

**Prof. Dr. Hanaa HACHIMI**  
Associate Professor in Applied Mathematics & Computer Science

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## Education

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03.28.2017	<b>University habilitation in Applied Mathematics.</b> ENSA, Ibn Tofail University of Kenitra, Morocco.
2010 - 2013	<b>Ph.D in Applied Mathematics &amp; Computer Sciences.</b> University Med V, Mohammadia Engineers School of Rabat, Morocco. <b>Ph.D in Mechanics &amp; Systems Reliability.</b> National Institute of Applied Sciences of Rouen, France.
2007 - 2009	<b>Master of Mathematical Analysis and Information Processing</b> Ibn Tofail University, Faculty of Sciences of Kenitra, Morocco.
2005 - 2007	<b>Bachelor in Applied Mathematics.</b> Ibn Tofail University, Faculty of Sciences of Kenitra, Morocco.

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## Professional experiences

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06-11 January 2020	<b>Visiting Professor. Erasmus+ for Training</b> Sapienza University, Roma, Italy.
2019- Present	<b>Secretary General</b> Sultan Moulay Slimane University , Bni Mellal, Morocco.
18-20 January 2019	<b>Visiting Professor. Keynote Speaker on ICDMAI2019</b> Lincoln University College, Kuala Lumpur, Malaysia.
03-07 December 2018	<b>Visiting Professor. International Lecture Week</b> Ostfalia Faculty of Computer Science/IT, Wolfenbüttel, Germany.
27-31 August 2018	<b>Visiting Professor. Keynote Speaker on ICRITO2018</b> Amity University, Noida, India.
23-30 June 2018	<b>Visiting Professor. Mooc Project</b> Uninettuno University, Roma, Italy.
04-21 April 2018	<b>Visiting Professor. Erasmus+ for Training</b> University of Genoa, Genoa, Italy.
2017-Present	<b>Associate Professor in Applied Mathematics.</b> Ibn Tofail University, National School of Applied Sciences of Kenitra, Morocco
November 2016	<b>Visiting Professor. Mobility Agreement</b> Ostfalia Faculty of Computer Science/IT, Wolfenbüttel, Germany.
11-15 July 2016	<b>Visiting Professor. Erasmus+ for Teaching</b> METU Graduate School of Applied Mathematics of Ankara, Turkey. Responsible and Coordinator of Statistics, Probability, Graph Theory and Operational Research courses.

27-31 October 2014 **Visiting Professor. Tempus Porfire project**  
Management school of Grenoble, Grenoble, France.

2013-2017 **Assistant Professor in Applied Mathematics.**  
Ibn Tofail University, National School of Applied Sciences of Kenitra, Morocco  
Responsible and Coordinator of Statistics, Probability, Graph Theory and Operational Research courses.

2010-2013 **Ph.D Student in Applied Mathematics & Computer Sciences.**  
University Med V, Mohammadia Engineers School of Rabat, Morocco.  
**Ph.D Student in Mechanics & Systems Reliability.**  
National Institute of Applied Sciences of Rouen, France.  
*Research Project* : Contribution of meta-heuristic algorithms in global optimization and applications.  
*Supervisor* : Prof. Dr. Ellaia Rachid.  
*Co-Supervisor* : Prof. Dr. El Hami Abdelkhalak.  
*Date of defense* : June the 29th, 2013.  
*Place of defense* : University Med V, Mohammadia Engineers School of Rabat, Morocco.  
*Type doctoral* : Cotutelle.

**Funding :** National Stock Exchange of the Ministry of Higher Education and Research. Morocco.  
Grant of AUF, University Agency of Francophony, France

2008-2013 **Lecturer**  
**Mathematical analysis and algebra.** (120 hours).  
National Institute of Applied Sciences of Rouen, France.  
**Applied mathematics.** (48 hours).  
**R software, and SPSS Statistics.** (48 hours).  
University Med V, Mohammadia Engineering school of Rabat, Morocco.  
**Probability and statistics.** (144 hours).  
**Applied mathematics.** (64 hours).  
**Matlab.** (48 hours).  
National School of Industry and Mines of Rabat, Morocco.  
**Probability and statistics.** (50 hours).  
High school of Commercials and Citizens HECC of Rabat, Morocco.  
**Mathematics, probability and statistics.** (48 hours).  
Tofail University, National School of Applied Sciences of Kenitra, Morocco.  
**Probability and statistics.** (64 hours).  
**Algorithms and C language.** (144 hours).  
Tofail University, Faculty of Sciences of Kenitra, Morocco.  
**Computing.** (144 hours).  
Kettabi Institute of Kenitra, Morocco.  
**Production Management and Operational Research GP RO.** (96 hours).  
Ibn Tofail University, National School of Business and Management of Kenitra, Morocco.  
**Office, Algorithms and C language.** (144 hours).  
**Project Management, Operating System and Database.** (144 hours).  
Institute of Technology and Professional Studies of Kenitra, Morocco.

2008-2009 **Internship Master II Research.**  
Genetic algorithms and applications in cryptography.  
Scientific research laboratory CIROS of Kenitra, Morocco. (6 months).

2007-2008

### **Software Developer**

Development of FINO in Java and Ajax, a GPS geolocation application.  
Creation with Website Joomla XEOPING : www. Xeoping. Com.  
Company Xeoping geolocation, Kenitra, Morocco. (10 months).  
Development under ACCESS and VISUAL BASIC of GESTECO, a database for the management of primary schools, Kenitra, Morocco. (8 months).  
Development under ACCESS and VISUAL BASIC of HOLDING ALBA-RAKA, a database for the management of stocks.  
Design office in topography and building engineering, Kenitra, Morocco. (3 months).

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## Training courses

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July 2016 : Training facilitator of research training under LINDO and EXCEL-SOLVER. (5 days)

- METU Graduate School of Applied Mathematics, Ankara, Turkey.

July 2015 : Training facilitator of training in Statistics under SAS. (4 days)

- Ernest & Young Company, Montreal, Canada.

October 2014 : Training facilitator of statistics under SPSS. (5 days)

- Company Xeoping geolocation, Kenitra, Morocco.

August 2013 : Training facilitator of Project Management. (5 days)

- ADN-Synergie Company, Auray, France.

November 2011 : Training facilitator of Financial Estimator. (3 days)

- Mondial Expertise, Casablanca, Morocco.

September 2010 : Training facilitator of database training in MS ACCESS. (4 days)

- Regional Directorate for Water and Forests (DREF), Kenitra, Morocco.

November 2009 : Training facilitator of Windows Server 2008. (4 days)

- Regional Agricultural Development Office (ORMVAG), Kenitra, Morocco.

May 2009 : Training facilitator of the office training (MS WORD, MS EXCEL, MS : POWER POINT). (5 days)

- Ministry of Health CHU Ibn Sina, Rabat, Morocco.

October 2009 : Training facilitator of MS ACCESS database training. (5 days)

- Regional Directorate for Water and Forests (DREF), Kenitra, Morocco.

November 2008 : Training facilitator of the office training (MS WORD, MS EXCEL, MS : POWER POINT). (5 days)

- Regional Directorate for Water and Forests (DREF), Kenitra, Morocco.

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## Areas of qualifications

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### **Optimization**

Heuristic, metaheuristic, evolutionary and stochastic algorithms.

Hybridization, coupling and global optimization.

### **Operational Research**

Linear, nonlinear and Dynamic programming.

Multi-objective programming, multicriteria and modeling.

Graph Theory, Simulation, Inventory Management and Queues.

Quality control / reliability, game theory and project management.

### **Statistics and Probabilities**

Descriptive statistics, Probability of laws.

Statistical inference, regression and multi-variate analysis.

Statistical surveys and surveys, time series.

### **Cryptography**

Symmetric, asymmetric, quantum cryptography, steganography and unconditional security.

Elliptic cryptography, digital signature, biometrics, channel coding, and Markov chain.

### **Informatics**

Programming and development : R, C, C ++, JAVA, Maple, Matlab, Visual Basic Latex, VB. NET, Win Server, Flash, ANSYS, ABACUS.

Environment : Linux, Windows10, IOS XI.

Project management and image processing Software : SAS, SPSS, MS Project, CRM, AutoCad, PS-pice, Adobe Illustrator, Metric Estimator.

Office : Word, Excel, Power Point, Outlook, Front Page, Access, Publisher.

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## **Books**

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1. Optimisation Métaheuristique et Applications. Prof. Dr. Hanaa HACHIMI. Edition : Univ Européenne. ISBN 978-3639622966.
  2. Optimisation Mono et Multi Objectif par les Algorithmes Bio-Inspirés. Prof. Dr. Hanaa HACHIMI. Edition : Univ Européenne. ISBN 978-3330867376.
  3. Hybridization of Bio-inspired Metaheuristics for Global Optimization. Mariam ELKHECHAFI, Prof. Dr. Hanaa HACHIMI, Prof. Dr. Youssfi ELKETTANI. Edition : LAP LAMBERT Academic Publishing. ISBN 978-3659454462.
  4. LA COLLABORATION UNIVERSITE-ENTREPRISE AU SERVICE DE L'INNOVATION AU MAGHREB. Edition : CAMPUS OUVERT, ISBN : 979-10-90293-46-5.
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## **Publications**

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1. FAHDI S, ELKHECHAFI M, **HACHIMI H** (2019). Green Port in Blue Ocean : Optimization of Energy in Asian Ports. 5th International Conference on Optimization and Applications (ICOA). IEEE.
2. BENBRAHIM H, **HACHIMI H**, AMINE A (2019). Comparison between Hadoop and Spark. IEOM. IEEE.
3. HADDOUCH S, **HACHIMI H**, HMINA N (2019). Approach and contribution of urban road traffic management to reduce congestion estimation times using optimization algorithms. 5th International Conference on Optimization and Applications (ICOA). IEEE.
4. BENBRAHIM H, **HACHIMI H**, AMINE A (2019). Survey on the Use of Health Information Systems in Morocco : Current Situation, Obstacles and Proposed Solutions. Advanced Intelligent Systems for Sustainable Development. Springer.

5. SMALILI Y **HACHIMI H**(2019). Segmentation problem in direct market campaigns : Modified Bat Algorithm. 5th International Conference on Optimization and Applications (ICOA). IEEE.
6. BOUAZZA S, BENMANOUN Z, **HACHIMI H**(2019). Optimization of logistics to support the African's development. 5th International Conference on Optimization and Applications (ICOA). IEEE.
7. SHOUVIK C, AISHWARYA R, SOUMYA S, KALYANI M, SANKHADEEP C, **HACHIMI H**(2019). Contrast Optimization using Elitist Metaheuristic Optimization and Gradient Approximation for Biomedical Image Enhancement. Amity International Conference on Artificial Intelligence (AICAI). IEEE.
8. SINGH S.B, NARINDER S **HACHIMI H**(2019). Inertia Constant strategy on Mean Grey Wolf Optimizer Algorithm for Optimization functions. 5th International Conference on Optimization and Applications (ICOA). IEEE.
9. MHAOUACH N, **HACHIMI H**, BELGHITI T (2019). Reliability and Optimization of the Manufacturing of Steel Flanges, by using Mechanical Method, Statistical Method, Firefly Algorithm. INTERNATIONAL JOURNAL OF MECHANICAL AND PRODUCTION ENGINEERING RESEARCH AND DEVELOPMENT. Pages : 99-110, Volume : 9-2.
10. BENCHEKROUN H, BENMANOUN Z, **HACHIMI H**(2019). How to select suppliers when implementing a sustainable procurement strategy. 5th International Conference on Optimization and Applications (ICOA). IEEE.
11. NGADI M, AMINE A, NASSIH B, **HACHIMI H**(2019). A highly efficient system for Mammographic Image Classification Using NSVC Algorithm. Procedia Computer Science Volume 148, 2019, Pages 135-144.
12. BENBRAHIM H, **HACHIMI H**, AMINE A (2018). Moroccan Electronic Health Record System. IEOM. IEEE.
13. M CHAND, **HACHIMI H**, R RANI (2018). New Extension of Beta Function and Its Applications. International Journal of Mathematics and Mathematical Sciences.
14. BENMAMOUN Z, **HACHIMI H**, AMINE A (2018). Green Logistics Practices. Proceedings of 2017 International Renewable and Sustainable Energy Conference, IRSEC 2017.
15. BENMAMOUN Z, **HACHIMI H**, AMINE A (2018). Comparison of inventory models for optimal working capital; case of aeronautics company. International Journal of Engineering, Transactions A : Basics.
16. HADOUCH S, **HACHIMI H**, HMINA N (2018). Modeling the flow of road traffic with the SUMO simulator. IEEE.
17. SINGH N , **HACHIMI H** (2018). A New Hybrid Whale Optimizer Algorithm with Mean Strategy of Grey Wolf Optimizer for Global Optimization. Mathematical and Computational Applications.

18. NGADI M, AMINE A, NASSIH B, **HACHIMI H**, ELATTAR A (2018). Intelligent classification of Heart Disease using Neighboring Support Vector Classifier. International Journal of Tomography and Simulation, Issue No. 4, Vo. 31.
19. EL KHECHAFI M, BENMAMOUN Z, **HACHIMI H**, AMINE A, EL KETTANI Y (2018). Firefly Algorithm for Supply Chain Optimization. Lobachevskii Journal of Mathematics.
20. EL KHECHAFI M, **HACHIMI H**, EL KETTANI Y (2018). A new Hybrid Cuckoo Search and Firefly Optimization. Monte Carlo Methods and Applications.
21. BENMAMOUN Z, **HACHIMI H**, AMINE A (2018). Working Capital Maximization with the inventory management optimization Case of Spare parts Moroccan company. International Journal of Engineering.
22. EL KHECHAFI M, **HACHIMI H**, AMINE A, EL KETTANI Y (2017). Construction of a novel water quality classifier : A case study in the Sebou region. International Journal of Applied Mathematics and Statistics.
23. **HACHIMI H**, ASSIF S, Y. AOUES, A. EL HAMI, R. ELLAIA, M. AGOUZOUL (2017). Optimization of the Solder Joints of an Electronic Card Using Heuristic Algorithm. International Journal of Engineering Research in Africa.
24. BENMAMOUN Z, **HACHIMI H**, AMINE A (2017). Inventory management optimization using lean six-sigma Case of Spare parts Moroccan company. IEEE.
25. NGADI M, AMINE A, **HACHIMI H**, EL-ATTAR A (2017). Vicinal support vector classifier : A novel approach for robust classification based on SKDA. Pattern Recognition and Image Analysis.
26. EL KHECHAFI M, **HACHIMI H**, EL KETTANI Y (2017). A NEW HYBRID FIREFLY WITH GENETIC ALGORITHM FOR GLOBAL OPTIMIZATION. International Journal of Management and Applied Science.
27. NGADI M, AMINE A, NASSIH B, **HACHIMI H**, EL-ATTAR A. (2017). Uniformed two local binary pattern combined with neighboring support vector classifier for classification. International Journal of Artificial Intelligence.
28. AARICH M, **HACHIMI H**, HMINA N (2017). State of art of optimization and meta heuristic a comparative study of the Harmony Search Algorithm. IEEE.
29. MHAOUACH N, **HACHIMI H**, ASSIF S, BELGHITI T (2017). Modeling and Evaluating the Stress of Two Mechanical Structures in Piping Industry-The Ring Flange and the new Quadra-Sector Flange-, International Journal of Engineering and Future Technology. Volume 14, Issue2.
30. NGADI M, **HACHIMI H**, AMINE A, NASSIH B, and EL-ATTAR A (2016), "The performance of LBP and NSVC combination applied on face classification", Applied Computational Intelligence and Soft Computing.
31. NGADI M, EL ATTAR A, **HACHIMI H**, AMINE A (2016). A new optimal approach using NSVC for Breast Cancer Diagnosis Classification, International Journal of Imaging & Robotics.

Volume 16 ; Issue No. 4 ; 2016 : pp. 25-36.

32. TAYB S, AZDOUD Y, AMINE A, NASSIH B, **HACHIMI H**, HMINA N (2016). HOL, GDC-TAND LDCT FOR PEDESTRIAN DETECTION. Computer Science & Information Technology, pp. 87-96.
33. EL KHECHAFI M, **HACHIMI H**, EL KETTANI Y (2014). Etude comparative de la classification des stations entre l'algorithme SVM et l'hybridation de GA PSO, SFC'2014, pp. 163-168.
34. **HACHIMI H**, MAKHLOUFI A, ELLAIA R and EL HAMI A (2013). Optimization of engineering structures by heuristic algorithms. IEEE, IESM, pp. 464.
35. **HACHIMI H**, EL HAMI A, ELLAIA R (2013). A new hybrid genetic algorithm with particle swarm optimization and normal boundary intersection method for generating generation the Pareto frontier. Journal of Automation & Systems Engineering Volume 7, Issue 1, pp. 115-124.
36. ASSIF S, **HACHIMI H**, AGOUZOUL M, ELLAIA R, EL HAMI A, AOUES Y (2013). Optimization for an electronic card with a new hybrid method. Advanced Materials Research, pp. 143-151.
37. **HACHIMI H**, EL HAMI A, ELLAIA R (2012). A New Hybrid Genetic Algorithm and Particle Swarm Optimization. Key Engineering Materials, pp. 115-125.

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## Indexed international communications

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1. FAHDI S, ELKHECHAFI M, **HACHIMI H** (2019). Green Port in Blue Ocean : Optimization of Energy in Asian Ports. 5th International Conference on Optimization and Applications (ICOA) 25-26 April 2019, Kenitra, Morocco.
2. HADDOUCH S, **HACHIMI H**, HMINA N (2019). Approach and contribution of urban road traffic management to reduce congestion estimation times using optimization algorithms. 5th International Conference on Optimization and Applications (ICOA) 25-26 April 2019, Kenitra, Morocco.
3. SMALILI Y **HACHIMI H**(2019). Segmentation problem in direct market campaigns : Modified Bat Algorithm. 5th International Conference on Optimization and Applications (ICOA) 25-26 April 2019, Kenitra, Morocco.
4. BOUAZZA S, BENMANOUN Z, **HACHIMI H**(2019). Optimization of logistics to support the African's development. 5th International Conference on Optimization and Applications (ICOA) 25-26 April 2019, Kenitra, Morocco.
5. SINGH S.B, NARINDER S **HACHIMI H**(2019). Inertia Constant strategy on Mean Grey Wolf Optimizer Algorithm for Optimization functions. 5th International Conference on Optimization and Applications (ICOA) 25-26 April 2019, Kenitra, Morocco.
6. BENCHEKROUN H, BENMANOUN Z, **HACHIMI H**(2019). How to select suppliers when implementing a sustainable procurement strategy. 5th International Conference on Optimization and Applications (ICOA) 25-26 April 2019, Kenitra, Morocco.

Applications (ICOA) 25-26 April 2019, Kenitra, Morocco.

7. BENBRAHIM H, **HACHIMI H**, AMINE A (2019). Comparison between Hadoop and Spark. IEOM 05-07 March, Bangkok, Thailand.
8. SHOUVIK C, AISHWARYA R, SOUMYA S, KALYANI M, SANKHADEEP C, **HACHIMI H**(2019). Contrast Optimization using Elitist Metaheuristic Optimization and Gradient Approximation for Biomedical Image Enhancement. Amity International Conference on Artificial Intelligence (AICAI) 04-06 February, DUBAI, UAE.
9. BENBRAHIM H, **HACHIMI H**, AMINE A (2018). Moroccan Electronic Health Record System. IEOM 26-27 July 2018, Paris, France.
10. BENBRAHIM H, **HACHIMI H**, AMINE A (2018). Survey on the Use of Health Information Systems in Morocco : Current Situation, Obstacles and Proposed Solutions. Advanced Intelligent Systems for Sustainable Development. 12-14 July, Tangier, Morocco.
11. HADDOUCH S, **HACHIMI H**, HMINA (2018). Modeling the flow of road traffic with the SUMO simulator. 4th International Conference on Optimization and Applications (ICOA). 26-27 April, Mohammadia, Morocco.
12. **HACHIMI H** (2018). Hybridization of Bio-inspired Metaheuristics for Optimization Applications. H3ABioNet "Pan African Bioinformatics Network for H3Africa", Women in Data Science (WiDS) Conference, 05 March 2018 Stanford University in California, USA.
13. BENMAMOUN Z, **HACHIMI H**, AMINE A (2017). Green logistics practices. IRSEC2017 The International Renewable and Sustainable Energy Conference 04-07 December, Tanger, Maroc.
14. BENMAMOUN Z, **HACHIMI H**, AMINE A (2017). Green Supply Chain management optimization Case of food industry. ICOA2017 The 3rd International Conference on Optimization and Application April 27-28, Meknes, Morocco.
15. DALLALY Y, **HACHIMI H**, AMINE A (2017). Management and implementation of applications to improve road safety in Morocco. ICOA2017 The 3rd International Conference on Optimization and Application April 27-28, Meknes, Morocco.
16. NGADI M, AMINE A, NASSIH B, **HACHIMI H** (2017). A performance evaluation of AdaBoost and SVM forFace and Cancer Classification. ICOA2017 The 3rd International Conference on Optimization and Application April 27-28, Meknes, Morocco.
17. BENBRAHIM H, **HACHIMI H**, AMINE A (2017). Analysis of Big Data with Spark. 5th International Congress of the SM2A, March 16-18, 2017, Meknes, Morocco.
18. BENMAMOUN Z, **HACHIMI H**, AMINE A (2017). Inventory management optimization using lean six-sigma Case of Spare parts Moroccan company. The 7th International Conference in Industrial Engineering and Operations Management, April 11-13, 2017, Rabat, Morocco.
19. AARICH M, **HACHIMI H**, HMINA N (2017). State of the art of optimization and meta heuristic a comparative study of the Harmony Search Algorithm. 4th IEEE International Colloquium



on Information Science and Technology (CiSt16) 24-26 October, Tangier, Morocco.

20. EL KHECHAFI M, **HACHIMI H**, EL KETTANI Y (2017). A New Hybrid Firefly with Genetic Algorithm for Global Optimization. at the International Academic Conference on Artificial Intelligence and Soft Computing (ICAISC) held in Antalya, 21 -22 February Turkey.
21. BENBRAHIM H, **HACHIMI H**, AMINE A (2016). Review : MapReduce and Spark.4th Edition of CISSI 08-10 December, Kenitra, Morocco.
22. EL KHECHAFI M, **HACHIMI H**, EL KETTANI Y (2016). New Water Quality Indicator with Hybrid Heuristic (GA PSO). CIMEE16, 22-24 September Tripoli, Lebanon.
23. TAYB S, AZDOUD Y, AMINE A, NASSIH B, **HACHIMI H**, HMINA N (2016). HOL, GDC-TAND LDCT FOR PEDESTRIAN DETECTION. Computer Science & Information Technology (CS & IT), 02-03 January, Zurich, Switzerland.
24. EL KHECHAFI M, EL KETTANI Y and **HACHIMI H** (2015). A New Hybrid Cuckoo Search and Firefly Optimization to the Conference MIC'2015,07-10 June, Agadir, Morocco.
25. HARMOUCH J, **HACHIMI H**, BELGHITI T (2014). Risk assessment under Solvency II : Application of genetic algorithms - META14, 27-31 October, Marrakech, Morocco.
26. EL ALIMI A, **HACHIMI H** (2014). Optimization of security systems facing vulnerability stakes - META14, 27-31 October, Marrakech, Morocco.
27. **HACHIMI H** (2012). Optimization by heuristic algorithm for the solder joints of an electronic card. International Conference on Metaheuristics and Nature Inspired Computing, META'12HotelElmouradi Palace, 26-31 October, Port El Kantaoui Sousse, Tunisia.
28. **HACHIMI H** (2010). A Hybrid Genetic Algorithm and Particle Swarm Optimization for Cryptography. Fifth International Conference on Reverse Problems, Control and Optimization of PICOF'10 Forms at Polytechnic University, 07-09 April, Cartagena, Spain.

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## National communications

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1. BELAIDI D, **HACHIMI H**, AMINE A (2017). Study of ventilation strategies in a high-risk room in the hospital environment. ICAM2017 International Conference on Applied Mathematics 19-20 December, Taza, Morocco.
2. EL KHECHAFI M, **HACHIMI H**, EL KETTANI Y (2017). Integration of Datamining Techniques and Heuristics Knowledge in Water Quality Modelling. Data Engineering in bioinformatics, Image and Data Analysis , 23-25 March, Tangier, Morocco.
3. MHAOUACHE N, **HACHIMI H**, BELGHITI T (2016). Stress in Flanges in metal piping. 4th ICCDS'2016, 26-28 October, Agadir, Morocco.

4. NGADI M, **HACHIMI H**, AMINE A (2016). An experimental comparison of mammography image using different supervised classification methods. International conference on wireless technologies and embedded and intelligent systems. Wits16, 21-22 April, Kenitra, Morocco.
5. NGADI M, NASSIH B, **HACHIMI H**, AMINE A (2016). Genetic algorithms combined with SVM for breast cancer diagnosis. WOA 2016, 17-19 May, Kenitra, Morocco.
6. BAKADIRI A, **HACHIMI H**, AMINE A (2016). Analytical detection techniques of drowsiness in the driver. WOA 2016, 17-19 May, Kenitra, Morocco.
7. BELAIDI D, **HACHIMI H**, AMINE A, LAKHOUIT A (2016). Comparative study between two methods of air quality. WOA 2016, 17-19 May, Kenitra, Morocco.
8. MHAOUACHE N, **HACHIMI H**, BELGHITI T (2016). Optimization and Innovation of the Metallic Structures and Application in the black steel flanges. WOA 2016, 17-19 May, Kenitra, Morocco.
9. BENMAMOUN Z, **HACHIMI H**, AMINE A (2016). The lean applied to an optimum solution in a Moroccan company. WOA 2016, 17-19 May, Kenitra, Morocco.
10. DALLALY Y, **HACHIMI H**, AMINE A (2016). Management and implementation of applications to improve road safety in Morocco. WOA 2016, 17-19 May, Kenitra, Morocco.
11. KIBOU M, **HACHIMI H**, BELGHITI T (2016). Typology and sustainability assessment of dairy cattle breeding systems. WOA 2016, 17-19 May, Kenitra, Morocco.
12. BENBRAHIM H, **HACHIMI H**, AMINE A (2016). Analysis of Big Data with Hadoop. WOA 2016, 17-19 May, Kenitra, Morocco.
13. EL KHECHAFI M, **HACHIMI H**, EL KETTANI Y (2016). New Application of the hybrid algorithm (GA PSO) hydraulic model. WOA 2016, 17-19 May, Kenitra, Morocco.
14. KIBOU M, **HACHIMI H**, BELGHITI T (2016). Typology and evaluation of the sustainability of dairy farming systems at the Sidi Bennour level. JSSA16, 25-26 March, Larach, Morocco.
15. NGADI M, **HACHIMI H**, AMINE A (2015). Classification and reduction of dimensionality application : Image processing. 1st International Workshop on Engineering and Innovation in Healthcare. FST Fes, 18 January, Fes, Morocco.
16. EL KHECHAFI M, EL KETTANI Y **HACHIMI H** (2014). Comparative study of the classification of the stations between the SVM algorithm and the hybridization of GA PSO. SFC'2014 CNRST, 10-12 September, Rabat, Morocco.
17. **HACHIMI H**, MAKHLOUFI A, ELLAIA R and EL HAMI A (2013). Optimization of engineering structures by heuristic algorithms. IESM EMI 28-30 October, Rabat, Morocco.
18. **HACHIMI H** (2013). A new hybrid optimization algorithm for a pylon-cable-stayed problem. 10th edition of the Scientific Journals of Numerical Analysis & Optimization. Ecole Supérieure de

Technologie in Essaouira, from 31 October to 02 November, Essaouira, Morocco.

19. **HACHIMI H** (2013). Optimization of engineering structures by heuristic algorithm. The 5th International Conference on Industrial Engineering and Systems Management IESM2013. Mohammedia School of Engineers EMI Rabat, Morocco 28-30 October.
20. **HACHIMI H** (2012). A new hybrid genetic algorithm with particle swarm optimization and Normal Boundary Intersection method for generating the Pareto frontier. International Symposium 2SCS ENSA Agadir, Hotel Sofitel Agadir / ENSA, 25-26 May, Agadir, Morocco.
21. **HACHIMI H** (2012). A new hybrid genetic algorithm with particle swarm optimization and Normalized normal constraint for the Pareto frontier »International Symposium on Materials and Aeronautics Technologies. ACMA Hotel zalagh park palace, School of Technology EST, 09-12 May, Fes, Morocco.
22. **HACHIMI H** (2011). Heuristics, Meta-heuristics and Applications. Scientific days at the MIA Laboratory at the Faculty of Science, 06 July, Rabat, Morocco.
23. **HACHIMI H** (2011). Mathematics and Interactions. Summer school. National School of Applied Sciences ENSA, 16-19 May, Agadir, Morocco.
24. **HACHIMI H** (2010). A Hybrid Genetic Algorithm and Particle Swarm Optimization for Cryptography. CIRO'10, University cadia ayad faculty semlalia, 24-27 May, Marrakech, Morocco.
25. **HACHIMI H** (2010). A New Hybrid Genetic and Particle Swarm Optimization Algorithm. First Spring School Numerical Methods for Partial Derivative Equations NumPDEs at the Abdelmalek Essadi University, 12-16 April, Tetouan, Morocco.
26. **HACHIMI H** (2009). Genetic Algorithms and Applications. National Journals of Cryptography, Computer Science, Operational Research and Statistics CIROS, at the CIROS Laboratory, Faculty of Sciences, 11-12 December, Kenitra, Morocco.
27. **HACHIMI H** (2009). A Hybrid Genetic Algorithm and Particle Swarm Optimization for Cryptography. 2nd Meeting of Optimization Modeling and Approximation MOMA'9, Hassania School of Public Works EHTP, November 19-21, Casablanca, Morocco.

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## Posters

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1. BENBRAHIM H, **HACHIMI H**, AMINE A (2017). Processing engine for Big Data : Spark, Storm and Flink. ICOA2017 The 3rd International Conference on Optimization and Application April 27-28, Meknes, Morocco.
2. SALMI S, SEDDIKI A and **HACHIMI H** (2015). Meta heuristics for the treatment of big data. JNS'5 at the ENSA, 7-8 May, Kenitra, Morocco.

3. EL ALIMI A, **HACHIMI H** (2014). Optimization of the encryption algorithms to minimize the vulnerability of information systems, International Symposium on Information Systems Security, 12-14 March, Kenitra, Morocco.
4. **HACHIMI H** (2013). 2nd scientific days. LIRIMA, EMI, 17-19 September, Rabat, Morocco.
5. **HACHIMI H** (2013). Science Days. LERMA, EMI, 15-17 March, Rabat, Morocco.
6. **HACHIMI H** (2012). Sustainable development. National Science Week, Faculty of Science, LERMA, SM2A, EMI, 20 April, Rabat, Morocco.
7. **HACHIMI H** (2012). Extension of the design of posters. Lycée Omar Elkhayam, January 16, Rabat, Morocco.
8. **HACHIMI H** (2011). Modeling, optimization and simulation of Mossys systems. Mohammadia School of Engineers EMI, 29 June, Rabat, Morocco.
9. **HACHIMI H** (2011). Renewable energies. National Science Week, Faculty of Science, LERMA, SM2A, EMI, 20 April, Rabat, Morocco.
10. **HACHIMI H** (2010). Mathematics Applied to the Information Security Service ; Cryptography. National Science Week, Faculty of Science, LERMA, SM2A, EMI, 21 April, Rabat, Morocco.

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## Participation in seminars and conferences

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- 2019. 25-26 April ICOA2019, Kenitra, Morocco.
- 2019. 09-15 April Spring University, Beni Mellal, Morocco.
- 2019. 13 March, Forum USMS, Beni Mellal, Morocco.
- 2018. 26-27 April ICOA2018, Mohammadia, Morocco.
- 2018. 22 February Seminar Code\_Aster, Meknes, Morocco.
- 2018. 19 February Smart Compus, Kenitra, Morocco.
- 2017. 04-07 December IRSEC17, Tanger, Morocco.
- 2017. 03-04 November EMI, Rabat, Morocco.
- 2017. 19-20 October ICAM, Taza, Morocco.
- 2017. 10-11 July IETC17 & Let's Challenge 2.0, Kenitra, Morocco.
- 2017. 3-7 July PACOM2017, Rabat, Morocco.
- 2017. 16-19 May LICMA2017, Bayrouth, Lebanon.
- 2017. 27-28 April ICOA2017, Meknes, Morocco.
- 2017. 03-06 April Sac2017, Marrakech, Morocco.
- 2017. March 30-31 Workshop closes Porfire-Tempus at the ESCA, Casablanca, Morocco.
- 2016. 17-19 May Woa2016 and Let's Challenge, Kenitra, Morocco.
- 2016. 21-22 April WITS2016, Kenitra, Morocco.
- 2016. 04-08 April Sac2016, Pisa, Italy.
- 2015. 17-18 December Steering Committee Porfire-Tempus at the ESCA, Casablanca, Morocco.
- 2015. 26-28 October Porfire-Tempus Case Study at the ESCA, Casablanca, Morocco.
- 2015. 7-10 June MIC1, Agadir, Morocco.
- 2015. 30 May Research Porfire-Tempus Action at ENSIAS, Rabat, Morocco.
- 2015. 13 May Doctoral days at the ENSA, Kenitra, Morocco.
- 2015. 07-08 May JNS'5 at ENSA, Kenitra, Morocco.

2015. 22 and 23 April 2015 WOA2015 at ENSA, Kenitra, Morocco.  
 2015. 13-17 April SAC2015, Salamanca, Spain.  
 2015. 25-27 March CISSI at ENSA, Kenitra, Morocco..  
 2015. Member of the M. U. M in the scientific orientation, Paris, France.  
 2014. 27-31 October 2014 Meta14, Marrakech. Morocco.  
 2014. Member of the Vistac project of Humanity / Tech of the University of New Mexico, USA and the University of Lisbon, Portugal.  
 2014. 26 May to 25 June Cybercrime in ENSA, Kenitra, Morocco.  
 2014. 23 April IWOLIA at the ENSA, Kenitra, Morocco.  
 2014. 12-14 March CISSI at ENSA, Kenitra, Morocco.  
 2013. 27 to 29 November Hitting times and exitproblems for stochasticmodels, Dijon, France.  
 2013. 25 and 26 November Workshop SeqBio, Montpellier, France.  
 2013. 13-17 January Fourth School of Scientific Computing LEM2I, Tipaza, Algeria.  
 2012. 02-09 November School CIMPA. Bobodioulasso Polytechnic School, Burkina Faso.  
 2012. 02-06 July International Congress of Sociology. Mohammadia School of Engineers EMI in Rabat, Morocco.  
 2012. 25-27 June MNOTSI. Summer school. National School of Applied Sciences ENSA of kenitra, Morocco.  
 2012. 18-21 June Thematic School on Islamic Finance. Ecole Mohammadia of engineers EMI in Rabat, Morocco.  
 2011. 15-17 December Days of Probability and Statistics. National School of Applied Sciences, Marrakech, Morocco.  
 2011. 06 July Scientific Days of Heuristics, Meta-heuristics and Applications. MIA Laboratory, Faculty of Science, Rabat, Morocco.  
 2011. June 29-30 and July 1 Mossys. 20 th anniversary of lerma EMI Rabat, Morocco.  
 2011. 11 May Techniques of publication Scientific. CNRST in Rabat, Morocco.  
 2011. March 14 The day of pi. Lerma EMI, Rabat, Morocco.  
 2010. 28-31 October International Conference on Metaheuristics and Nature Inspired Computing META'10. Djerba, Tunisia.  
 2010. 05-09 July NATO ATC minetech of paris. Ecole des mines, Paris, France.  
 2010. 24-27 May 5th International Conference on Operational Research CIRO'10. Cadi Ayad University, Semailia Faculty, Marakech, Morocco.  
 2010. 12-16 April First Spring School Numerical Methods for Partial Derivative Equations NumPDEs. University Abdelmalek Essadi in Tetouan, Morocco.  
 2010. 07-09 April 5th International Conference on Reverse Problems, Control and Optimization of Forms PICO'10. Polytechnic University, Cartagena, Spain.  
 2009. 11-12 December National Days of Cryptography, Computer Science, Operational Research and Statistics CIROS. Faculty of Sciences at the CIROS Laboratory, Kenitra, Morocco.  
 2009. 19-21 November 2nd MOMA'9 Modeling and Approximation Optimization Meeting. Hassania School of Public Works EHTP, Casablanca, Morocco.  
 2009. 06-08 May 4th Symposium on Trends in Mathematical Applications in Tunisia Algeria Morocco TAMTAM. Faculty of Science, Kenitra, Morocco.

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## Scientific training

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2018 Training on Mooc, ENSA of Kenitra, Morocco. (2 days).  
 2017 Training on Moodle, Ensa of Kenitra, Morocco. (1 day).  
 2017 Training on Mooc, Enset of Rabat, Morocco. (2 days).  
 2017 Entrepreneurial Day, EMI of Rabat, Morocco. (1 day).  
 2015 Applied Mathematics Education in Naivasha, Kenya. (5 days).

2014 Training in innovation of the Tempus-Porfire Project in Grenoble Ecole de Management, Grenoble, France. (5 days).  
2014 Mathematica at ENSA 02 October, Kenitra, Morocco. (1 day).  
2012 Introduction to Abacus software. Université Laval, Quebec, Canada. (2 months).  
2011 Summer School Mathematics and Interactions. National School of Applied Sciences ENSA, Agadir, Morocco. (4 days).  
2011 Techniques of publication Scientific. National Center for Scientific and Technical Research, CNRST, Rabat, Morocco. (1 day).  
2010 Training on industrial risks. Ecole des mines, Paris, France. (15 days).  
2009 Spring School under the theme Non-Commutative and Physical Geometry. Faculty of Kenitrades Sciences Laboratory of Mathematical Analysis and Non-Commutative Geometry and Laboratory of Mathematical Analysis and Application (METZ), Kenitra, Morocco. (6 days).  
2008 Remote client relationship, NLP, Communication, Telemarketing. National Agency for the Promotion of Employment and Skills, Kenitra, Morocco. (2 months).  
2006 Training on customer relations and marketing. Marketing and remote customer relations IETP, Kenitra, Morocco. (3 months).  
2005 Training in the METRE software. Holding Al baraka Engineering and design office, Kenitra, Morocco. (2 months).  
2002 Introduction to analytical accounting. Prescof, Accounting Trustee, Kenitra, Morocco. (2 months).

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## Research Projects

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- Member of CIMPA 2020 project , Kenitra, Morocco.
- Member of Mooc project 2018.
- Member of SAS project with Grant Thornton 2017.
- Member of the SAFE-RAOD 2016-2019 project between CNRST and METL for the development of an IT application for road safety.
- Member of the Erasmus + April 2018 Mobility Project as a Visiting Professor at UNIGE in Genova, Italy, to realize a solid training in Mathematical Engineering.
- Member of Project Toubkal 2015-2018 between INSA of Rouen and ENSA of Kenitra for mechatronics.
- Member of the Tempus Project (PORFIRE) 2014-2017 to produce modules in innovation and entrepreneurship for the benefit of our engineering students.
- Member of the Erasmus + July 2016 Mobility Project as a Visiting Professor at METU in Ankara, Turkey, to realize a solid training in Mathematical Engineering.
- Member of the VistacHumanity / Tech 2014 project of the university new mexico, USA and the university of Lisbon, Portugal to facilitate the translation of the works emanating from the arab countries and vice versa.

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## Scientific reviewing

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### Journals

- Elsevier : Book Reviewing.
- International Journal of Innovative Research in Applied Sciences and Engineering.
- International Journal of Information Science and Technology.
- Multimedia Tools and Applications.
- International Journal of BioSciences and Technology.
- International Journal of Computational Intelligence Studies.
- Applied Mathematical Modelling.
- Chaos : Interdisciplinary Journal of Nonlinear Science.
- Engineering Science and Technology.
- Artificial Intelligence Review.

### Conferences

- Member of the Scientific Committee of ICSSD2019, 03-04 October 2019.
- Member of the Scientific Committee of ESAI19, 02-03 May 2019.
- Member of the Scientific Committee of ICOA2017, ICOA2018, ICOA2019, 27-28 April 2017, 26-27 April 2018, 25-26 April 2019.
- Member of the Scientific Committee of WorldCIST2019, 16-19 April 2019.
- Member of the Scientific Committee of NISS2019, 27-28 March 2019.
- Member of the Scientific Committee of ICCIT2019, 08-10 February 2019.
- Member of the Scientific Committee of ISIICT2018, 31 October-01 November 2018.
- Member of the OMCS IEEE CIST'16 Scientific Committee, 24-26 October 2016/21-24 October 2018.
- Member of the Scientific Committee of BDCA2018, 04-05 April 2018.
- Member of the Scientific Committee of ICEMIS2018, 09-11 April 2018.
- Member of the Scientific Committee of MedPRAI2018, 27-28 March 2018.
- Member of the Scientific Committee of TEM2018, 26-27 March 2018.
- Member of the IETC2017 Scientific Committee, July 10-11, 2017.
- Member of the Scientific Committee of the 2nd, 3rd and 4th edition of the CISSI Symposium, 12-14 March 2014, 25-26-27 March 2015 and 08-09-10 December 2016.
- LACI Scientific Committee Member 10-14 June 2016.
- Member of the JNS'6 Scientific Committee on May 23-24, 2016.
- Scientific Committee Member of WOA 17-18 May 2016.
- Scientific Committee member of SCCSP2016, 2016. 17-20 March 2016.
- Member of the JNS'5 Scientific Committee, 07-08 May 2015.

### Organization

- National Agency of Evaluation and Insurance Quality of Higher Education and Scientific Research, ANEAQ.

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## Jury

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- 2010-Present : Member of several jury of final project defense in Mathematic and in applied engineering fields.
- 2017-Present : Member of several jury of thesis defense in Mathematic and in applied engineering fields.

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## Organization of events

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- General Chair of the CIMPA School of "Numerical Analysis & Optimization, Control and Inverse Problems" 25 March - 03 April 2020.
  - General Chair of the 1<sup>st</sup>, the 2<sup>sd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup> and the 6<sup>th</sup> edition of the International Workshop / Conference on Optimization and Applications ; On 22-23 April 2015, on 17-18 May 2016, on 27-28 April 2017, on 26-27 April 2018, 25-26 April 2019 and 17-18 March 2020.
  - General Chair of the 1<sup>st</sup>, 2<sup>sd</sup>, 3<sup>sd</sup> and 4<sup>sd</sup> edition of the international innovation competition Let's Challenge on 19 May 2016 , 10 July 2017, 12 October 2018 and 27 November 2019.
  - Member of the organizing committee of TEM2018 on 26-27 March 2018.
  - Member of Scientific and Publicity Committee of ICEMIS2018 on 9-11 April 2018.
  - Member of the organizing committee of the 32<sup>th</sup> edition of SAC2017, 03-07 2017.
  - Member of the organization committee of the 2<sup>sd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> edition of the CISSI Symposium, 12-14 March 2014, 25-26-27 March 2015 and 08-09-10 December 2016.
  - Member of the organizing committee JNS'6 May 23-24 2016.
  - Chair of the doctoral day on May 13, 2015.
  - Member of the JNS'5 Organizing Committee, 07-08 May 2015.
  - Member of the Organizing Committee of the META'14 International Congress, October 27-31, 2014.
  - Member of the Organizing Committee of the National Campaign Against Cybercrime Together Against Cybercrime from 06 May 2014 to 25 June 2014.
  - Member of the Organizing Committee of the International Workshop IWOLIA, April 23, 2014.
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## Scientific Recognition and Various Occupation

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- President of the Moroccan Society of Engineering Sciences and Technology (MSEST) since 2018.
  - Associate member of the Mathematics laboratory, Punjabi University, Patiala, India since 2018.
  - Member of Chaire UNESCO in Ibn Tofail University since 2018.
  - Local secretary of Snesup of Ensa of Kenitra, Morocco 2017-2018.
  - Member of the OSWD since 2016.
  - Permanent member of the BOSS team at the Kenitra ENSA, Morocco since 2015.
  - Associate member of the LSMF team at the ENSEM in Casablanca, Morocco since 2015.
  - Advisor of the Enactus club of Ensa of Kenitra, Morocco since 2015.
  - Permanent member of the ADSI team at Kenitra ENSA at Kenitra ENSA, Morocco between 2013 and 2015.
  - Member of the association Meta since 2013.
  - Associate member of the LERMA Laboratory at EMT of Rabat, Morocco since 2013.
  - Associate member of the LOFIMS Laboratory at INSA of Rouen, France since 2013.
  - Permanent member of the Laboratory (LGS) at the ENSA of Kenitra, Morocco since 2013.
  - Member of SMAI, France since 2012.
  - Member of the association AWMA since 2012.
  - Member of the Moroccan Society of Applied Mathematics SM2A Rabat, Morocco since 2009.
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## Languages

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**Arabic** : Mother tongue.

**French** : Bilingual (DELF, DALF).



**English** : Current (TOEFL, TOEIC).

**German** : Basic Level (ZDAF).

**Spanish** : Basic Level.

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## Hobbies

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- Swimming, Riding, Judo, Scientific, Travel, Music.