

Chemseddine Rahmoune

Personal Data

PLACE AND DATE OF BIRTH : Thenia, Algeria | 08 December 1983
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ACTUAL OCCUPATION : Lecturer / University of BOUMERDES
EMAIL : ch.rahmoune@univ-boumerdes.dz
NATIONALITY : Algerian
EMPLOYMENT ADDRESS : Mechanical Department
Faculty of Engineering Sciences
University of BOUMERDES

Skills & Activities

Skills Matlab, Simulink , Excel ; Power point

Scientific Interests System Modeling, Signal Processing, Condition Monitoring, Fault Diagnosis

Objectives I would like to pursue my work where I can use my skills in scientific research concerning the domain of my scientific interests, in education, in group working, including laboratory research, coordinations student's courses. I hope to find the field where I can improve my scientific level, mainly in publication, inventing.. etc.

Experienced in working effectively as part of a team.

Languages Arabic
English
French

Education Training

<i>June 2009 :</i>	- Engineer in mechanical engineering, industrial maintenance option - Dissertation title : Detection and localization of faults in asynchronous machines by spectral analysis of the stator current
<i>September 2011 :</i>	- Magister in industrial maintenance, maintenance of mechanical systems option - Dissertation title : Stator current analysis and processing for fault detection in electromechanical systems
<i>June 2015 :</i>	- PhD in mechanical engineering, mechatronics. option - Dissertation title : Contribution to the Monitoring of Electromechanical Systems
<i>December 2018 :</i>	- Habilitation HDR in mechanical engineering, mechatronics. option

Teaching History

<i>Current :</i>	Associate Professor (Maitre de conférence "A", HDR) University of Boumerdes
<i>Jun 2015 – Dec 2018</i>	Lecturer, Associate Professor (Maitre de conférence "B", Phd). University of Boumerdes
<i>Nov 2013- Jun 2015 :</i>	Lecturer, Assistant Professor (Maitre assistant "B"). University of Boumerdes
<i>Sep 2011- Nov 2013 :</i>	Assistant Professor (Enseignant vacataire). University of Boumerdes

Teaching Experiences

<i>2016 - Current :</i>	1. Modeling and simulation of electrical machines 2. Electric machine controls 3. Waves and vibrations 4. Basic electrical engineering
<i>2011 - 2016 :</i>	1. Thermal engine and heat transfer 2. Solid Mechanics 3. Continuum mechanics 4. Quantum mechanics 5. Electronic 6. Automated diagnosis

Students Supervising Graduation

- 2012 - 2019: : Since the 2011/2012 academic year, 47 Master's degree projects have been proposed and directed. These projects can be classified in 04 axes :
1. Monitoring and diagnosis by signal processing methods. **(25 projects)**
 2. Surveillance and diagnosis by artificial intelligence methods **(11 projects)**
 3. Maintenance, reliability study and failure analysis **(09 projects)**
 4. Systems control **(02 projects)**

Books

- 1 R-Lagrange, un nouveau formalisme pour la mise en équation.
Éditions Universitaires Européennes., ISBN: 978-613-8-47908-6
- 2 Vibrations - Tome 1 : Oscillations à un seul degré de liberté Notes de cours avec exercices corrigés.
Éditions Universitaires Européennes., ISBN: 978-3-330-87947-8
- 3 Électrotechnique fondamental 2 Notes de cours avec exercices corrigés Transformateur et Machines à courant continu.
llabonne., ISBN: 978-620-2-36027-2
- 4 Électrotechnique Fondamental 1 notes de cours avec exercices corrigés.
Presses Académiques Francophones., ISBN: 978-620-2-36013-5

Journal Publications

1. Adel Afia, **Chemseddine Rahmoune**, Benazzouz Djamel, Merainani Boualem, Fedala Semchedine: *New Gear fault diagnosis mehod based on MODWPT and Neural Network for Feature Extraction and Classification*. Journal of Testing and Evaluation 06/2019;, DOI:10.1520/JTE20190107
2. Adel Afia, **Chemseddine Rahmoune**, Djamel Benazzouz: *Gear fault diagnosis using Autogram analysis*. Advances in Mechanical Engineering 12/2018; 10(12):168781401881253., DOI:10.1177/1687814018812534
3. Mohamed Zair, **Chemseddine Rahmoune**, Djamel Benazzouz: *Multi-fault diagnosis of rolling bearing using fuzzy entropy of empirical mode decomposition, principal component analysis, and SOM neural network*. ARCHIVE Proceedings of the Institution of Mechanical Engineers Part C Journal of Mechanical Engineering Science 1989-1996 (vols 203-210) 10/2018; 233(9):095440621880551., DOI:10.1177/0954406218805510

4. Rahmoune Chemseddine, Merainani Boualem, Benazzouz Djamel, Fedala Semchedine: *Gear fault feature extraction and classification of singular value decomposition based on Hilbert empirical wavelet transform*. Journal of Vibroengineering 06/2018; 20(4)., DOI:10.21595/jve.2017.18917
5. Azeddine Ratni, **Chemseddine Rahmoune**, Djamel Benazzouz: *A new method to enhance of fault detection and diagnosis in gearbox systems*. Journal of Vibroengineering 02/2017; 19(1):176-188., DOI:10.21595/jve.2016.17214
6. Boualem Merainani, **Chemseddine Rahmoune**, Djamel Benazzouz, Belkacem Ould-Bouamama: *A novel gearbox fault feature extraction and classification using Hilbert empirical wavelet transform, singular value decomposition, and SOM neural network*. Journal of Vibration and Control 02/2017; 24(12):107754631668899., DOI:10.1177/1077546316688991
7. Boualem Merainani, Djamel Benazzouz, **Chemseddine Rahmoune**: *Early detection of tooth crack damage in gearbox using empirical wavelet transform combined by Hilbert transform*. Journal of Vibration and Control 08/2015; 23(10)., DOI:10.1177/1077546315597820
8. Kamel Belalouache, Djamel Benazzouz, **Chemseddine Rahmoune**: *390. A new method based on fast Kurtogram for the identification of pitting fault versus crack fault in gearbox systems*. Journal of Vibroengineering 09/2014; 16(6).
9. **Chemseddine Rahmoune**, Djamel Benazzouz: *Monitoring Gear Fault by Using Motor Current Signature Analysis and Fast Kurtogram Method*. International Review of Electrical Engineering 03/2013; 8(2):616-625.
10. **Chemseddine Rahmoune**, Djamel Benazzouz: *Mechanics & Industry Early detection of pitting failure in gears using a spectral kurtosis analysis*. Mechanics and Industry 01/2012; 13(4):245-254., DOI:10.1051/meca/2012018

Conference Proceedings

1. Adel Afia, **Chemseddine Rahmoune**, Benazzouz Djamel, Mohamed Zair, Fawzi Gougam: *Gear fault diagnosis using Maximal Overlap Discrete Wavelet Packet Transform, Fast Kurtogram and Kurtosis indicator*. Afia Adel. International Conference on Advanced Mechanics and Renewable EnergiesAt: Boumerdes, Algeria, Boumerdes, Algeria; 11/2018
2. Fawzi Gougam, **Chemseddine Rahmoune**, Benazzouz Djamel, Mohamed Zair, Adel Afia: *Early fault detection for bearing in different working condition using Singular Value Decomposition (SVD) and adaptatif neuro fuzzy inference system (ANFIS)*. International Conference on Advanced Mechanics and Renewable Energies, Boumerdes, Algeria; 11/2018
3. Mohamed Zair, **Chemseddine Rahmoune**, Benazzouz Djamel, adel Afia: *Gear Multi-Fault Feature Extraction and Classification Based on Fuzzy Entropy of Local Mean Decomposition, Singular Value*

Decomposition and MLP Neural Network. International Conference on Advanced Mechanics and Renewable Energies ICAMRE2018 November 28 & 29, 2018, Boumerdes - Algeria; 11/2018

4. Mohamed Zair, Adel Afia, Fawzi Gougam, **Chemseddine Rahmoune**, Benazzouz Djamel: *Automatic condition monitoring of electromechanical system based on spectral kurtosis and SOM neural network*. SIGPROMD 2018, Djelfa; 03/2018
5. Adel Afia, Fawzi Gougam, Mohamed Zair, **Chemseddine Rahmoune**, Benazzouz Djamel: *Envelop analysis using empirical decomposition, kurtosis and Hilbert transform to enhance gearbox diagnosis*. SIGPROMD 2018, Djelfa; 03/2018
6. Fawzi Gougam, Mohamed Zair, Adel Afia, **Chemseddine Rahmoune**, Benazzouz Djamel: *Gearbox diagnosis using wavelet packet decomposition and spectral kurtosis*. SIGPROMD 2018, Djelfa; 03/2018
7. B. Merainani, **C. Rahmoune**, D. Benazzouz, B. Ould Bouamama, A. Ratni: *Fault feature extraction and classification based on HEWT and SVD: Application to rolling bearings under variable conditions*. 2017 6th International Conference on Systems and Control (ICSC); 05/2017, DOI:10.1109/ICoSC.2017.7958712
8. Ratni Azeddine, **Rahmoune Chemseddine**, Benazzouz Djamel, Ould bouamama Belkacem, Merainani Boualem: *Detection of shaft crack fault in gearbox using Hilbert Transforms*. 2017 6th International Conference on Systems and Control (ICSC); 05/2017, DOI:10.1109/ICoSC.2017.7958660
9. Boualem Merainani, **Chemseddine Rahmoune**, Djamel Benazzouz, Belkacem Ould-Bouamama: *Rolling bearing fault diagnosis based empirical wavelet transform using vibration signal*. 2016 8th International Conference on Modelling, Identification and Control (ICMIC); 11/2016, DOI:10.1109/ICMIC.2016.7804169
10. B. Merainani, D. Benazzouz, B. Ould Bouamama, **C. Rahmoune**: *Early Fault Diagnosis of Gearbox Using Empirical Wavelet Transform and Hilbert Transform*. 24th Mediterranean Conference on Control and Automation (MED) June 21-24, 2016, Athens, Greece, Athens, Greece; 06/2016, DOI:10.1109/MED.2016.7536020
11. Boualem MERAINANI, Djamel Benazzouz, **Chemseddine Rahmoune**, Azeddine Ratni: *Condition Monitoring of Rolling Element Bearing Under variable Amplitude Loading Using Synchrosqueezed Wavelet Transform*. ICAAID 2015; 01/2015
12. Azeddine Ratni, Djamel Benazzouz, **Chemseddine Rahmoune**, Boualem MERAINANI : *Amélioration de la détection et de diagnostic des engrennages utilisant Maximum cureleted Kurtosis deconvolution combiné avec kurtosis spectrale*. ICAAID 2015; 01/2015