

## **Modele CV Enseignant**

**Name:** Ilhem BOUCHARÉB

**Rank:** Maitre de conférences A

**Department:** Electronique, Electrotechnique et Automatique (EEA)

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### **Educational Profile:**

- Doctorat Science/PhD in Electrical Engineering, option: Modelling and Control of Electrical Machines, Faculty of Engineering, University of Mentouri Constantine.
- Master in Electrical Engineering, option: Modeling and Control of Electrical Machines, Faculty of Engineering, University of Mentouri Constantine.
- Ingénieur Diploma in electrical engineering, Specialty : Electrical Networks, Institute of Electrical Engineering, Faculty of Engineering, University of Mentouri Constantine.

### **Honors and Distinctions**

#### **Scientific Activities & Membership of Scientific Societies**

##### **Membership of Scientific Societies:**

- Associate Editors in International Journal of Applied Electromagnetics and Mechanics.
- Member of IEEE IES Electrical Machines Technical Committee.
- Member of ICCAD organizer comity.
- TPC of ISIE'2022 Electrical Machines and Drives.

##### **Reviewer pour des revues internationales :**

IEEE Transactions on Industrial Electronics, IET Engineering Applications of Artificial Intelligence, Journal of Vibration and Control, Electronics Letters, MDP Journal of Intelligence, ISA Transactions, Journal of Intelligent Systems, Intelligent Industrial Systems etc.

##### **Reviewer pour des conférences internationales :**

ICEM IEEE International Conference on Electrical Machines, SDEMPED IEEE International Symposium on Diagnosis for electrical machines, IECON IEEE Industrial Electronics Society power electronics and drives, IFAC World Congress, PEMC International Power Electronics and Motion, SysTol International Conference on Control and Fault Tolerant Systems, ISIE IEEE International Symposium on Industrial Electronics, ISEM, International Symposium on Applied Electromagnetics and Mechanics, ISEF International Symposium on Electromagnetic Fields in Mechatronics, Electrical and Electronic Engineering etc.

## List of Current Research Projects

Projet PRFU: Conception d'un onduleur de traction basé sur la technologie de Mosfet Sic pour les Véhicules électriques, code A01L07ES250120220001

## List of Journal Publications (starting with most recent one according to the **format below**)

[1] Ilhem Bouchareb, Amar Bentounsi, Abdesselam Lebaroud, «A Comparative Study of Synchronous Reluctance and Switched Reluctance Motors for High-Performance Fault-Tolerant Applications», IJAEM, Vol. 39, No.1-4, 2012, pp. 793-799. [http://www.journaltoics.ac.uk/index.php?action=browse&subAction=subjects&publisherID=34&journalID=15356&pageb=6&userQueryID=&sort=&local\\_page=1&sortType=DESC&sortCol=1](http://www.journaltoics.ac.uk/index.php?action=browse&subAction=subjects&publisherID=34&journalID=15356&pageb=6&userQueryID=&sort=&local_page=1&sortType=DESC&sortCol=1)

[2] Ilhem Bouchareb, Amar Bentounsi, Abdesselam Lebaroud, «Torque Analysis of Faulty SRM using FEA-TFR Approach», Int. Journal of Computer Applications (0975-8887), Vol. 61, No.4, January 2013, pp. 28-35. <http://www.ijcaonline.org/archives/volume61>

[3] Ilhem Bouchareb, Amar Bentounsi, Abdesselam Lebaroud, « Fault Detection and Diagnosis in a Set “Inverter-Switched Reluctance Motor” Based on Pattern Recognition Using Kalman Filter Prediction », IJAEM, Vol.45, No.1-4, pp. 1383-5416. <http://iospress.metapress.com/content/11r81216864274q8/>

[4] Ilhem Bouchareb, Amar Bentounsi, Abdesselam Lebaroud, « Reliable Intelligent Fault Diagnosis System for Electrical Machines », Journal of Industrial Electronics and Electrical Engineering (IJIEEE), Vol.4, Issue 2, ISSN: 2347-6982, Feb.-2016.

[5] Ilhem Bouchareb, «Fault Tolerant Control Based SFO-Intelligent PID: Application on SynRM for Flywheel Energy Storage Systems -Part I», Advances in Modelling and Analysis B, Page: 54-62, DOI: [https://doi.org/10.18280/ama\\_b.641-408](https://doi.org/10.18280/ama_b.641-408)

[6] Ilhem Bouchareb, «Sensor Based Electromagnetic Waves for Unblocks Clogged Arteries», International Journal of Applied Electromagnetics and Mechanics IJEAM, 2022, 1-16, vol. 69, no. 2, pp. 245-261, 2022, IOS Press, DOI: [10.3233/JAE-210196](https://doi.org/10.3233/JAE-210196).

[7] Imene Djelamda, Ilhem Bouchareb, « Li-Ion Battery Fault Diagnosis Dedicated to Electric Vehicles by Neural Network Pattern Recognition », Journal Mathematical Modelling of Engineering Problems. Vol. 9, No. 1, February, 2022, pp. 144-149, <https://doi.org/10.18280/mmep.090118>

[8] Imene Djelamda, Ilhem Bouchareb, « Field-oriented control based on adaptive neuro-fuzzy inference system for PMSM dedicated to electric vehicle », Bulletin of Electrical Engineering and Informatics Vol. 11, No. 4, August 2022, pp. 1892~1901 ISSN: 2302-9285, DOI: [10.11591/eei.v11i4.3818](https://doi.org/10.11591/eei.v11i4.3818).

## List of Conference Papers (starting with most recent one, using the **format below**)

[01] Ilhem Bouchareb, Amar Bentounsi, Abdesselam Lebaroud, Bachir Batoun and Radjem Rebbah, «On Line Diagnosis of Faults on Switched Reluctance Motor Using Coupled Circuit-FEM», EFEEA'10

International Symposium on Environment Friendly Energies in Electrical Applications, 02-04 November 2010, Ghardaïa, Algeria.

[02] Ilhem Bouchareb, Bachir Batoun, Amar Bentounsi and Abdesselam Lebaroud, «Study on Fault Tolerant Power Converter for Switched Reluctance Drive Using Coupled Circuit-FEM», Sixth International Conference and Exhibition on Ecological Vehicles and Renewable Energies EVER'10, March 31- April 3, 2011, Monte-Carlo (Monaco).

[03] Ilhem Bouchareb, Amar Bentounsi, Abdesselam Lebaroud, Fares Rebbahi, Bachir Batoun, «Modeling and Detection of Eccentricity Fault in Switched Reluctance Motor», 10th International Conference on Environment and Electrical Engineering IEEEIC 2011, 8-11 Mai 2011, Rome.

[04] Ilhem Bouchareb, Amar Bentounsi, Abdesselam Lebaroud, «A Comparative Study of Synchronous Reluctance and Switched Reluctance Motors for High-Performance Fault-Tolerant Applications», 15th International Symposium on Applied Electromagnetics and Mechanics ISEM 2011, 7-9 September 2011, Napoli.

[05] Ilhem Bouchareb, Amar Bentounsi, Abdesselam Lebaroud and Bachir Batoun, «Dynamic Eccentricity Fault Detection In Switched Reluctance Motor Using Time-Frequency Analysis », 6th International conference on Sciences of Electronics, Technologies of Information and Telecommunication SETIT 2012, 21-24 March 2012, Tunisia.

[06] Ilhem Bouchareb, Amar Bentounsi, Abdesselam Lebaroud, «Fault Detection and Diagnosis in a Set "Inverter-Switched Reluctance Motor" Based on Pattern Recognition Using Kalman Filter Prediction», 16th International Symposium on Applied Electromagnetics and Mechanics ISEM 2013, 31 July -2 August 2013, Canada.

[07] Ilhem Bouchareb, Amar Bentounsi, Abdesselam Lebaroud, «An Integrated Artificial Neural Networks/Optimal Time-Frequency Based Classification in Condition Monitoring of Synchronous Reluctance Motor Stator Fault», 9th IEEE International Symposium on Diagnostics for Electrical Machines, Power Electronics & Drives SDEMPED 2013, 27-30 August 2013, Spain.

[08] Ilhem Bouchareb, Amar Bentounsi, Abdesselam Lebaroud, «Classification Method for Faults Diagnosis in Reluctance Motors Using Hidden Markov Models », 23rd IEEE International Symposium on Industrial Electronics, ISIE 2014, 1-4 Jun 2014, Turkey.

[09] Ilhem Bouchareb, Amar Bentounsi, Abdesselam Lebaroud and Rebahi Fares, «Automatic Fault diagnosis of Fault Tolerant Power Converter for Switched Reluctance Motor based on Time Frequency Technique», 16th International Power Electronics and Motion Control Conference and Exposition, PEMC 2014, 21-24 September 2014, Antalya, Turkey.

[10] Ilhem Bouchareb, Amar Bentounsi, Abdesselam Lebaroud, Tianzhen. Wang and Mohamed.E.H. Benbouzid, «Optimum Feature Extraction and Selection for Automatic Fault Diagnosis of Reluctance Motors», 40th Annual Conference of IEEE Industrial Electronics Society, IECON 2014, October 29 - November 1, 2014, Dallas, TX - USA.

[11] Ilhem Bouchareb, Amar Bentounsi, Abdesselam Lebaroud, «Advanced Diagnosis Strategy for Incipient Stator Faults in Synchronous Reluctance Motor», 10th IEEE SDEMPED International Symposium on Diagnosis for electrical machines power electronics and drives 2015, September 1-4, Guarda, Portugal.

[12] Ilhem Bouchareb, Amar Bentounsi, Abdesselam Lebaroud, «Reliable Intelligent Fault Diagnosis System for Electrical Machines», 48th ICRIET International Conference on Recent Innovations in Engineering and Technology, Spain, Barcelona, 11 December 2015.

[13] Ilhem Bouchareb, Amar Bentounsi, Abdesselam Lebaroud, « Performance Evaluation and Remedial Strategy of Synchronous Reluctance Motor Drive under Winding Turn Short Circuit Fault», XXIIth ICEM International Conference on Electrical Machines (ICEM'2016) 2016, September 4 to 7, SwissTech Convention Center, Lausanne, Switzerland.

[14] Ilhem Bouchareb, Amar Bentounsi, Abdesselam Lebaroud, « Towards Advanced Diagnosis Recognition for Eccentricities Faults: Application on IM», accepted for oral presentation at the upcoming conference SDEMPED IEEE International Symposium on Diagnostics, Power Electronics and Drives (SDEMPED 2019) in Toulouse, France, on August 27-30, 2019. DOI: 10.1109/DEMPED.2019.8864920

[15] Ilhem Bouchareb, Abdesselam Lebaroud «Sensor Based Electromagnetic Waves for Unblocks Clogged Arteries» 20th ISEF International Symposium on Electromagnetic Fields in Mechatronics, Electrical and Electronic Engineering (ISEF), 20-23 September 2021 Lodz/Cracow – Poland. <https://isef.eu/doc/agenda.pdf>.

[16] Ilhem Bouchareb, Abdesselam Lebaroud, «Fuzzy-Based Pattern Recognition For Automatic Diagnosis of Magnetic Hysteresis Effect: Application on 6/4 SRM Fault Tolerant Power Converter» 20th ISEF International Symposium on Electromagnetic Fields in Mechatronics, Electrical and Electronic Eng

[17] Imene Djelamda, Ilhem Bouchareb, « HMM-Based Automatic Evaluation of Electromagnetic Compatibility in Electric Vehicles», 20th ISEF International Symposium on Electromagnetic Fields in Mechatronics, Electrical and Electronic Engineering (ISEF), 20-23 September 2021 Lodz/Cracow –Poland. <https://isef.eu/doc/agenda.pdf>

[18] Imene Djelamda, Ilhem Bouchareb, «Fuzzy C-means clustering for diagnostic of PMSM dedicated to electrical vehicle», La 1ere conference internationale d'Electrotechnique et Technologies Modernes CIETM'22 February 18, 2022.

[19] Ilhem Bouchareb, « PATTERN RECOGNITION BASED FUZZY-LOGIC SYSTEM FOR LOSS ASSESSMENT IN FAULT TOLERANT POWER CONVERTER OF 6/4 SRM ». 20th International Symposium on Applied Electromagnetics and Mechanics ISEM 2022, 05-08 June 2022, Thessaloniki-Greece.

[20] Ilhem Bouchareb, « Pattern Recognition Intelligent System Based RTF-NNT for Early Detection: Application on Alzheimer», 2022 IEEE 9th International Conference on Sciences of Electronics, Technologies of Information and Telecommunications (SETIT). 28-30 Mai 2022, Hammamet, Tunisia, page 369-377. DOI: 10.1109/SETIT54465.2022.9875851

[21] Ilhem Bouchareb, « Intelligence Diagnosis of Eccentricities Faults Based Probabilistic Neural Network (NN-PNN): Application on IM», 2023 IEEE 7th International Conference on Control, Automation and Diagnosis (ICCAD'23), 10-12 May 2023, Rome, Italy.

#### **List of Current Doctoral Research Students Supervision**

1. Seddik Kedjouti (2eme année)

