

Faculté des Sciences de la Technologie

Département : Electrotechnique

1- Identification du laboratoire		اسم المخبر	
Intitulé du Laboratoire		لقسنطينة الكهربائية الهندسة مخبر	
Intitulé du Laboratoire	Laboratoire de Génie Electrique de Constantine		
Acronyme du labo	LGEC		
Adresse électronique			
Site web ou URL	http://umc.edu.dz/lgec/		
Année d'Agrément :	(Date de création) 08/07/2012) 2012	Tel : 031819013	Fax : 031819013

2- Directeur du laboratoire			
Nom & Prénom	LABED Djamel	Grade : Professeur	
Adresse Electronique	djamel_labed @yahoo.fr		
Nombre Equipes :	Quatre (4)	Nbre Chercheurs : 14 permanents+22 doctorants	Nbre Personnel soutien :00

3- Présentation du laboratoire
<p><u>Objectifs</u></p> <p>L'objectif premier du LGEC est de regrouper autour de quatre équipes de recherche complémentaires des compétences dans le domaine du Génie Electrique pour créer un synergie autour d'un projet innovant d'actualité : il s'agirait d'étudier des chaines complètes de génération ,conversion et gestion d'électricité à partir d'EnR (Solaire PV et éolien).cela inclut notamment l'étude, la conception et l'optimisation des structures innovantes de machines adaptées aux fonctionnements envisagés ainsi que la mise en œuvre d'interfaces entre la production et la consommateur pour fournir une énergie de qualité .Il s'agira aussi d'étudier l'intégration des EnR au réseau HTB/HTA,la fiabilité de fonctionnement,.....</p>
<p><u>Axes de Recherche :</u></p> <ol style="list-style-type: none">1- Structures performantes de machines électrique dédiées à la conversion et au traitement d'énergie2- Conception électromécanique et dimensionnement d'installation éolienne.3- Impact et Apport de sources d'EnR sur le réseau électrique et qualité d'énergie4- Sûreté de fonctionnement des systèmes électriques.
<p><u>Mots-Clés :</u></p> <p>Convertisseurs d'énergie ; modélisation ; optimisation ; simulation, filtrage ;EnR ; commande ;mécanisme d'entraînement ;réseau électrique ;réseaux Intelligents ;diagnostic ; pronostic ;surveillance ;qualité d'énergie ; outils et logiciels de simulation</p>

4- Chefs d'équipes		
.Titre de l'Equipe1	<i>Conversion Optimisation et Traitement de l'Energie Electrique (COTEE)</i>	
Nom - Chef d'équipe ¹	KAIKAA Med Yazid	Grade : MCA
.Titre de l'Equipe2	<i>Etude de Systèmes Electromécaniques et Electromagnétiques (ESEE)</i>	
Nom - Chef d'équipe ²	KERDOUN Djallel	Grade : Professeur
.Titre de l'Equipe3	<i>Equipe Energie Electrique (EEE)</i>	
Nom - Chef d'équipe ³	LABED Djamel	Grade : Professeur
.Titre de l'Equipe4	<i>Sûreté de Fonctionnement des Systèmes Electriques (SFSE)</i>	
Nom - Chef d'équipe ⁴	BOUCHEKARA Housseem	Grade : MCA

a) Publications Internationales des Equipes

1

Bouchareb, A. Bentounsi, and A. Lebaroud, "Fault detection and diagnosis in a set "inverter-SRM" based on pattern recognition using Kalman filter prediction", *IJAEM, IOS Press*, vol. 45, no. 1-4, 2014, pp. 495-502.

<http://iospress.metapress.com/content/11r81216864274q8/>

2

M.Y. Kaikaa, M. Hadjami, and A. Khezzar, "Effects of the Simultaneous Presence of Static Eccentricity and Broken Rotor Bars on the Stator Current of Induction Machine", *IEEE Trans. On Industrial Electronics*, Vol.61, N°5, pp. 2452 – 2463, May 2014.

http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=6544672&url=http%3A%2F%2Fieeexplore.ieee.org%2Fxppls%2Fabs_all.jsp%3Farnumber%3D6544672

3

M.Y. Kaikaa, "Effect of unbalanced supply on dynamic eccentricity fault diagnosis in induction motor", *International Journal of Applied Electromagnetics and Mechanics*, Vol.46, N°4, 2014, pp.793-808.

<http://iospress.metapress.com/content/b466v42i220m772k/>

4

Medoued, A. Lebaroud," Classification of Induction Machine Faults using Time Frequency Representation and Particle Swarm Optimization ", *Journal of Electrical Engineering & Technology*, vol. 9, N°1, 2014, pp.170-177.

<http://www.jeet.or.kr/LTKPSWeb/uploadfiles/be/201310/221020131149038930000.pdf>

5

Boumassata, D. Kerdoun, "Modeling, Simulation and Control of Wind Energy Conversion System based on Doubly Fed Induction Generator and Cycloconverter", *Advances in Electrical and Computer Engineering, AECE*, Vol.14, N°2, pp. 43-48, 2014.

<http://www.aece.ro/current.php>

6

N. Cherfia, D. Kerdoun and A. Boumassata, "Correction of the Mechanical Speed for the DFIG Wind Turbine", *International Journal of Research in Engineering & Technology, IJRET*, Vol.2, N°.11, pp. 29-38, 2014.

<http://www.impactjournals.us/journals.php?id=77&jtype=2&page=20>

7

S. Boukebbous, M. Khelif, D. Kerdoun, "Voltage Control of standalone photovoltaic system", *International Journal of Renewable Energy Research, IJRER*, Vol.4, N°3, pp. 698-704, 2014.

<http://www.ijrer.org/index.php/ijrer/article/viewFile/1528/pdf>

8

N. Cherfia, D. Kerdoun and A. Boumassata, "Sliding mode Control indirect strategy of the active and reactive power for the wind turbine DFIG", *International Journal of Control, Energy and Electrical Engineering, CEEE*, Vol.2, 2014.
http://ipco-co.com/CIER%2713-CEEE/ID_133.pdf

9

M. Madaci, D. Kerdoun, A. Boumassata and N. Cherfia, "Power active filter system implementation for photovoltaic generation system (PVGS) used in standing alone zones", *Proceeding Engineering & Technology, PET*, Vol.6, pp. 104-109, 2014.

<http://www.ipco-co.com/Papers%20CEIT%2714/39.pdf>

10

Boumassata, D. Kerdoun, M. Madaci and N. Cherfia, "Variable Speed WECS based on a DFIG and a six-pulse bridge cycloconverter", *Proceeding Engineering & Technology, PET*, Vol.6, pp. 80-85, 2014.

<http://www.ipco-co.com/Papers%20CEIT%2714/40.pdf>

11

Labeled Imen, Boucherma Mohamed, Labeled Djamel, "Economic Dispatch Using Classical Methods And Neural Networks", *IEEE Publisher* Print ISBN:978-605-01-0504-9.

<http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6713826>

12

Labeled Djamel, Boucetta Abdallah, "Power quality control strategy for grid-connected renewable energy sources using PV array, Wind turbine and battery", IEEE ISBN 978-1-4673-6392-1/13 ©2013 IEEE ISSN :2155-5516.

<http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6635868>

13

A.Draidi, D. Labeled, "Forecasting the Algerian Load Peak Profile Using Time Series Model Based On Backpropagation Neural Networks », IEEE ISBN 978-1-4673-6392-1/13/ ©2013 IEEE ISSN : 2155-5516.

<http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6635879>

14

Labeled Djamel, Nadir Ghanemi, "A robust performance of a voltage Source Converter based High Voltage Current ", IEEE ISBN 978-1-4673-4508-8/12/©2012, IEEE Print ISBN: 978-1-4673-4506-4.

<http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6484435>

15

Fetissi Selwa, Labeled Djamel, "Transient Stability Analysis of Synchronous Generator in Electrical Network", *International Journal of Scientific & Engineering Research*, Vol. 5, N° 8, August 2014.

<http://www.ijser.org/researchpaper%5CTransient-Stability-Analysis-of-Synchronous-Generator-in-Electrical-Network.pdf>

16

Boucetta Abdallah, Labeled Djamel, " Simulation Study Of A Photovoltaic Grid Connected System With A Rated Power Of 1 MW", *International Journal of Advanced Technology & Engineering Research*. Volume 4, Issue 2, March 2014, ISSN No: 2250-3536. IJATER © 2014

http://www.ijater.com/Files/f316b662-0829-4b7c-86b5-6c4340e9eceb_IJATER_15_01.pdf

17

Medoued Ammar, Lebaroud Abdesslem, " Classification of Induction Machine Faults using Time Frequency Representation and Particle Swarm Optimization ", *Journal of Electrical Engineering & Technology*, Vol. 9, No. 1: 170-177, 2014.

http://eng.kiee.or.kr/publication/paper_list.asp

b) Communications Internationales des équipes

1

I. Boucharab, A. Bentounsi, A. Lebaroud "Optimum Feature Extraction and Selection for Automatic Fault Diagnosis of Reluctance Motors", 40th Annual Conference of IEEE Industrial Electronics Society, IECON14, Dallas, TX – USA, 11/2014.

<http://iecon2014.org/index.php/component/content/category/2-uncategorised>

2

I. Boucharab, A. Bentounsi, A. Lebaroud, "Classification Method for Faults Diagnosis in Reluctance Motors Using Hidden Markov Models", ISIE2014, 1-4 June 2014, Istanbul, Turkey, pp. 984-995.

<http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=6864746&url=http%3A%2F%2Fieeexplore.ieee.org%2Fiel7%2F6851787%2F6864573%2F06864746.pdf%3Farnumber%3D6864746>

3

- I. Bouchareb, A. Bentounsi, A. Lebaroud and F. Rebahi, “Automatic Fault diagnosis of Fault Tolerant Power Converter for Switched Reluctance Motor based on Time-Frequency Technique”, 16th Int. Power Electronics and Motion Control Conf. And Exposition, PEMC2014, Sept. 21-24, 2014, Antalya, Turkey.
http://www.researchgate.net/publication/266321392_Automatic_Fault_diagnosis_of_Fault_Tolerant_Power_Converter_for_Switched_Reluctance_Motor_based_on_Time-Frequency_Technique
- 4
- F. Rebahi, A. Bentounsi, A. Lebsir and T. Benamimour, “Soft magnetic materials for SRM: finite element analysis and perspective”, Conf. Int. en Sciences et Technologie au Maghreb, CISTEM2014, 3-6 Nov. 2014, Tunis.
<http://www.esti.tn/CISTEM/index.php/component/chronofoms/?chronofom=accueil2>
- 5
- F. Rebahi, A. Bentounsi, H. Bouchekara and I. Bouchareb, “Optimum Geometry to Improve Torque of a Doubly Salient Variable Reluctance Machine”, 16th Int. Power Electronics and Motion Control Conf. And Exposition, PEMC2014, Sept. 21-24, 2014, Antalya, Turkey.
http://www.pemc2014.org/files/PEMC_program_booklet_16_09.pdf
- 6
- A. Lebsir, R. Rebbah, M. Larakeb, H. Djeghloud and A. Bentounsi, “Virtual Tests of a Salient Poles Synchronous Machines using Finite-Elements Method”, SPEEDAM’2014, June 18-20, 2014, Ischia, Italie.
http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6871907&sortType%3Dasc_p_Sequence%26filter%3DAND%28p_IS_Number%3A6871901%29
- 7
- N. Elhaj, T. Jarou, M. B. Sedra, H. Djeghloud, and Y. Terriche, “Contribution of a Shunt Active Power Filter Control using a Double Fuzzy PI Controller”, 16th Int. Power Electronics and Motion Control Conf. And Exposition, PEMC2014, Sept. 21-24, 2014, Antalya, Turkey.
http://www.pemc2014.org/files/PEMC_program_booklet_16_09.pdf
- 8
- H. Djeghloud, M. Larakeb, Y. Terriche, A. Bentounsi, and D. Kerdoun, “Laboratory Implementation of a Hybrid Series Active Power Filter System Part II: Series Active Filter Designing”, 16th Int. Power Electronics and Motion Control Conf. And Exposition, PEMC2014, Sept. 21-24, 2014, Antalya, Turkey.
http://www.pemc2014.org/files/PEMC_program_booklet_16_09.pdf
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- H. Djeghloud, Y. Terriche, D. Kerdoun, M. Larakeb and A. Bentounsi, “Laboratory Implementation of a Hybrid Series Active Power Filter System Part I: Designing of Passive Components”, 16th Int. Power Electronics and Motion Control Conf. And Exposition, PEMC2014, Sept. 21-24, 2014, Antalya, Turkey.
http://www.pemc2014.org/files/PEMC_program_booklet_16_09.pdf
- 10
- H. Djeghloud, O. Guellout, M. Larakeb, O. Bouteldja, S. Boukebous and A. Bentounsi, “Practical Study of a Laboratory Undersized Grid-Connected PV System”, Int. Conf. on Smart Grids and Technologies, ISGT2014, Kuala Lumpur, Malaysia, 20-23 May 2014.
http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=6873863
- 11
- M.Y. Kaikaa, “Effects of Mixed Faults on the Stator Current Spectrum of the Induction Machine”, 2nd international conference on power engineering, energy and electrical drives (peed '14), Istanbul, Turkey, December 15-17, 2014.
www.wseas.org/main/.../2014/Istanbul/Program.pdf
- 12
- T. Boukra Tahar, A. Lebaroud, " Identifying New Prognostic Features For Remaining Useful Life Prediction”, 16th international power electronics and motion control conference and exposition (PEMC 2014), 21-24 September 2014, Antalya, Turkey. ISBN 978-1-4799-2062-4
http://www.pemc2014.org/files/PEMC_program_booklet_16_09.pdf
- 13
- A. Medoued, A. Lebaroud, M. Mordjaoui, D. Sayad, “ Induction motor fault diagnosis based on the radial vibration analytic signal”, International Conference on control, engineering and information technology (CEIT’14) 22-25 March 2014, Tunisia.
<http://www.ipco-co.com/Papers%20CEIT%2714/065.pdf>
- 14
- A. Medoued, A. Lebaroud, O. Boudebouz and D. Sayad, “A Spectral Domain Computational Technique Dedicated to Fault Detection in Induction Machine”, International Congress in Honour of Professor Ravi P. Agarwal, June 23–26, 2014, Uludag University, Bursa–Turkey.
- 15
- N. Cherfia, D. Kerdoun, A. Boumassata and M. Madaci, “Indirect vector control of a double fed induction generator applied in wind energy with PWM and SVM”, International Conference on Control, Engineering & Information Technology, CEIT’14, Sousse, Tunisia, 22-25 March, 2014.
<http://www.wikicfp.com/cfp/servlet/event.showcfp?eventid=31963©ownerid=1>
- 16

S. Boukebbous, M. Khelif, **D. Kerdoun**, "Etude, Modélisation et Caractérisation des Panneaux Photovoltaïques", 8th International Conference on Electrical Engineering, CEE'2014, Batna, Algeria, 16-17 November, 2014.

<http://cee2014.univ-batna.dz/index.php/call-for-paper.html>

17

S. Boukebbous, M. Khelif, D. Kerdoun, "Control of grid-connected photovoltaic system with batteries storage", Second International Conference on Electrical Engineering and Control Applications, ICEECA'2014, Constantine, Algeria, 18-20 November, 2014.

http://www.umc.edu.dz/iceeca2014/Call_Papers.html

18

Labeled Imen, Labeled Djamel, Boucherma Mohamed "Static And Dynamic Economic Load Dispatch Using Neural Networks". Conference on Control, Engineering & Information Technology (CEIT'14). 22-25 Mars 2014, Monastir – Tunisia. Proceedings - Copyright IPCO-2014, ISSN 2356-5608. Springer www.ipco-co.com/Papers%20CEIT'14/153.pdf

19

Sekhane Hocine, Labeled Djamel, "Modeling & Simulation of SVC Device to Build a Smart Grid of Renewable Energy System". Conference Internationale des Energies Renouvelables (CIER'14) Décembre 19 - 21, 2014, Monastir – Tunisia.

<http://ipco-co.com/CIER%2714.html>

20

Sekhane Hocine, Labeled Djamel, "Integration Study of SVC Device (3TSC+1TCR type) for a Real Power System." First International Conference on Electrical Engineering ICEEB'14 Biskra, December 07-08, 2014

www.univ-biskra.dz

21

Sekhane Hocine, Labeled Djamel, "Insertion Study of UPFC Device to Build a Smart Grid System.", 3th International Conference on Information Processing and Electrical Engineering (ICIPEE'14), 24-25 November 2014.

<http://www.univ-tebessa.dz/fr/ICIPEE2014>

22

Sekhane Hocine, Labeled Djamel, "Use of intelligent systems for the optimization of reactive power & the control of voltage (comparison between STATCOM & SVC)". 2nd International Conference on Electrical Energy and Systems (ICEES'2014), Annaba, 21, 22 et 23 October 2014. <https://sites.google.com/site/icees14/home>

23

Fetissi Selwa, Labeled Djamel, "Modeling and simulation of a PV system with DC / AC conversion.", 8th International Conference on Electrical Engineering (CEE'2014), Batna, November 16-17, 2014.

<http://cee2014.univ-batna.dz>

24

Sekhane Hocine, Labeled Djamel, "Insertion Study of SSSC Device, to Improve the Powers Transits & Voltage Regulation in a Real Test Network", The Second International Conference on Electro –Energy (ICEE'2014), Skikda, 10–11 November 2014.

c) Communications nationales

1

Lebaroud Abdesselam, Medoued Ammar, "New method dedicated to faults classification of induction machines", International Conference on Electromechanical Engineering (ICEE'2014), Skikda, Algeria, 10-12 November 2014.

2

Bouguerne Abla, Lebaroud Abdesselam, "K- Means Clustering Algorithm For Classification of Ball Bearing Faults", International Conference on Electromechanical Engineering (ICEE'2014), Skikda, Algeria, 10-12 November 2014.