,
- Image Processing,
- Pattern Recognition,
- Sensors,
- ...

### **Intituled of some thesis :**

1. Speed Control of a DC Motor –Application to Rail Model –
2. Development of a Software Didactic applied to Frequency Modulation
3. Implementation and real time test of a Regulator RST on an Industrial control Process CE177
4. Monochromatic Image Processing (Edge Detection, Filtering and Neurone Network Segmentation
5. A Comparative Study between Classical Denoising Image Methods and Bilateral Filtering.
6. Photovoltaic PV-Battery Association (MPPT Command Concept)
7. Realisation of a Switching Power with Automatic Regulation for Television.
8. Development of Software Sizing Analog Filters.
9. Analog and Digital Regulation of a First Order System – Speed Control of a DC Motor -.
10. Realization of a JONES Chopper.
11. Study, Sizing and Realization of a Photovoltaic Irrigation Prototype (2021)

## **RESEARCHER**

- Member of a team (Solar Cells Technology) at the research laboratory LMSSEF (Laboratoire des Matériaux et Structure des Systèmes Electromécaniques et leur fiabilité) (2000-2018) at Oum El Bouaghi University, Algeria.
- Member of a team at the research laboratory LEMCE (Laboratoire d'Etude des Matériaux et Composants Electroniques : *Study of Electronic Materials and Components Laboratory*) (1996-until now) at Constantine 1 University, Algeria.
- Member of a team at the research laboratory ENT (Laboratoire d'Electronique et Nouvelles Technologies : *Laboratory of Electronics and New Technologies*) (2019-until now) at Oum El Bouaghi University, Algeria.
- Speciality Manager of the speciality : "*Industrial Informatics*" for three years.
- Member of the *Scientific Council* for two consecutive terms, Departement of Electrical Engineering, University of Oum El Bouaghi, Algeria.
- A member of scientific committees of doctoral competitions in Electronics field.
- Expertise in evaluating course handouts.
- Member of the Advisory Board of the International Scientific periodical Journal of "Strategic Studies for Disasters and Opportunity Management", ISSN (Online) 2629-2572, Democratic Arabic Center for strategic, political & Economic Studies, Berlin, Germany.
- Chairman of the Preparatory Committee for the Collective Book intituled "The Problems of Scientific Research in the Arab World" which will be published by October 2021, Democratic Arabic Center for strategic, political & Economic Studies, Berlin, Germany.

## **◆ PUBLICATIONS, COMMUNICATIONS AND SCIENTIFIC MANIFESTATIONS**

### **PUBLICATIONS**

- [1] M. Remram, F. Ayad, **F. Boulgamh**, A. Laugier " *Neutralisation des impuretés métalliques par effet Getter extrinsèque*", revue de l'Université de Constantine, Vol. 8, Décembre 1997.
- [2] **F. Boulgamh**, A. Tolia, M. Remram, A. Djouambi, "*Determination of Mono and Polysilicon Schottky Diodes Parameters using I-V and C-V Iterative Methods*", WSEAS Transactions on circuits and systems, Issue 11, vol. 4, November 2005, ISSN:1109-2734, pp. 1581-1586.
- [3] **F. Boulgamh**, M. Remram, A. Djouambi, "*Small Signal Fractional Order of PN Junction Diode*", In "*Recent Advances in Electrical Engineering and Control Applications – Lecture Notes in Electrical Engineering 411*", pp. 247-255 ed. Springer International Publishing AG 2017.
- [4] **F. Boulgamh**, M. Remram, A. Djouambi, "*Fractional Behavior of PN Junction Diode Under AC-Small Signal Conditions*", in Proceedings of the 1st International Conference on Electronic Engineering and Renewable Energy. ICEERE 2018 - Lecture Notes in Electrical Engineering, vol 519 pp. 283-289, ed. Springer, Singapore.

## CONFERENCES

- [5] **F. Boulgamh**, M. Remram " *Mécanismes de diffusion des porteurs dans le silicium extrinsèque*", Communication présentée à la conférence sur le Génie Electrique et l'Electronique, 28-30 Décembre 1996, INELEC Boumerdes.
- [6] M. Remram, F. Ayad, H. Satha, **F. Boulgamh**, A. Laugier, " *Guettering techniques efficiencies of metal impurities in silicon* " in the international conference on Low Dimensional Structure & Devices, Lisbon, Portugal 19-21 May 1997.
- [7] **F. Boulgamh**, M. Remram, " *Modèle de distribution des dopants dans les semi-conducteurs à partir des mesures capacitives*" in the Proceedings IEEE'97 international annual conference on the Electronic, Control, Electrical & Computer Engineering, Batna University 7-8 and 9 December 1997.
- [8] **F. Boulgamh**, M. Remram, " *Evolution de la conductivité électrique du silicium implanté et traité par recuit rapide isotherme* ", Communication présentée aux 6<sup>èmes</sup> journées Maghrébines des sciences des matériaux, Annaba, 9-10-11- Novembre 1998.
- [9] **F. Boulgamh**, M. Remram, A. Laugier, " *Optimization of implantation dose and annealing temperature in silicon wafers implanted As<sup>+</sup> and annealed by RTA*", In the International Conference on Extended Defects in Semiconductors EDS'98- Jaszowiec, Poland, 6-11 September, 1998, publié dans le proceeding.
- [10] **F. Boulgamh**, M. Remram, " *Caractérisation de diodes Schottky à base de silicium monocristallin et multicristallin par une technique itérative I-V*", Communication présentée au Congrès Euro-Mediterraneen de la Matière Condensée (CEMMC), Tlemcen, 04-06 Juin 2001.
- [11] **F. Boulgamh**, M. Remram, " *Optimization of implantation dose and annealing temperature in silicon wafers implanted As<sup>+</sup> and annealed by RTA*" in the sixth international meeting on materials science, IMMS-6, April 3-5, 2000, M'sila, Algeria.
- [12] **F. Boulgamh**, A. Telia, M. Remram, A. Djouambi, " *I-V and C-V methods to extract Al/polysilicon Schottky diode parameters*", in the 2005 WSEAS International MultiConference on Sofia, Bulgaria (October 2005).

## SCIENTIFIC MANIFESTATIONS

- ❖ The **First Summer School on Linux**, Oum El Bouaghi, Algeria, July **2001**.
- ❖ **Organize and Paticipate** to the 1<sup>st</sup> Workshop intituled: "**PV Technology and Solar Energy Integration in the Grid: A Grand Challenge**" Workshop, animated by Prof. Nouar Tabet (from Hamad Ben Khalifa University (Doha, Qatar) and Prof. Mohamed BOUDOUR, from University of Sciences and Technology , Algiers, Algeria), April, 11<sup>th</sup>, **2018**, Oum El Bouaghi University, ALGERIA.
- ❖ **Social Media Camp** Algeria **2019**, University of Batna 2 , Algeria
- ❖ **Tech-TOC forum**, Batna, ALGERIA, **2019**.
- ❖ The **second** (July 2019), the **third** (July 2020) and the **fourth** (September 2021) **Algerian American Foundation Summer University on Renewable Energies** (AAFSURE'2019, AAFSURE'2020, AAFSURE'2021).

- ❖ A **member of the organization committee** of "Course in scientific research methodology" and the **author of the Lecture** intitled -how to choose the supervisor and the subject of the research-, organized by Democratic Arabic Center for strategic, political & Economic Studies, Berlin, Germany, November 2<sup>nd</sup> 2020.
- ❖ "**Comprehensive Quality Management Diploma**", 28/09/2021-03/10/2021, IFAD Platform for Academics and Researchers.

## Present research area

- ❖ Solar Cells and photovoltaic system
- ❖ Electrical Characterization of electronic compounds
- ❖ Identification and modelization of electronic systems
- ❖ Fractional Systems

## Language skills

- ❖ Arabic, Native language
- ❖ French
- ❖ English

## ◆ OTHER FORMATIONS

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1. *Global Namaa Academy for Training and Development (GNATD),Algeria And Global academy for training and development (gatd), uk*

- ❖ **Course Training to obtain the Trainer Diploma**

2. *Global Namaa Academy for Training and Development (GNATD),Algeria*

- ❖ **Life Management**
- ❖ **Time Management**
- ❖ **Personal and Strategic planning**

3. *Adel chebel eltamimi group*

- ❖ **NLP Diploma** (*From Canadian Training Center of Neuro-Linguistic-Programming*)
- ❖ **NLP Assistant Practioner** (*From Canadian Training Center of Neuro-Linguistic-Programming*)
- ❖ **NLP Practioner Certified** (*From Canadian Training Center of Neuro-Linguistic-Programming*)
- ❖ **Power of Motivation and Excellence**
- ❖ **Self Confidence**

4. *International Academy of Family studies and Society, Turkey*

- ❖ **Mini Master of Business Administration**

## ◆ OTHER ACTIVITIES

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- ❖ **Project manager of "Roua Rashida"** (related to students personal development at Oum El Bouaghi University).
- ❖ **Personal development Trainer.**
- ❖ **Electronics Trainer** (for high school and university students)
- ❖ **Supervisor of e-Nour students Club,** Faculty of Exact and Natural Sciences Faculty, University of Oum El Bouaghi, Algeria