ELBHIRI Brahim
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Head of SMARTiLab laboratory EMSI

PERSONNEL INFORMATION

Nationality	Moroccan
Adress	Ang Rue SIAM et Cote d'ivoire, Imm 13, Apt 4 DIOUR JAMAA, Rabat, Morocco
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Languages	Arabic, French, English, Spanish

EDUCATION INFORMATION

Year	Diploma
2007-2010	PhD in Computer Science & Telecommunication, Mohamed V University - Faculty of Science Rabat , and UPC Barcelona, Spain
2005-2006	DESA Computer Science & Telecommunication, , Mohamed V University - Faculty of Science Rabat , Higher School of Computer Science, Electronics and Automation, Paris
2003-2004	Maitrise FST, Fes Morroco
Jun 2000	Graduated to Baccalaureate Ibn abdoun, KHOURIBGA, Morocco

PROFESSIONAL INFORMATION

Year	Profession
2011 -2018	Professor At the Moroccan High School of Engineering and Sciences
From 2018	SMARTiLab Laboratory Director
From 2018	Pedagogic Director of the Moroccan High School of Engineering and Sciences
From 2019	Director of RD EMSI-Rabat

INDUSTRIELS PROJETS

- ONEE: Securing the local network ONEE-BENI-MELLAL by implementing the NAC solution (PACKETFENCE)
- NOKIA: Swap 2G-3G in SRAN NOKIA, study and implementation of the new 3G layering strategy, 2G-3G and 4G-3G inter-system adaptation.
- Banque Populaire: STUDY, PLANNING AND INSTALLATION OF THE SOLUTION
LOCAL RADIO LOOP IN THE PROFILE OF THE BANQUE POPULAIRE
- Alcatel-Lucent: STUDY OF NG-WDM TRANSMISSION TECHNOLOGY & ITS IMPLEMENTATION IN THE MAROC TELECOM NETWORK
- ONCF: Study of the ONCF Telecom network and the development of a synchronization solution for HUAWEI Telecom equipment Study of the METRO internet part of the HSI network of MAROC TELECOM
- Alcatel-Lucent: Implementation of NGWDM transmission technology equipment in favor of Maroc Telecom customer
- NOKIA: Swap 2G-3G in SRAN NOKIA and study of the new 3G layering strategy.
- SICOTEL communications: the implementation of a Ku-band VSAT network for the backhaul of 2G BTS and INWI business customers
- NOKIA: Optimization and functionality of the IAM operator's 4G network
- NOKIA: 3G / 4G migration in the Core network Implementation of the CS Fallback functionality
- ANRT: Planning of fourth generation networks (4G / LTE) and QoS monitoring of an LTE network in the city of Rabat

PUBLICATIONS

Publications:

- ➢ Associate Journal Editor: " Research on #Blockchain Technology for Peer-to-Peer (#P2P) Energy Trading" Information MDPI, Mathematics MDPI and Energies MDPI
- ➢ Associate Journal Editor: " Advances on Utilization of Recycled and Sustainable Materials in Energy-Efficient Buildings and Infrastructural Systems" Energies, Energy and Buildings, MDPI
- ➢ Active Reviewer (Conferences):
  - CIOT'2022
  - ICI2C'21
  - BLM'2021 and BLM'2022
  - ICATH'2022,2021,2019
  - SDS2019
  - SCA'2019
  - ASD 2018
  - REPS GIE'2018
  - 3ICT'18
  - WINCOM'2018
  - ATSIP 2017
  - ICEECC 2017
  - ICEECC 2016
  - IEACon 2016
  - MedICT 2015
  - ICM 2015
  - ICC 2015
  - MWN 2015
  - ICM'2015
- ➢ Conference convenors and scientific committees:
  - CIOT'2022
  - ICI2C'2021
  - BLM'2021 and BLM'2022
  - ICATH'2022,2021,2019
  - SCA'2019
  - REPS GIE'2018
  - WINCOM'2018
  - ICM'2015

Books:

- ➢ Brahim El Bhiri, Rajaa Saidi, Mohammed Essaaidi, Naima Kaabouch "Smart Mobility and Industrial Technologies: The Quality of Life in Sustainable Cities" ASTI, springer 2024
- ➢ Ayman S. Mosallam, Brahim El Bhiri, Vistasp M. Karbhari, Shadi Saadeh "Advances in Smart Materials and Innovative Buildings Construction Systems" SUCI, springer 2023
- ➢ Rajaa SAIDI, Brahim EL BHIRI, Yassine MALEH, Ayman MOSALLAM, Mohammed ESSAAIDI "Advanced Technologies for Humanity" Springer 2021.
- ➢ B. EL BHIRI, Aymane MOSALLAM "Proceedings of International Conference on Advanced Technologies for Humanity ICATH'2020", SCITEPRESS'2020.

Book chapter

- ➢ Y. KARFA BEKALI, A. ZUGARI, B. EL BHIRI, M. Ali ENNASAR, M. KHALLADI "A Compact Frequency Re-configurable Antenna for many wireless Applications" LNDECT, Advanced Technologies for Humanity, Springer, 2021
- ➢ Y. Frederic Ebobisse DJENE, M. SBAI EL IDRISSI, P.-Martin TARDIF, B. EL BHIRI, Y. FAKHRI and Y. KARFA BEKALI "Lightweight-Blockchain for Secured Wireless Sensor

Networks: Energy consumption of MAC address-based Proof-of-Authentication", LNDECT, Advanced Technologies for Humanity, Springer, 2021

➤ Brahim EL BHIRI, Alba Pagès Zamora "System level simulator" IST-033914-WINSOC European project, D4.1.1 v1.0, 23-09-2008

Patent and distinctions

Patents :

➤ Gadi Mohamed amine ; MERZOUK Safae ; CHARADI Ssadik ; Salbi Adil ; EL BHIRI Brahim ; Gadi Adil "système Intelligent de Prospection Marine (SIProM) " Num 52831, 29/03/2021

➤ EL BHIRI Brahim; ABOUDRAR Yassine; MOADIB Zakaria ; BENNANI Toufik ; QAOUB Wiam ;MAGHROUT Mohamed ; Moulay LEERIBIYA ; KERFA BEKALI Younes ; Bouatra Mehdi "Système intelligent stérilisateur et distributeur des produits hygiènes " Num 54417, 20/09/2021

➤ Gadi Mohamed amine ; MERZOUK Safae ; CHARADI Ssadik ; Salbi Adil ; EL BHIRI Brahim ; Gadi Adil « Système de validation de la qualité des viandes » Num 52830 31/05/2021

➤ Gadi Mohamed amine ; MERZOUK Safae ; CHARADI Ssadik ; Salbi Adil ; EL BHIRI Brahim ; Gadi Adil « Système de micro-éoliennes à axe vertical pour la production d'énergie électrique par le courant d'air Routier » Num 52833, 29/03/2021

➤ EL BHIRI Brahim , MERZOUK Safae ; CHARADI Ssadik ; Salbi Adil « système hybride de production d'énergie auxiliaire », Num 46983, 18/03/2020

➤ EL BHIRI Brahim "Système de supervision des engins mobiles à base du GPRS/GSM/GPS" OMPIC/TISC, 26/12/2013

Distinctions and awards

➤ 1ier price the National competition of innovation R&D Maroc
➤ Gold Medal in international innovation Fair ISIF'2018 Turquie
➤ Gold Medal in the international Fair of innovation Genova, Geneve, Swisse, 2019
➤ Gold Medal in the international Fair of innovation ICan, Toronto, Canada, 2019
➤ Gold Medal in the international Fair of innovation INTARG, Katowice, Pologne, 2029

Journaux Internationaux

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➤ Y. F. EBOBISSE DJENE, M. SBAI EL IDRISSI, P.-M. TARDIF, A. JORIO, B. EL EL BHIRI, Y. FAKHRI : "A formal energy consumption analysis to secure cluster-based wsn: a case study of multi-hop clustering algorithm based on spectral classification using lightweight blockchain", Sensors 22(20):7730, October 2022

➤ H. CHENNOUK , E.H. Ziyati, B. El Bhiri,: "Business value creation through project management based on big data approach", Ingénierie des systèmes d'information, Vol. 27, No. 5, pp. 823-828 October 2022

➤ H. CHENNOUK, B. EL BHIRI, S. BARA, El H. ZIYATI : "THE MACHINE LEARNING IN PROJECT MANAGEMENT: A SYSTEMATIC MAPPING STUDY", Journal of Theoretical and Applied Information Technology, vol 98, No. 10 May 31, 2020

➤ Noureddine Assad, **Brahim Elbhiri,** Moulay Ahmed Faqihi, Mohamed Ouadou, and Driss Aboutajdine, " Efficient deployment quality analysis for intrusion detection in wireless sensor networks" Wireless Networks,Springer April 2016, Volume 22, Issue 3, pp 991–1006

➤ Jorio A., Fkihi S.E., Elbhiri B., Aboutajdine D. "Multi-hop Clustering Algorithm Based on Spectral Classification for Wireless Sensor Network". Lecture Notes in Electrical Engineering, vol 381. Springer, Cham (2016)

➤ Assad N., Elbhiri B., Faqihi M.A., Ouadou M., Aboutajdine D. (2016) "On the Deployment Quality for Multi-intrusion Detection in Wireless Sensor Networks". Lecture Notes in Electrical Engineering, vol 381. Springer, Cham (2016)

➤ Ali Jorio, Sanaa El Fkihi, **Brahim Elbhiri**, and Driss Aboutajdine, "An Energy-Efficient Clustering Routing Algorithm Based on Geographic Position and Residual Energy for Wireless Sensor Network," **Journal of Computer Networks and Communications**, vol. 2015, Article ID 170138, 11 pages, 2015. doi:10.1155/2015/170138

➤ Noureddine Assad, **Brahim Elbhiri,** Moulay Ahmed Faqihi, Mohamed Ouadou, and Driss Aboutajdine, "Analysis of the Deployment Quality for Intrusion Detection in Wireless Sensor Networks," **Journal of Computer Networks and Communications**, vol. 2015, Article ID 812613, 7 pages, 2015. doi:10.1155/2015/812613

- **B. Elbhiri** , S. El Fkihi, A. Jorio, D. Aboutajdine "Equitable Clustering algorithm for Wireless Sensor Networks based on the Spectral Classification" Journal of Networking Technology page 163-168, Vo 4, N°4 December 2013
- ALI JORIO, SANAA EL FKIHI, **B. Elbhiri**, DRISS ABOUTAJDINE "A NEW CLUSTERING ALGORITHM FOR WIRELESS SENSOR NETWORKS"
Journal of Theoretical and Applied Information Technology March 2013 Vol. 49 No.3.

- **B.Elbhiri,** R. Saadane, D. Aboutajdine**.** "Stochastic and Equitable Distributed Energy-Efficient Clustering (SEDEEC) for heterogeneous wireless sensor networks" **International Journal of Ad Hoc and Ubiquitous Computing Volume7 Issue 1, December 2011 Pages 4-11**.
- **B. Elbhiri, R. Saadane, A. Zamora, D Aboutajdine.** "Stochastic and Balanced Distributed Energy-Efficient Clustering (SBDEEC) for heterogeneous wireless sensor networks" **Infocomp Juornal, Vol :8, N°4, pp : 11-20, September, 2009**
- **B.Elbhiri, R.Saadane, D.Aboutajdine** "Stochastic Distributed Energy-Efficient Clustering (SDEEC) for heterogeneous wireless sensor networks"**, ICGST International Journal on Computer Network and Internet Research, CNIR, Vol :9, N°2,pp :11-17, 2009.**

Conférences internationales et nationales

- I. EL GAABOURI, M. SENHADJI, M. BELKASMI AND B. ELBHIRI : "A twofold encryption scheme to secure iot based smart grid system ", ICATH 2022, Marrakech - Morocco November 2022
- S. HAMAN, A. MOUMEN, K. JENOUI, B. ELBHIRI, Y. EL BOUZEKRI EL IDRISSI : "The application of machine learning techniques in the supply chain management: an exploratory literature review", IWDPESD2022 - ICATH 2022, Marrakech - Morocco November 2022
- Z. MOUHIB, L. NACIRI, M. GALLAB, S. MERZOUK, A. SOULHI, M. DI NARDO, B. ELBHIRI : "Tpm and tqm : what connections and how they are changing through industry 4.0 technologies ?", ICATH 2022, Marrakech - Morocco November 2022
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- M. SBAI EL IDRISSI, Y. F. EBOBISSE DJENE, P.-M. TARDIF, B. EL-BHIRI : "Efficient energy consumption of iot network security based on symmetric and asymmetric cryptography and hash function ", ICATH 2022, Marrakech - Morocco November 2022
- Y. AKARNE, A. ESSADKI, T. NASSER, B. EL BHIRI, H. LAGHRIDAT : "Electric vehicle and photovoltaic system integration in a grid connected ac microgrid", Marakech, ICATH 2022, November 2022
- Ismail El Kafazi, **Brahim ELBHIRI** "Energy Efficiency for Laboratory Building: A case study" Accepted IEEE GPECOM2022, Cappadocia, Turkey 14-17 Jun 2022
- Lina NCIRI, **Brahim ELBHRII** "Risks And Opportunities Within Lean 4.0 Systems: SWOT Analysis" Accepted Proceedings of the 5th European International Conference on Industrial Engineering and Operations Management Rome, Italy, July 26-28, 2022
- Y. F. EBOBISSE DJENE , A. BERRAZZOUK ,**B. EL BHIRI** & Y. FAKHRI : "Encryption algorithms for WSN - IOT: A software based analysis with Contiki Cooja", ICATH'2020, November 20 -21, 2020
- Y. F. EBOBISSE DJENE , R. ZEROUOUL , A. BERRAZZOUK , Y. CHAABI, F.-Z. BELOUADHA, **B. EL BHIRI** : "COVID19: Confinement control based on a new Discrete Localization Algorithm (DLA) ", ICATH'2020, November 20 -21, 2020
- P. MENOUNGA MBILONG, A. EL KASSIRI, F.-Z. BELOUADHA & **B. EL BHIRI** : "Predicting COVID-19 Cases Using CNN Model", ICATH'2020, November 20 -21, 2020
- **B. EL BHIRI**, R. ZEROUOUL, A. JORIO : "Spectral classification for a robust clustering in an Heterogenous Wireless Sensor Networks", 2018 Renewable Energies, Power Systems & Green Inclusive Economy (REPS-GIE), Casablanca,pp. 1-6 April 23-24, 2018
- A. JORIO, **B. EL BHIRI** "An Energy-Efficient Clustering Algorithm Based on Residual Energy for Wireless Sensor Network", 2018 Renewable Energies, Power Systems & Green Inclusive Economy (REPS-GIE), Casablanca,pp. 1-6 April 23-24, 2018
- **B. Elbhiri** " An efficient clustering in Heterogenous Wireless Sensor Networks based on Near Optimal Bi-Partitions" **Submitted SENSORNETS 2017.**

- ➢ **B. Elbhiri "**Spectral classification for a robust clustering in a Heterogenous Wireless Sensor Networks"**. JDSI_EMSI 2016.**
- ➢ **B. EL BHIRI** and R. ZEROUOUL : "An efficient clustering in Heterogenous Wireless Sensor Networks based on Near Optimal Bi-Partitions", WINCOM'2018, Marrakesh, Morocco, October 16-19, 2018
- ➢ Ali Jorio, **B. Elbhiri** "An Energy-Efficient Clustering Algorithm Based on Residual Energy for Wireless Sensor Network" **JDSI_EMSI 2016.**
- ➢ Noureddine ASSAD, **Brahim Elbhiri,** My Ahmed FAQIHI, Mohamed OUADOU, DrissABOUTAJDINE "On the Deployment Quality for Multi-intrusion Detection in Wireless Sensor Networks" MedICT2015, May 7-9, 2015 Saïdia, Morocco.
- ➢ Noureddine ASSAD, **Brahim Elbhiri,** Sanaa EL FKIHI, My Ahmed FAQIHI, Mohamed OUADOU, DrissABOUTAJDINE "Intrusion Detection Quality Analysis for Homogeneous Wireless Sensor Networks" **NETYS 2014, Morocco**
- ➢ Ali Jorio, Sanaa El Fkihi, **Brahim Elbhiri,** Driss Aboutajdine" Hierarchical Clustering Algorithm based on Spectral Classification for Wireless Sensor Network" **ICMCS'14.**
- ➢ **B. Elbhiri ,** S. El Fkihi, R. Saadane, N. Lasaad, A. Jorio, D. Aboutajdine "A New Spectral Classification for Robust Clustering in Wireless Sensor Networks**" The 6th Joint IFIP Wireless and Mobile Networking Conference WMNC'2013, 23-24 April, Dubai, UAE**
- ➢ **B. Elbhiri,** Sanaa El Fkihi, Ali Jorio, and Driss Aboutajdinez **"**Equitable Clustering algorithm for Wireless Sensor Networks based on the Spectral Classification**" WCCIT-ICNGCC-2013, 22-24 juin, Soussa, Tunisie.**
- ➢ Noureddine ASSAD**, Brahim ELBHIRI,**Sanaa EL FKIHI, My Ahmed FAQIHI, Mohamed OUADOU, Driss ABOUTAJDINE "Sum Minimum Cost Link Algorithm for Wireless Sensor Networks**" SENSORCOMM, 25-31 Aout 2013, Barcelone, Spain**
- ➢ Ali Jorio, Sanaa El Fkihi, **Brahim ELBHIR**, Driss Aboutajdine **"**An Energy-Efficient Clustering Algorithm Based On Residual Energy for Wireless sensor Network**" SENSORCOMM, 25-31 Aout 2013, Barcelone, Spain.**
- ➢ **B. Elbhiri, S. El fkihi,, R. Saadane, D. Aboutajdine.** "Clustering in Wireless Sensor Networks based on Near Optimal Bi-partitions" **IEEE International NGI2010 confenrcence.**
- ➢ **B.Elbhiri, A.Pagès-Zamora, D.Aboutajdine,** "Real deployment of Consensus Algorithm on Self-organized Wireless Sensor Networks "**, International IEEE ICT'09, pp 130-135, 25-27May2009,Marrakech Maroc.**
- ➢ **B. Elbhiri, M. T. Chahdi, S. El fkihi,, R. Saadane, D. Aboutajdine.** "Optimal and efficient sensing area for wireless sensor networks" **Acceped in International NGNS'2010.**
- ➢ **B.Elbhiri, R.Saadane, A.Pagès-Zamora, D.Aboutajdine,** "Equitable distributed energy-efficient clustering (EDEEC) for heterogeneous wireless sensor network ", **International Conference NGNS'09, 3-6 June 2009, Rabat**
- ➢ **B.Elbhiri, R.Saadane, A.Pagès-Zamora D.Aboutajdine,** "Developed Distributed Energy-Efficient Clustering (DDEEC) for heterogeneous wireless sensor networks", **accepted to International ISVIC2010 conference**

Divers

Member of the AJCIT (Association des Jeunes Chercheurs en Informatique et Télécom),

Member of the AOMDR (association d'Ouled Mkoudo pour le développement Rural),

Football, voyage