

A ECHCHELH
49 aged married
PhD in Mechanical Engineering
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University Academics and Extra Responsibilities

2014-2017 Expert Assessor CNRST Scientific Committee projects I (Exact Sciences, Sciences Engineer)
Since 2014 Assessor Expert Masters Project for accreditation
Since 2014 Responsible for the research team Energy Engineering and Mechanics.
Since 2014 Head of Master Energetics and Fluid Mechanics
Since 2011 Maitre de conférences
Member of the assistant teacher recruitment board

Knowledge Areas, Research Activities and Expertise

Our areas of expertise are related to the research we are conducting in the laboratory of Electrical Engineering and dynamic system for ten years. The work that we wanted scalable and diversified in time and in content, are organized around thematic priority such as:

- Composite Materials, mold manufacturing-based resin
- Fluids Mechanics (two-phase flow, turbulence grid)
- Automotive, Aerospace & Transportation
- Agribusiness, Biotechnology & Health
- Water & Environment
- Quality, Safety & Hygiene
- Energy & Renewables,

Research in these areas of expertise helped to provide answers to societal issues of utility and public interest in the subjects are in perfect interaction with the economic and industrial fabric such that:

- Evaluation of the potential Eolien in northern Morocco case of Offshore Wind Turbine.
- Physico-chemical and biological characterization of essential oils.
- Physico-chemical analysis and spatio-temporary study of water quality in the M'nasra region.
- Study of the antifungal activity of essential oil of *Artemisia mesatlantica* Morocco.
- Bacteriological and parasitological evaluation of the water quality in the Oujda WWTP
- Simulation and numerical modeling of dynamic systems by finite difference volume control and Eulerian-Lagrangian tracking.
- Study of the digital manufacturing processes cases composite materials of resin transfer molding.
- Study of waste water and gaseous emissions, Development of a condensate processing technique: oil refinery SAMIR the Case Sidi Kacem

Scientific Production

More than fifty articles published in scientific journals with impact factor, 29 participations at scientific conferences. Co-organizer of scientific events

Partnerships, Research Contracts

CNRST contract for the Scientific Committee I (Mathematics, Physics, Chemistry, Engineering, ICT)

- Research project of the Tunisian-Moroccan cooperation reference 13TM33 CMPTM for the years 2012-2013-2014 academics
- Franco-Moroccan Cooperation Project Reference ES2012 NAP-on training project in the Energy sector and support the building with wood and local materials.
- Cooperation with the following organizations that resulted in solid research with results published in journals
- Applied Research Laboratory in Higher National School of Electrical and Mechanical polymers University Hassan II
- LERMAB / IUT Longwy, Institut Carnot, Nancy, University of Lorraine, France.

Publication of articles in international journals indexed and by field of activity

A / Energy & Renewable Energy

1. S.El Ahmadi, A.Echchelh, A.Laaraifi, M.El Ganaoui and A.Chaouch, 'The Role Of Rural Areas As Leverage For Renewable Energy Development In Morocco: The Case Of Sidi Taibi Village' *trade Science Environmental Science*, Vol 9, Issue 11 (2014).
2. A. Benaboud1, A. Echchelh, A. Saad, M. Hajjoubi, M.S.Karrouk & F. Lahlou' *Characterization and evaluation of offshore wind potential along the Moroccan coasts' American Journal of Environmental Engineering and Science 2014; 1(1): 8-14*
3. A. Benaboud1, A. Echchelh, A. Saad, M. Hajjoubi, M.S.Karrouk & F. Lahlou' *Analysis of the wind speed as a function of the height of the atmospheric boundary layer, American Journal of Environmental Engineering and Science 2014; 1(1): 1-6*
4. A.Benaboud, M. Hajjoubi, m. Ahd, A. Erkik, A. Echchelh, 'Evaluation and statistical analysis of potential wind the wilaya tanger-tetouan' *Tr. Sci. J. Env. Sci. . Vol. 8, Issues 6, (2013).*

B / Water & Environment

5. A.Rassam, A.Echchelh, A.Chaouch, M.Bourkhiss, B.Bourkhiss A.El Malhi *Degradation of organic pollution in communal waste water by aerated lagoon system: Case of the waste water treatment plant of Oujda (Morocco) Environmental Science ESAIJ, 9(1), p.37-43, 2014*
6. A.Rassam, M.Bourkhiss, A.Echchelh, A.Chaouch and B.Bourkhiss, 'Evaluation of Bacteriological and Parasitological quality of wastewater of the city of Oujda (Morocco) *Res. Rew. Bio. Sci . Volume 7(9), 2013*
7. I.Idrissi Alami, A.Rhidouani, M.Zeraouli, A. Echchelh, M. Addou, S. Ben Ahmed 'Spatial and temporal study of the salinization quality of groundwater: case of M'nasra (Morocco)', *Phys & chem.news Pages:*
8. *o resin transfer moulding simulation:., Phys & chem.news Vol 57, January 2011, ISSN 1114-3800, pp. 85-94.*
9. A. Echchelh, D.Huilier et H.Burnage 'Dispersion de particules sphériques dans un écoulement turbulent. Effet de la rotation des particules' *C. R. Acad. Sci. Paris t. 322, série II b, p. 95-101, 1996.*

E / Study on the Evolution of Road Safety

10. D. Ennajih, M. Elgameh, A. Salik. A. Echchelh, A. Chaouch' *Study of the Influence of Parameters of Road Safety on the Road Accidents' IJRSET Volume 2, Issue 4, April 2015, PP 22-27*
11. M. El Gameh, A. Echchelh, D. Najih, T. Touijer, A. Chaouch, N. Nekkak, A. Soulaymani 'Quantitative Analysis and Study on the Evolution of Road Safety in Morocco' *IJRSET Vol 1, Issue 9, PP 210-215, December 2014*

F / Biotechnology & Agribusiness

12. M.Sobh, N.chaouche, A.Chaouch, A.Echchelh, 'Controlled Artichoke Fermentation by Microbial Inoculation, T.S. Inc. ISSN : 0974 - 7435 Volume 7 Issue 5 BTAIJ, [174-183](2013)
13. M.Sobh, A.Echchelh, H.Oudda, A.Chaouch, M.Ouhssine, 'Optimization of the Synthesis Parameters β -Fructofuranosidase Extracellular for strain Isolated Candida Sp Brine olives', *Trade Science Inc. 126 Prasheel Park, SanjayRaj Farm House, Nr. Saurashtra Uni, Rajkot - 360 005 Gujarat – INDIA / Vol 7, Issue 1, 2013[1-5].*
14. M.Sobh, A.Echchelh, H.Oudda, A.Chaouch, M.Ouhssine, 'Activité Antibactérienne de lactobacillus Plantarum', *Sci. Lib. Ed mers. Vol. 5 N°130205. ISSN 2111-4706. (2013).*

15. H.K.Bencheqroun[], M.Ghanmi[], B.Satrani[], A.Aafi, M. Aberchane[], A.Echchelh, A.Chaouch['Effect of phenological stages on yield, chemical composition and bioactivity of *Artemisia mesatlantica* essential oil of Morocco Trade Science Inc. ISSN : 0974 - 7508 Volume 8 Issue 5 NPAIJ, 8(5), 2012 [198-207]
16. H.K.Bencheqroun[], M.Ghanmi[], B.Satrani[], A.Aafi, M. Aberchane[], A.Echchelh, A.Chaouch['Antifungal activity of *Artemisia mesatlantica* essential oil of Morocco against wood rot fungi' NPAIJ, 8(5), 2012
17. M.Sobh, M.Aouane, Y.Chbab, A.Echchelh, H.Oudda, A.Chaouch, M.Ouhssine, 'Assessment of Cleaning and disinfection operations of equipments in a Moroccan artichoke processing and Ganning plant' Trade Science Inc. 126 Prasheel Park, SanjayRaj Farm House, Nr. Saurashtra University, Rajkot - 360 005 Gujarat – INDIA / Vol. 6, Issue 3, 2012
18. Y.Chbab, A.Echchelh, M.Aouane, M.Jadal, A. Chaouch , and M.Ouhssine, 'Monitoring of the evolution of the microbiological flora treated straw', *Biotechno TRS* Vol. 5, Issue 10, (2012)

National and International Congress

1. A.Benaboud, A. Echchelh, A Saad, F.Lahlou, M. Ahd 'Analyse et Diagnostic de la vitesse du vent en fonction de l'altitude de la couche limite atmosphérique' 1er Colloque franco-marocain sur les énergies nouvelles et renouvelables, COFMER'01 28-30 Octobre 2014,
2. A. Saad, A. Echchelh, M. Hattabi, M. El Ganaoui, F. Lahlou, Optimization of the cycle time in resin transfer moulding process 11ème Congrès de Mécanique 23-26 Avril 2013 Agadir (Maroc)
3. A. Saad, A. Echchelh, M. Hattabi, M. El Ganaoui, F. Lahlou, 'Numerical Simulation of Thickness Variation Effect on Resin Transfert Moulding process' International Symposium on Computational and Experimental Investigations on Fluid Dynamics. March 18-20, 2013 Sfax, Tunisia.
4. A. Saad, A. Echchelh, M. Hattabi, M. El Ganaoui, 'Optimisation on The Cycle Time in Resin Transfert moulding process' 11ème Congrès de Mécanique à Agadir – Maroc, du 23 au 26 avril 2011.
5. A. Saad, A. Echchelh, M.Hattabi, J.Samir, M.El Ganaoui, 'A computational model for simulating resin transfer moulding process: 10ème Congrès de Mécanique à Oujda – Maroc, du 19 au 22 avril 2011.
6. A.Saad, A. Echchelh, M.Hattabi, J.Samir A fast algorithm for moving interface problems applied to resin transfer moulding RTM, , 4th international conference on approximation methods and numerical modelling in environment and natural resource, Saidia- Morocco, May 23-26, 2011.
7. A. Echchelh, D.Huilier et H Burnage « Influence des forces transversales sur la dispersion de particules dans une turbulence de grille », 2ème Congrès Marocain de Mécanique, Casablanca-Maroc, 10-13, Avril 1995 Maroc, Tome. 1, p. 266-271.
8. D.Huilier, A. Echchelh, T.Schaeffer and H.Burnage "Numerical modelling of heavy particles in various laminar or turbulent flows fields", soumise au International Congress on Multiphase Flows, Kyoto-Japan, April, 3-7, 1995