

Mohamed Maher Ben Ismail, Ph.D

Computer Science department, College of Computer and Information Sciences,
King Saud University

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Research Interest	Artificial Intelligence, Machine Learning, Pattern Recognition, Image Processing, Spatial/Temporal Data Mining, Information Fusion, Statistical modeling.
Teaching Interest	Algorithm Analysis and Design Artificial Intelligence Image Processing and Pattern recognition Machine learning Theory of Computation Programming Languages Data Structures Database design Data Mining Signal Processing
Honors and Awards	Best Faculty member – Computer Science department, KSU – 2017. Graduate Dean’s citation award 2011. IEEE outstanding CECS student award 2011. Invited member – Golden Key International Honor Society. Graduate Research Assistantship – University of Louisville. Promoted to job grade 12 using the HAY evaluation method within STMicroelectronics on March 2004.
Education	Doctor of Philosophy in Computer Engineering and Computer Science University of Louisville, Ky, USA. May 2011. Dissertation: “Image annotation and Retrieval based on Multi-modal Feature Clustering and Similarity Propagation”. Advisor: Prof. Hichem Frigui 1 year of Master of Automatic and Signal Processing National School of Engineering of Tunis, Tunisia, June 2005. advised by: Dr. Safiya Belghith Electrical Engineer Diploma National School of Engineering of Tunis, Tunisia, June 2002. Graduation with honors. Additional advanced math courses covering the areas of topology, measure theory, numerical analysis, convex optimization, theory of probability and operational research. Additional courses in electronics, telecommunication, Artificial intelligence and game theory. National Exam for admission to national engineering schools in Tunisia , ranked 250/3000, June 1999.

Associate degree in Mathematics and Physics

College of Fundamentals of Engineering, June 1999. Graduation with honors.

Professional appointments

Associate Professor at King Saud University

College of Computer and Information Sciences. Computer Science department.
From March 2017 – present.

Assistant Professor at King Saud University

College of Computer and Information Sciences. Computer Science department. From September 2011 – March 2017.

Graduate Research Assistant

Multimedia Research Lab, CECS, UofL. From August 2006 – May 2011.

Graduate Research Assistant: Extensive experience with image processing and machine learning techniques. More specifically, I worked on the development and the implementation of Content-based Image Retrieval (CBIR) and annotation prototype that takes advantage of the developed algorithms for efficient web image annotation and retrieval. Also, I developed machine learning algorithms that integrate visual features with textual keywords, summarize, and organize data repositories.

Design and Development Engineer

STMicroelectronics, Ariana, Tunisia. From June 2002 - June 2006.

Design and Development engineer involved in the validation of 8-bits ST microcontroller tools. I was leading the design/development team of 8-bits ST microcontroller tools.

Design and Development Engineer Intern

STMicroelectronics, Ariana, Tunisia. From February 2002 - June 2002.

Graduation Project: Design and Development of validation platform for MDT50 emulator.

Electrical Engineer Intern

Poulina Group, Tunis, Tunisia. From July-August 2001.

Study and empirical comparison of several pressure sensors.

Refereed

Conference/ Journal Papers

Ouiem Bchir, **Mohamed Maher Ben Ismail** and Sara Algarni, “*SUPPORT KERNEL CLASSIFICATION: A NEW KERNEL-BASED APPROACH*”, International Journal of Advanced Computer Science and Applications, Vol. 11, No. 9 (To appear).

Mohamed Maher Ben Ismail, Reema Alabdullatif and Ouiem Bchir, “*ALZHEIMER’S DISEASE DETECTION USING NEIGHBORHOOD COMPONENTS ANALYSIS AND FEATURE SELECTION*”, International Journal of Advanced Computer Science and Applications, Vol. 11, No. 9 (To appear).

Haifa Alyahya, **Mohamed Maher Ben Ismail** and AbdulMalik Al-Salman, “*Deep Ensemble Neural Networks for Recognizing Isolated Arabic Handwritten Characters*”, ACCENTS Transactions on Image Processing and Computer Vision, Vol. 6, No. 20 (To appear).

Sarah Badr AlSumairi and **Mohamed Maher Ben Ismail**, “*X-Ray Image based Pneumonia Classification using Convolutional Neural Networks*”, ACCENTS Transactions on Image Processing and Computer Vision, Vol. 6, No. 20 (To appear).

Ghada Hader, **Mohamed Maher Ben Ismail** and Ouiem Bchir, “*Automatic Fall Detection using Region-based Convolutional Neural Network*”, International Journal of Injury Control and Safety Promotion, DOI: 10.1080/17457300.2020.1819341, (To appear).

Norah Asiri, Ouiem Bchir, **Mohamed Maher Ben Ismail**, Mohammed Zakariah, Yousef Alotaibi, “*Image based Smoke Detection using Feature Mapping and Discrimination*”, *Soft Computing (To appear)*.

Ouiem Bchir, **Mohamed Maher Ben Ismail**, et al., “*Intelligent Child Monitoring System*”, *International Journal of Image Processing (IJIP)*, Vol. 14, No. 3, pp. 30-44, 2020.

Norah Ibrahim Fantoukh, **Mohamed Maher Ben Ismail**, and Ouiem Bchir, “*Automatic Determination of the Number of Clusters for Semi- Supervised Relational Fuzzy Clustering*”, *International Journal of Fuzzy Logic and Intelligent Systems*, Vol. 20, No. 2, pp. 156-167, 2020.

Atheer AlKubeyyer, **Mohamed Maher Ben Ismail**, Ouiem Bchir and Metab Alkubeyyer, “*Automatic Detection of the Meningioma Tumor Firmness in MRI Images*”, *Journal of X-Ray Science and Technology*, Vol. 28, No. 4, pp. 659 – 682, 2020.

Mohamed Maher Ben Ismail, “*Local Ensemble Approach for Meningioma Tumor Firmness Detection in MRI Images*”, *Proceedings of the International Conference on Image, Video and Signal Processing (IVSP '20)*, pp. 45–50, doi.org/10.1145/3388818.3389158, March 2020.

Mohamed Maher Ben Ismail, Arwa AlGabas and Ouiem Bchir, “*FALL DETECTION USING THE HISTOGRAM OF ORIENTED GRADIENTS AND DECISION BASED FUSION*”, *Journal of Computer Science*, Vol. 16, No. 2, pp. 257-265, 2020.

Abeer almohamade, Ouiem Bchir, **Mohamed Maher Ben Ismail**, “*Multiple Query Content Based Image Retrieval using Relevance Feature Weights Learning*”, *Journal of Imaging*, Vol 6, No. 1, pp. 2-14, 2020.

Mohamed Maher Ben Ismail, Sara N. Alfaraj, and Ouiem Bchir, “*Automatic Image Annotation using Possibilistic Clustering Algorithm*”, *International Journal of Fuzzy Logic and Intelligent Systems*, Vol. 19, No. 4, pp. 250-262, 2019.

Mnahi Alqahtani, Abdu Gumaei, Hassan Mathkour, **Mohamed Maher Ben Ismail**, “*A Genetic-based Extreme Gradient Boosting Model for Detecting Intrusions in Wireless Sensor Networks*”, *Sensors*, Vol. 19, No. 20, pp. 4383, 2019.

Md. Saiful Islam, **Mohamed Maher Ben Ismail**, Ouiem Bchir, Mohammed Zakariah, Yousef Ajami Alotaibi, “*Robust Detection of Atrial Fibrillation Using Classification of a Linearly-Transformed Window of R-R Intervals Tachogram*”. *IEEE Access*, Vol. 7, pp. 110012-110022, 2019.

Ouiem Bchir, **Mohamed Maher Ben Ismail** and Nora Asiri, “*Image Based Smoke Detection Using Source Separation*”, *SPECTROSCOPY AND SPECTRAL ANALYSIS*, Vol. 39, No. 3, pp. 982-989, 2019.

Ouiem Bchir, **Mohamed Maher Ben Ismail** and Nada Al-Zahrani, “*Multiple Bleeding Detection in Wireless Capsule Endoscopy*”, *Signal, Image and Video Processing (SIVP)*, Vol. 13, No. 1, pp. 121-126, 2019.

Zakariah M, Khan S, Chaudhary A., Rolfo C., **Mohamed Maher Ben Ismail** and Alotaibi Y, “*To Decipher the Mycoplasma hominis Proteins Targeting into the Endoplasmic Reticulum and Their Implications in Prostate Cancer Etiology Using Next-Generation Sequencing Data*”, *Molecules. Vol 23, No. 5, 2018*.

Ouiem Bchir, **Mohamed Maher Ben Ismail** and Nourah AL_Aseem. “*EMPIRICAL COMPARISON OF VISUAL DESCRIPTORS FOR ULCER RECOGNITION IN WIRELESS CAPSULE ENDOSCOPY VIDEO*”. *The 4th International Conference on Image Processing and Pattern Recognition (IPPR 2018)*, Copenhagen, Denmark, April 2018.

Mohamed Maher Ben Ismail and Ouiem Bchir, “*Empirical Investigation of Multiple Query Content Based Image Retrieval*”. *International Journal of Applied Pattern Recognition*, Vol. 5, No. 3, pp. 229, 2018.

Ouiem Bchir, **Mohamed Maher Ben Ismail**, “*Region-Based Image Retrieval Using Relevance Feature Weights*”. *Int. J. Fuzzy Logic and Intelligent Systems*, Vol. 18, No. 1, pp. 65, 2018.

Mohamed Maher Ben Ismail, “*A Survey on Content-based Image Retrieval*”, *International Journal of Advanced Computer Science and Applications*, Vol. 8, No. 5, pp. 159-170, 2017.

Mohamed Maher Ben Ismail and Ouiem Bchir, "*Automatic Fall Detection using Membership based Histogram Descriptors*". Journal of Computer Science and Technology, Vol. 32, No. 2, pp. 356-367, 2017.

Mohamed Maher Ben Ismail and Ouiem Bchir, "*Endoscopy Video Summarization using Novel Relational Motion Histogram Descriptor and Semi-supervised Clustering*". Journal of Experimental & Theoretical Artificial Intelligence, Vol. 28, No. 4, pp. 629-653, 2016.

Mohamed Maher Ben Ismail and Ouiem Bchir, "*Content based Video Categorization using Relational Clustering with Local Scale Parameter*", International Journal of Computer Science and Information Technology, Vol. 8, No. 1, pp. 27-46, 2016.

Ouiem Bchir, Hichem Frigui and **Mohamed Maher Ben Ismail**, "*Fuzzy clustering with learnable cluster dependent kernels*", Pattern Application and Analysis Journal: Vol. 19, No. 4, pp. 919-937, 2016.

Ouiem Bchir and **Mohamed Maher Ben Ismail**, "*Generic Evaluation Metrics for Hyperspectral Data Unmixing*", The Soft Computing and Automation Journal, Vol. 22, No. 1, pp. 1-16, 2016.

Mohamed Maher Ben Ismail, Ouiem Bchir and Abdelmonim Artoli, "*Optical Flow based Analysis of Leukocyte Dynamics in Microcirculation*", International Journal of Artificial Intelligence & Applications (IJAA) Vol. 6, No. 3, pp. 25-34, 2015.

Mohamed Maher Ben Ismail and Ouiem Bchir, "*Semi-supervised Local Fusion Approach for Mine Detection in Sonar Data*", International Journal OF Intelligent Systems, Vol. 30, No. 11, pp. 1161–1183 (DOI 10.1002/int.21739), 2015.

Mohamed Maher Ben Ismail and Ouiem Bchir, "*CE Video Summarization using Relational Motion Histogram Descriptor*", International Conference on Optoelectronics and Image Processing (ICOIP 2015), July 2015, Chicago.

Ahmed Z. Emam, Yasser Ali and **Mohamed Maher Ben Ismail**, "*Adaptive Features Extraction for Capsule Endoscopy (CE) Video Summarization*", International Conference on Computer Vision and Image Analysis applications (ICCVIA'15), January 2015, Sousse, Tunisia.

Ouiem Bchir and **Mohamed Maher Ben Ismail**, "*Verbal Offense Detection in Social Network Comments using Novel Fusion Approach*", AI Communications, Vol. 28, No. 4, pp. 765-780, 2015.

Ouiem Bchir and **Mohamed Maher Ben Ismail**, "*Generalized Relative Spectral Unmixing Evaluation Measure*", IEEE-International Conference on Audio, Language and Image Processing (ICALIP), Shanghai, July 2014.

Mohamed Maher Ben Ismail and Ouiem Bchir, "*Survey on number of endmembers estimation approaches for unmixing hyperspectral data*", IEEE-International Conference on Audio, Language and Image Processing (ICALIP), Shanghai, July 2014.

Mohamed Alkaoud, Ibrahim AshShohail, and **Mohamed Maher Ben Ismail**, "*Automatic Image Annotation Using Fuzzy Cross-Media Relevance Models*," Journal of Image and Graphics, Vol. 2, No. 1, pp. 59-63, . doi: 10.12720/joig.2.1.59-63, June 2014.

Mohamed Maher Ben Ismail and Ouiem Bchir, "*Insult Detection in Social Network Comments Using Possibilistic Based Fusion Approach*", Computer and Information Science, Springer Studies in Computational Intelligence, Vol. 566, pp 15-25, DOI: 10.1007/978-3-319-10509-3_2, , 2014.

Heelah Alraqibah, **Mohamed Maher Ben Ismail** and Ouiem Bchir, "*Empirical Comparison of Visual Descriptors for Content based X-ray Image Retrieval*", International Conference on Image and Signal Processing (ICISP'14), Cherbourg, June 2014.

Heelah Alraqibah, Ouiem Bchir and **Mohamed Maher Ben Ismail**, "*X-Ray Image Retrieval System Based on Visual Feature Discrimination*", Proceeding SPIE, vol. 9159, International Conference on Digital Image Processing (ICDIP), Athens, April 2014.

Mohamed M. Ben Ismail, Ouiem Bchir, and Ahmed Z. Emam, "*Endoscopy Video Summarization based on Multi-modal Descriptors and Possibilistic Unsupervised Learning and Feature Subset Weighting*". The Soft Computing and Automation Journal, vol. 20, no. 3, pp. 381-402, 2014. (DOI:10.1080/10798587.2014.890320).

M. Maher Ben Ismail and Hichem Frigui, "*Unsupervised Clustering and Feature Weighting based on Generalized Dirichlet Mixture Modeling*". Information Sciences. vol. 274, pp. 35-54, DOI: 10.1016/j.ins.2014.02.146, 2014.

Mohamed M. Ben Ismail, Ouiem Bchir, and Ahmed Z. Emam, "*Endoscopy Video Summarization based on Unsupervised Learning and Feature Discrimination*", IEEE Visual Communications and Image Processing. VCIP 2013. Malaysia 2013.

Ouiem Bchir, Hichem Frigui, and **Mohamed Maher Ben Ismail**. "*Semi-supervised fuzzy clustering with learnable cluster dependent kernels*". International Journal on Artificial Intelligence. Vol. 22, No. 3, pp. 13500. 2013.

Sarah Alotaibi, Sahar Kasim, Ouiem Bchir and **Mohamed Ben Ismail**. "*Empirical comparison of visual descriptors for multiple bleeding spots recognition in wireless capsule endoscopy video*". 15th International Conference on Computer Analysis of Images and Patterns. CAIP 2013, pp. 402-407 UK. 2013.

Ouiem Bchir, **Mohamed Maher Ben Ismail** and Hichem Frigui. "*Mixture Analysis based on Spectral Summarization*", 5th IEEE workshop on Hyperspectral Image and Signal Processing: Evolution in remote Sensing. WHISPERS 2013. Florida, USA. 2013.

Ouiem Bchir, Hichem Frigui and **Mohamed Maher Ben Ismail**. "*Semi-Supervised clustering and Local Scale Learning algorithm*". International Conference on Artificial Intelligence. ICAI 2013. Tunisia. 2013.

Ouiem Bchir, Hichem Frigui and **Mohamed Maher Ben Ismail**. "*Semi-Supervised Relational Fuzzy clustering with Local Distance Measure Learning*". International Conference on Artificial Intelligence. ICAI 2013. Tunisia. 2013.

Mohamed Maher Ben Ismail and Ouiem Bchir, "*Automatic Image Annotation based on Semi-supervised Clustering and Membership based Cross Media Relevance Model*". International Journal of Pattern Recognition and Artificial Intelligence Vol. 26, No. 6, Dec 2012.

Ben Ismail, M. Maher; Frigui, H. "*Image Database Categorization using Robust Modeling of Finite Generalized Dirichlet Mixture*". International Journal of Signal and Imaging Systems Engineering, Vol. 5, No. 2, pp. 143-153, July 2012.

Mohamed Maher Ben Ismail, "*Image Database Categorization based on a Novel Possibilistic Clustering and Feature Weighting Algorithm*". International Proceedings of Computer Science & Information Technology, vol. 46, pp. 122-127, Singapore, 2012.

Mohamed Maher Ben Ismail, "*Possibilistic Clustering and Feature Weighting based on Robust Modeling of Finite Generalized Dirichlet Mixture*". 8th International Conference on Machine Learning and Data Mining (MLDM). Germany, 2012

Mohamed Maher Ben Ismail, "*Image Annotation and Retrieval Based on Multi-Modal Feature Clustering and Similarity Propagation*". PhD thesis packaged, produced and published by BiblioLabs under license by ProQuest UMI (available online for sale). 2011.

Mohamed Maher Ben Ismail and Hichem Frigui, "*Image Database Categorization using Robust Unsupervised Learning Of Finite Generalized Dirichlet Mixture Models*". International Conference on Image Processing (ICIP), pp. 2457 - 2460, 2011.

Mohamed Maher Ben Ismail, Hichem Frigui: “*Possibilistic Clustering based on Robust Modeling of Finite Generalized Dirichlet Mixture*”. Twentieth conference of the International Association for Pattern Recognition (IAPR). pp. 573 - 576, ICPR 2010.

M. Maher Ben Ismail, Hichem Frigui: “*Image Database Categorization using Robust Modeling of Finite Generalized Dirichlet Mixture*” International Workshop on Image Processing Theory, Tools and Application (IPTA). pp. 334-339, 2010

M. Maher Ben Ismail, Hichem Frigui: “*Image Annotation based on Constrained Clustering and Semi-naive Bayesian Model*”. IEEE symposium on Computers and Communications (ISCC). pp. 431-436, 2009.

M. Maher Ben Ismail, Hichem Frigui, Caudill Joshua: “*Empirical Comparison of automatic Image Annotation Systems*”. International Workshop on Image Processing Theory, Tools and Application (IPTA), pp. 1-8, 2008.

Graduate and undergraduate teaching experience

King Saud University, CCIS, Computer Science Department (ABET & NCAAA accredited program):

- **Spring 2018:** Database Design (CT1313), Computer programming 2 (CSC 113), Human Computer Interaction (CSC 440), Data warehouse & data mining (588), Msc. Graduation project 2 (CSC 598).
- **Fall 2018:** Algorithm Design and Analysis (CSC 311), Data Warehouse & Data Mining (CSC 588), Selected Topics in Image processing & Pattern Recognition (CSC 669), Msc. Graduation project 1 (CSC 597), Msc. Graduation project 2 (CSC 598), Bsc. Graduation project 1 (CSC 496).
- **Spring 2019:** Algorithm Design and Analysis (CSC 311), Data Warehouse & Data Mining (CSC 588), Selected Topics in Image processing & Pattern Recognition (CSC 669), Independent Study I (CSC 696), Msc. Graduation project 2 (CSC 598), Bsc. Graduation project I (CSC 496).
- **Fall 2019:** Algorithm Design and Analysis (CSC 311), Theory of Computation (COS 205), Machine Learning (CSC 563), Independent Study I (CSC 696), Independent Study II (CSC 697), Msc. Graduation project 1 (CSC 597), Bsc. Graduation project II (CSC 497).
-

University of Louisville, Speed School of Engineering, CECS Department:

- **Fall 2005 to Fall 2007:** Lab and class instructor of C/C++ and Fundamentals of Engineering.

University of Louisville, Speed School of Engineering, Multimedia Research Lab:

- **Fall 2006:** Content Based Image Retrieval: lecturing weekly on a technical paper.
- **Spring 2008:** Multimedia Research Lab Seminar: lecturing on constrained semi-supervised clustering.
- **Fall 2009:** Multimedia Research Lab Seminar: lecturing on Automatic Image Annotation.

Student supervision

Supervisor of the following Bsc. Graduation projects (sample):

- **Fall 2011 - Spring 2012:** *"Image Database Categorization based on Low-level Features Clustering"*.
- **Spring 2013 – Fall 2013:** *"Automatic Image Annotation Using Fuzzy Learning Approach"*.
- **Fall 2013 – Spring 2014:** *"Automatic Insult Detection in Social Networks Comments"*
- **Fall 2014 – Spring 2015:** *"Verbal Offense Detection in Social Networks Comments using Global Fusion Approach"*.
- **Spring 2015 - Fall 2015:** *"Video Database Categorization based on Low-level Feature Clustering"*.
- **Spring 2019-Fall 2019:** *"Face Detection, Blurring and Tracking using Machine Learning Techniques"*.

Co-Supervisor of the following Msc. projects (sample):

- **Spring 2013 – Fall 2013: Msc:** *"X-Ray Image Retrieval System Based on Visual Feature Discrimination and Multiple Instance Learning"*.
- **Fall 2013 – Spring 2014:** *"Hyperspectral mixture analysis with self-Estimation of the Number of Endmembers"*.
- **Spring 2015 – Fall 2015:** *"Multiple Bleeding Detection in Wireless Capsule Endoscopy"*.
- **Spring 2015 – Fall 2015:** *"Empirical comparison of visual descriptors for ulcer recognition in wireless capsule endoscopy video"*.
- **Spring 2016 - Fall 2016:** *"Region based Image Retrieval using Relevance Feature Weights"*.
- **Spring 2018-Fall 2018:** *"ALZHEIMER'S DISEASE DETECTION USING NEIGHBORHOOD COMPONENTS ANALYSIS AND FEATURE SELECTION"*
- **Fall 2018-Spring 2019:** *"Automatic Detection of the Meningioma Tumor Firmness in MRI Images"*.

Grants

- Content based Endoscopy Video Summarization (RC121258), Principal Investigator, Budget: 40,000 Saudi Riyals, Agency: King Saud University, 2012-2013.
- Adaptive Capsule Endoscopy (CE) Image Classification (RC121256), Co-Principal Investigator, Budget: 40,000 Saudi Riyals, Agency: King Saud University, 2012-2013.
- Verbal Offense Detection in Social Network Comments (RC131013), Principal Investigator, Budget: 40,000 Saudi Riyals, Agency: King Saud University, 2013-2015.
- Generalized Relative Spectral Unmixing Evaluation Measure (RC131014), Principal Investigator, Budget: 40,000 Saudi Riyals, Agency: King Saud University, 2013-2015.
- Digital Speech, ECG Signal Processing, Emotion, Security and Health (RG-1439-033), Co-Principal Investigator, Budget: 150,000 Saudi Riyals, Agency: King Saud University, 2018-2020.

Committees

- Fall 2019 – present:** Head of the department Capstone project committee
- Fall 2016 – present:** Head of the department NCAAA accreditation committee.
- Spring 2018 – present:** Head of the department committee for ABET accreditation.
- Fall 2014 – present:** Head of QMS (Quality Management System of King Saud University) department committee.
- Fall 2015 – Fall 2018:** Head of the college website committee.
- Spring 2013 – present:** Member of the department committee for ABET accreditation.
- Spring 2013 – Spring 2016:** Member of the department NCAAA accreditation committee

Spring 2012 – present: Member of the department curriculum committee.
Spring 2012 – Fall 2015: Member of the department field experience committee.
Spring 2013 – present: Member of the college manpower committee.
Spring 2013 – Spring 2016: Member of the college recruitment committee.
Fall 2011 – Fall 2014: Member of the department capstone committee.

Activities and services

Reviewer for CCIS Research Center.
Reviewer for Taif University Research Center.
Reviewer for IEEE transactions on Fuzzy Systems..
Reviewer for Recent Patents on Computer Science.
Reviewer for King Saud University journal.
Reviewer for Computers in Human Behavior.
Reviewer for IJAIA Journal.
Reviewer for the journal Advances in Data Analysis and Classification.
Reviewer for the several IEEE Conferences.

Affiliations

Member of the “Engage 2010” organized by the Office of the Civic Engagement, Leadership and Service. University of Louisville, Spring 2010.
Member of the Institute of Electrical and Electronics Engineers (IEEE).
Member of the Society of Photographic Instrumentation Engineers (SPIE).

Personal Information

Languages: Arabic: native
French: fluent in reading/writing/speaking
English: fluent in reading/writing/speaking
Italian: basic

Doctoral Coursework

Combinatorial Optimization
Image Processing and Pattern Recognition
Content Based Image Retrieval
Pattern Recognition and Machine Intelligence
Data Mining
Artificial Intelligence
Multimedia and Hypertext
Content Based Video Retrieval
Computer Algorithms
Fuzzy theory

References

Dr. Hichem Frigui
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Director of Multimedia Research Lab
Computer Engineering & Computer Science, JB School of Engineering, University of Louisville, KY, USA.
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Dr. Adel Elmaghraby
Professor and CECS Department Chair
Director of Innovative and Emerging Technologies Lab
Computer Engineering & Computer Science, JB School of Engineering, University of Louisville, KY, USA.

Duthie Center for Engineering, 211
(502) 852 0470
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Dr. Olfa Nasraoui

Associate professor

Chair of e-commerce and the founding director of the Knowledge Discovery and Web Mining Lab

Computer Engineering & Computer Science, JB School of Engineering, University of Louisville, KY, USA.

Duthie Center for Engineering, 206

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