Dr. Mohamed BERKANE

Birth date   : 17 / 06 / 1968
Birthplace   : Constantine Algeria

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ACTUAL STATUS

Statut   : **MCB**
Speciality   : Computer science
Department   : mathematics and Computer science
Faculty   : Sciences Exactes et Science de la nature et de la vie
University   : **Larbi Ben M'hidi O.E.Bouaghi**

FORMATIONS AND DIPLOMAS

1. PhD :

Date obtained   : September 2010
Speciality   : Electronics, Electrotechnics, Automation
Option   : Images and systems
Institute   : INSA Lyon, France
Title   : Motion estimation and analysis using neural approaches.

2. Magister :

Date obtained   : June, 1998
Speciality   : Computer science
Option   : Artificial Intelligence
University   : Batna, Algeria
Title   : Design of a GIS for a potable water supply
Mention   : Very honorable

3. Ingénieur :

Date obtained   : October, 1992
Speciality   : Computer science
University   : Constantine, Algeria
Title   : Use of high-level Petri nets for solving the diagnostic problem"
Mention   : Good

4. BAC :

Date obtained   : June 1987
Speciality   : Technical Maths
High school   : Constantine. Algeria
Mention   : Pretty good

5. Other formations

• Design, creation and management of a website
      Trainer: Francophonie University Agency November 2001
• Linux network administration
      Trainer: Francophonie University Agency June 2001

PROFESSIONAL EXPERIENCE

- 1999-2001 :Teacher : «assistant professor» Larbi Ben M'hidi University, O.E.Bouaghi Algeria
- 2001-2010 :Teacher: « assistant professor CC» Larbi Ben M'hidi University, O.E.Bouaghi, Algeria.
- 2010 -2023 :Teacher: « MCB» Université Larbi Ben M'hidi University, O.E.Bouaghi Algeria.

MY COURSES

- Algorithmic
  - Static and dynamic data structures.
  - Structures Instructions (read, write, conditional, loops)
  - Procedure and function
  - Recursion and Sort
- Computer architecture
  - Numeration system and elementary logic function
  - Architecture of Von Neumann
  - Assembler and Processors
  - Memories and inputs/outputs
  - Hardware and software interruptions.
- Communication network
  - communication concept
  - OSI model layers
  - TCP/IP model
  - Administration and network security
- Operating system
  - Basic concepts
  - The interruptions
  - Synchronization
  - Memory management
  - File management system
- Parallel Architecture
  - Von Neumann's Architecture
  - Flynn's Classification
  - Raina classification
- • Parallel Algorithm
  - Parallel Algorithm Design
  - Parallel programming (OCCAM case study)
- • Motion detection and estimation
  - Biological vision in primates
  - Motion detection and estimation
- • Digital imaging
  - Basics
  - Image geometric transformations
  - Filtering and edge detection
  - Segmentation
- • Neural networks
  - The biological model
  - The formal neuron
  - Topology and learning concepts
  - Case Studies: Hopfield, Kohonen, CNN.

RESEARCH WORK

Experience in Research as a member of a team.

Period	Project title	Project Manager
2006-2008	Sharing virtualized real objects through the Internet. Code B0401/80/06.	Dr NINI Brahim
2009-2011	Verification and Validation of Multi-Agent Systems. Code. B*03020080003	Dr NINI Brahim
2012-2014	Study of the integration of intelligence tools. Code. B*03020110009	Dr NINI Brahim
2015-2019	Contribution to pattern recognition by neural networks and multi-agent systems. code :B*030201400010	Dr NINI Brahim

NATIONAL PUBLICATIONS

[1] **M. Berkane** : « L'introduction des réseaux de neurones cellulaires dans la résolution du problème de suivi d'objet » JSTA' 2003 Guelma Mai 2003

[2] M. Bouzenada, **M. Berkane**, B. Nini : « Proposition d'une méthode de reconnaissance d'objets rigides basée sur les graphes d'aspects» V.V.A.T.I' 2003 Jijel Juillet 2003

[3] B. Nini, **M. Berkane**, M. Bouzenada : « Manipulation d'objets virtuels dans un cadre collaboratif » S.N.I.B' 2004 Biskra Mai 2004

INTERNATIONAL PUBLICATIONS

[4] **M. Berkane**, P. Clarysse, I.E. Magnin : « Spatio-temporal summarizing method of periodic image sequences with Kohonen MAPs » ICANN'08. Prague September 2008

[5] **M. Berkane**, P. Clarysse, I.E. Magnin: « A formal neural network approach to motion estimation with discontinuities » HIS'08. Barcelona September 2008.

[6] **M. Berkane**, P. Clarysse, I.E. Magnin: « Une approche neuronale pour l'extraction de résumé de séquences d'images pour des phénomènes quasi-périodiques» JETIM'08. Blida Novembre 2008.

[7] J. Yankam Njiwa, **M. Berkane**, J.H. Luo, P. Clarysse, I.E. Magnin, Y.M. Zhu: «Reconstruction of Cardiac Cine MR Images Using Analytic Image and Neural Network» , ISPA'09, Salzburg, Austria, pp. 604-605, 2009.

[8] Chérif Taouche; Mohamed C. Batouche; **Mohamed Berkane**; Abdelmalik Taleb-Ahmed: "Multimodal biometric systems", International Conference on Multimedia Computing and Systems (ICMCS'14),p. 301-308, April 2014 , Marrakech, Morocco.

[9] Khalid Ghoul; **Mohamed Berkane**; Mohamed C. Batouche:" Neuronal approach for motion estimation in frequency domain" International Conference on Multimedia Computing and Systems (ICMCS'14),p. 241-245, April 2014, Marrakech, Morocco.

[10] Khalid Ghoul; **Mohamed Berkane**; Mohamed C. Batouche: motion estimation with frequency methods . The International Conference on Complex System CISC'14, Jijel, Algérie, December, 2014, Jijel, Algeria.

[11] Chérif Taouche; Mohamed C. Batouche; **Mohamed Berkane**; Abdelmalik Taleb-Ahmed:"New Face Recognition Method Based On Local Binary Pattern Histogram". The 15 th International Conference STA'14, December 2014. Hammamet, Tunisia.

[12] Belhouchet Kenza; **Berkane Mohamed**; Belhadef Hacene: "Facial expressions of interest's emotion" International Conference on Applied Research in Computer Science and Engineering (ICAR'15) p1-3, 2015, Beyrut, Laibanon.

[13] Khalid Ghoul; **Mohamed Berkane**; Mohamed C. Batouche:" Phase Correlation method to the optical flow using Neuronal networks" International Conference on Multimedia Computing and Systems (ICMCS'16), September 2016, Marrakech, Morocco.

[14] Belhouchet Kenza; **Berkane Mohamed**; Belhadef Hacene: "Basic Emotions Detection using Kohonen Self-Organizing MAPs" International Conference on Multimedia Computing and Systems (ICMCS'16) , September 2016 Marrakech, Morocco.

[15] Ghoul Khalid, **Berkane Mohamed** and Batouche Mohamed Chawki, "Comparative study of optical flow methods using frequency components", in the 2nd International Conference on Pattern Analysis and Intelligent Systems(PAIS'16), Novembre 2016, Khenchela, Algeria.

[16] Belhouchet Kenza; **Berkane Mohamed**; Belhadef Hacene: "Neuronal approach for emotion recognition based on features motion estimation" IRICT '17, International Conference of Reliable Information and Communication Technology 2017 - April 23-24Johor, Malysia.

JOURNAL PUBLICATIONS

[17] **M. Berkane**, P. Clarysse, J. Y. Njiwa, Y.M. Zhu, and I. E. Magnin «Neural network based summarizing method of periodic image sequences» NNW journal, vol. 6, pp. 687-703, 2010.

[18] Ghoul Khalid, **Berkane Mohamed** and Batouche Mohamed: « A neural-based method for optical flow estimation using phase correlation » International Journal of Computational Vision and Robotics, Vol.8 No.5, pp.526 – 542, 2018.

[19] Belhouchet Kenza; **Berkane Mohamed**; Belhadef Hacene: "Interest emotion recognition approach using self-organizing map and motion estimation" International Journal of Intelligent Systems Technologies and Applications. Vol.18 No.5, 2019.

[20] **Berkane Mohamed**, Belhouchet Kenza; ; Belhadef Hacene: "Emotion recognition approach using multilayer perceptron network and motion estimation" International Journal of synthetic emotions IJSE, volume 10, Issue 1. 2019 .