



Dr. Benrazek Ala-Eddine

Associate Professor and Researcher in Computer Science

📍 1000 Lots N=° 329, 24000 Guelma, Algeria ✉ benrazekalaeddine@gmail.com 📞 (+213)662903317

🔗 Single 📅 15 Dec 1993 🇩🇿 Algerian 🛡 Exempt 👤 Male 🖱 My Website 📄 R^g ResearchGate

🏠 Google Scholar 🆔 Orcid 🌐 LinkedIn 📖 MedLum 🐙 Github

👤 SHORT BIOGRAPHY

Dr. Ala-Eddine Benrazek is an Assistant Professor in the Department of Computer Science at *Zian Achour University*, Djelfa, Algeria, and a researcher in the **GADM** team at the Laboratory of Science and Technology of Information and Communication "*LabSTIC*", Guelma, Algeria. He received a Bachelor's degree (June 2015), a Master's degree (June 2017), and a Ph.D. degree (October, 2021) from the University of Guelma, Algeria, all in Computer Science. His research interests include the Internet of Video Things, Internet of Drones, Cloud-Fog Computing, Energy Optimization, Artificial Intelligence, Data Management and Indexing, Multimedia Networking, Surveillance Systems and Communication.

🌐 LANGUAGES

Arabic

Native



French



English



🧠 SKILLS

Multi Agent System

JADE & JAVA

Surveillance Systems and Communication

Object Detection

Tracking Objects

Multi-camera System

Multimedia Networking

Internet of Video Surveillance

Artificial Intelligence

Machine Learning

Deep Learning

Computer Vision

Cooperative System

Cooperative Control

Cooperative Communication

Distributed Control Systems

Energy Optimization

Data Management and Indexing

Data Bases

Data Indexing

SQL

NoSQL

PROGRAMMING SKILLS

JAVA



Multi-agent system, JADE, Desktop App

Matlab



Data Analysis, Data Visualization (DataViz)

PhP, MySQL, HTML, CSS



Dynamic website, Database

Protégé2000



Ontology

PackTracker



CISCO

Python



Data Structure, Computer Vision, Desktop App, Machine Learning

Qt



Prolog

Expert System

Tina



Petri net

Microcontroller



Arduino and Raspberry pi (Machine Learning and Computer Vision)

RESEARCH INTEREST

Computer Vision and Pattern Recognition

Artificial Intelligence
Video Mining
Object Recognition
Object Tracking
Surveillance Systems
Smart Cameras
Collaborative Cameras

Internet of Things -IoT-

Cloud-Fog Computing
Skin Computing
IoT Data Management and Indexing
Adaptation, Self-Organization, and Emergence in Complex Systems
Energy-efficient

Internet of Drones -IoD-

Autonomous Systems
Cooperative System
Distributed Control
Swarm UAVs
Heuristic Search
Cooperative search
Energy-efficient

PROFESSIONAL POSITIONS

Mar 2022 – present

Zian Achour University, Assistant Professor

Assistant Professor in the department of Mathematics and Computer Science at Zian Achour University, Djelfa, Algeria.

Djelfa, Algeria

Jan 2022 – Mar 2022

Yahia Fares University, Assistant Professor

Assistant Professor in the department of Mathematics and Computer Science at Yahia Fares University, Medea, Algeria.

Medea, Algeria

Feb 2019 – Feb 2022

08 Mai 1945 University,

Adjunct Instructor (Part-time position)

Adjunct Instructor (Part-time position) in the department of Computer Science at 08 Mai 1945 University, Guelma, Algeria.

Guelma, Algeria

PROFESSIONAL EXPERIENCE

08 mai 1945 University

Sep 2019 – Jul 2021	<i>Adjunct Instructor (Part-time position)</i> Teaching module: Artificial Intelligence and Pattern Recognition Intervention type : Practical work Level: 5th year (Master 2) Field: "Information and Communication Sciences and Technology (ICST)" Department of Computer Science	Guelma, Algeria
Feb 2019 – Aug 2019	<i>Adjunct Instructor (Part-time position)</i> Teaching module: Information and Communication Technology for Education (ICTE) Intervention type : Course + Practical work Level: 2nd year (Licence 2) Field: "Language studies" and "Literary studies" Department of French & English	Guelma, Algeria
Sep 2019 – Feb 2022	<i>Adjunct Instructor (Part-time position)</i> Teaching module: Compilation Intervention type: Practical work Level: 3rd year (Licence 3) Field: "Information systems (IS)" Department of Computer Science	Guelma, Algeria
Jan 2019 – Jul 2019	<i>Adjunct Instructor (Part-time position)</i> Teaching module: Computer Security Intervention type: Tutorials Level: 3rd year (Licence 3) Field: "Information systems (IS)" Department of Computer Science	Guelma, Algeria
Jan 2019 – Jan 2022	<i>Adjunct Instructor (Part-time position)</i> Teaching module: Networks and Servers Administration Intervention type: Practical work Level: 4th year (Master 1) Field: "Information and Communication Sciences and Technology (ICST)" Department of Computer Science	Guelma, Algeria
Oct 2021 – Jan 2022	<i>Adjunct Instructor (Part-time position)</i> Teaching module: Data analysis Intervention type: Practical work Level: 4th year (Master 1) Field: "Information systems (IS)" Department of Computer Science	Guelma, Algeria

Feb 2021 – Jan 2022	<p><i>Adjunct Instructor (Part-time position)</i></p> <p>Teaching module: Operating system</p> <p>Intervention type: Tutorials</p> <p>Level: 3rd year (Licence 3)</p> <p>Field: "Information System and Software Engineering (ISSE)"</p> <p>Department of Computer Science</p>	Guelma, Algeria
Oct 2021 – Jan 2022	<p><i>Adjunct Instructor (Part-time position)</i></p> <p>Teaching module: Data analysis techniques</p> <p>Intervention type: Practical work</p> <p>Level: 4th year (Master 1)</p> <p>Field: "Information and Communication Sciences and Technology (ICST)"</p> <p>Department of Computer Science</p>	Guelma, Algeria
Oct 2021 – present	<p>LabSTIC laboratory, Permanent researcher</p> <p>Permanent researcher at the Laboratory of Science and Information Technologies and Communication "LabSTIC", 08 mai 1945 University</p>	Guelma, Algeria
Yahia Fares University		
Jan 2022 – Mar 2022	<p><i>Assistant Professor</i></p> <p>Teaching module: Parallel and Distributed System</p> <p>Intervention type: Tutorials & Practical work</p> <p>Level: 4th year (Master 1)</p> <p>Field: "Systems Engineering and Web Technology"</p> <p>Department of Mathematics and Computer Science</p>	Medea, Algeria
Jan 2022 – Mar 2022	<p><i>Assistant Professor</i></p> <p>Teaching module: Systems Engineering</p> <p>Intervention type: Tutorials & Practical work</p> <p>Level: 4th year (Master 1)</p> <p>Field: "Systems Engineering and Web Technology"</p> <p>Department of Mathematics and Computer Science</p>	Medea, Algeria
Mar 2022 – present	<p>Zian Achour University, Assistant Professor</p> <p>Teaching module: Network Supervision & Quality of Service</p> <p>Intervention type: Course + Practical work</p> <p>Level: 4th year</p> <p>Field: "Networks & Distributed Systems"</p> <p>Department of Computer Science</p>	Djelfa, Algeria

EDUCATION

Jul 2015	<p>Bachelor's degree in Computer Science, 08 Mai 1945 University</p> <p>Dissertation Title : "Social Learning Through MOOCs"</p> <p>Advisor : Mr. Bourbia Riad</p> <p>Appreciation : With Honors</p>	Guelma, Algeria
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Jul 2017

Master's degree in Computer Science,

Guelma, Algeria

08 Mai 1945 University

Dissertation Title : " An Ontology-based Intelligent System for Distributed Modeling of the Patient Record "

(Dissertation.pdf [↗](#))

Master Advisor : Mr. Bourbia Riad

Appreciation : Very Honorable

Sep 2017 – Oct 2022

Ph.D. degree in Computer Science,

Guelma

LabSTIC Laboratory, 08 mai 1945 University [↗](#)

Dissertation Title : "Internet of Things: Analysis of suspicious behavior in a network of surveillance cameras "

(Dissertation.pdf [↗](#))

Ph.D. Advisor : Dr. Farou Brahim

Ph.D. Sub-Advisor : Pr. Seridi Hamid

Appreciation : Very Honorable, with Committee Praise

CERTIFICATES

CCNA Routing and Communication: Introduction to networks

Course completed

Exam passed

November 2014

CCNA Exploration: Routing Protocols and Concepts

Course completed

Exam passed

March 2015

CCNA Exploration: LAN Switching and Wireless

Course completed

Exam passed

May 2015

CCNA Exploration: Accessing the WAN

Course completed

Exam passed

June 2015

MOOCS

Jan 2022 – Feb 2022

Arduino Programming Fundamentals, Edraak [↗](#)

Abu Dhabi,
United Arab Emira
tes

First Week: Introduction to Arduino and Microcontrollers

Second Week: Different Types of Microcontrollers and Their Uses

Third Week: The Basics of Arduino Programming

Fourth week: Sensors

Fifth Week: Final Project- Fire Alarm System

May 2021 – Jun 2021

Internet of Things, Edraak [↗](#)

Abu Dhabi,
United Arab Emira
tes

Week 1: The IT Evolution and Internet technologies that contributed to our access to internet of things

Week 2: The integration between telecom and Information Technology

Week 3: IoT Architecture and Components

Week 4: Practical Application of IoT in our life

Learn the basics of MATLAB® through this introductory tutorial on commonly used features and workflows. Get started with the MATLAB language and environment so that you can analyze science and engineering data.

PUBLICATIONS

31 May 2022

Introduction of a tree-based technique for efficient and real-time label retrieval in the object tracking system, *arxiv* [↗](#)

Authors: **Ala-Eddine Benrazek**, Zineddine Kouahla, Brahim Farou, Hamid Seridi, Imane Allele

DOI: 10.48550/arXiv.2205.15477 [↗](#)

18 Feb 2022

Automatic labeling of tracked objects based on an indexing mechanism, *IEEE* [↗](#)

Authors: **Benrazek Ala-Eddine**, Allele Imane, Kouahla Zineddine, Farou Brahim and Seridi Hamid

Conference: IEEE International Conference on Theoretical and Applicative Aspects of Computer Science, Skikda

At: Skikda, Algeria

DOI: 10.1109/ICTAACS53298.2021.9715189

31 Dec 2021

A Survey on Big IoT Data Indexing: Potential Solutions, Recent Advancements, and Open Issues, *MDPI Future Internet* [↗](#)

Authors: Zineddine Kouahla, **Ala-Eddine Benrazek**, Mohamed Amine Ferrag, Brahim Farou, Hamid Seridi, Muhammet Kurulay, Adeel Anjum and Alia Asheralieva

DOI: 10.3390/fi14010019 [↗](#)

20 Dec 2021

A Comprehensive Survey of Low-Power Embedded Systems: Memory Optimization Techniques and Memory Allocation, *NCASAM 2021*

Authors: Gattal Elhachemi and **Benrazek Ala-Eddine**

Conference: 1st National Conference on Applied Science and Advanced Materials (NCASAM 2021)

At: ENSET-Skikda, Sekikda, Algeria

01 Dec 2021

Memory Optimization Problem in Embedded Systems: A Survey, *IAM'2021*

Authors: Gattal Elhachemi and **Benrazek Ala-Eddine**

Conference: 4th Conference on Informatics and Applied Mathematics (IAM'2021)

At: Guelma, Algeria, 2021

28 Oct 2021

A study of Lagrangian Relaxation and Dantzig-Wolfe Decompositions for the Generalized Assignment Problem, *IEEE* [↗](#)

Authors: Gattal Elhachemi and **Benrazek Ala-Eddine**

Conference: 5th IEEE International Conference on Networking and Advanced Systems (ICNAS 2021)

At: Annaba, Algeria.

DOI:10.1109/ICNAS53565.2021.9628940 [↗](#)

- 27 Oct 2021 **A Cost-Effective Space Partitioning Approach for IOT Data Indexing and Retrieval, IEEE** [↗](#)
 Authors: Ibtissem Kemouguette, Kouahla Zineddine, **Benrazek Ala-Eddine**, Farou Brahim and Seridi Hamid
 Conference: 5th IEEE International Conference on Networking and Advanced Systems
 At: Annaba, Algeria.
 DOI: 10.1109/ICNAS53565.2021.9628904 [↗](#)
- 17 Feb 2020 **An Efficient Indexing for IoT Massive Data based on Cloud-Fog Computing, WILEY Transactions on Emerging Telecommunications Technologies (ETT)** [↗](#)
 Authors: **Ala-Eddine Benrazek**, Kouahla Zineddine, Farou Brahim, Mohamed Amine Ferrag, Seridi Hamid and Kurulay Muhammet
 DOI: 10.1002/ett.3868 [↗](#)
- 01 Dec 2019 **Ascending Hierarchical Classification for Camera Clustering Based on FoV Overlaps for WMSN, IET Wireless Sensor Systems (WILEY)** [↗](#)
 Authors: **Ala-Eddine Benrazek**, Farou Brahim, Seridi Hamid, Kouahla Zineddine and Kurulay Muhammet
 DOI: 10.1049/iet-wss.2019.0030 [↗](#)
- 20 Nov 2019 **Using a bio inspired approach to improve UAVs vision coverage, CITCS'2019** [↗](#)
 Authors: Wafa Nebili, **Ala-Eddine Benrazek**, Muhammet Kurulay, Brahim Farou and Mohamed Amine Ferrag
 Conference: 1st International Conference on Innovative Trends in Computer Science (CITCS'2019)
 At: Guelma, Algeria.
- 12 Jun 2019 **A Scalable Index for Internet-of-Things, IAM'2019** [↗](#)
 Authors: **Ala-Eddine Benrazek**, Kouahla Zineddine, Farou Brahim and Seridi Hamid
 Conference: 2nd Conference on Informatics and Applied Mathematics IAM'2019
 At: Guelma, Algeria
 DOI: 10.13140/RG.2.2.20177.66403 [↗](#)
- 20 Dec 2018 **Efficient Camera Clustering Method Based on Overlapping FoVs for WMSNs, International Journal of Informatics and Applied Mathematic** [↗](#)
 Authors: **Ala-Eddine Benrazek**, Farou Brahim, and Kurulay Muhammet
- 27 Oct 2018 **A Method of Grouping Cameras in a Video Surveillance System Network, SaCoNeT 2018** [↗](#)
 Authors: **Ala-Eddine Benrazek**, Brahim Farou, Hamid Seridi
 Conference: 7th IEEE International Conference on Smart Communication in Network Technologies (SaCoNeT 2018)
 At: El-Ouad, Algeria
 DOI: 10.13140/RG.2.2.16822.22085 [↗](#)
- 03 Oct 2018 **A New Method of Grouping Cameras based on Overlapping Visual Fields in Wireless Multimedia Sensor Networks, IAM'18** [↗](#)
 Authors: **Ala-Eddine Benrazek**, Brahim Farou, Hamid Seridi
 Conference: 1st Conference on Informatics and Applied Mathematics (IAM'2018)
 At: Guelma, Algeria.

- 28 Dec 2017 **Agent-Based Modeling of the Hospital MIS to Enhance Patient Care, WCRES C 2017** [↗](#)
 Authors: Riad Bourbia, Lynda Dib, **Ala-Eddine Benrazek**
 Conference: World Congress on Renewable Energy and Sustainable Computing (WCRES C'17)
 At: Hammamet, Tunisia
- 08 Dec 2017 **A patient monitoring system based on agent technology under JADE, IEEE** [↗](#)
 Authors: Bourbia Riad, Lynda Dib, and **Ala-Eddine Benrazek**
 Conference: IEEE International Workshop on Complex Systems and Networks (IWCSN)
 At: Doha, Qatar
 DOI: 10.1109/IWCSN.2017.8276538 [↗](#)
- 29 Nov 2016 **An agent-based architecture for a distributed MIS, IEEE** [↗](#)
 Authors: Bourbia, Riad, Lynda Dib, and **Ala-Eddine Benrazek**
 Conference: 2016 IEEE/ACS 13th International Conference of Computer Systems and Applications (AICCSA)
 At: Agadir, Morocco
 DOI: 10.1109/AICCSA.2016.7945758 [↗](#).
- 17 Nov 2016 **An Intelligent System for Patient Data Sharing Under JADE Platform, AMINA'16**
 Authors: Riad Bourbia, Lynda Dib, **Ala-Eddine Benrazek**, Gueroui Fatima Zahra, Berkani Hayet
 Conference: 8ème Workshop AMINA " Application Médicales de l'informatique: Nouvelles Approches "
 At: Monastir, Tunisia,
- 29 Jul 2015 **Social learning through MOOCs, ICCES'2015** [↗](#)
 Authors: Riad Bourbia, Ali Seridi, Noor El houda Nouar, **Ala-Eddine Benrazek**.
 Conference: International Conference of Computing for Engineering and Sciences (ICCES'2015)
 At: Istanbul, Turkey

SCIENTIFIC ACTIVITIES

- | | | |
|----------|---|-----------------|
| Nov 2019 | Organization Committee , <i>Conference on Innovative Trends in Computer Science (CITCS'2019)</i>
University of 08 Mai 1945 Guelma — Algeria | Guelma, Algeria |
| Jun 2019 | Organization Committee , <i>2nd Conference on Informatics and Applied Mathematics IAM'2019</i>
University of 08 Mai 1945 Guelma — Algeria. | Guelma, Algeria |
| Dec 2021 | Organization Committee , <i>4th Conference on Informatics and Applied Mathematics IAM'2021</i>
University of 08 Mai 1945 Guelma — Algeria. | Guelma, Algeria |
| Dec 2021 | Program Committee , <i>4th Conference on Informatics and Applied Mathematics IAM'2021</i>
University of 08 Mai 1945 Guelma — Algeria. | Guelma, Algeria |

PROJECTS

2018 – 2021

Research Project (CNEPRU),

Design and Development of an Intelligent and Secure Video Surveillance System

Code : B*01520130020 / CooLo7UN240120130004

Grade: Membre

SUPERVISION

2020 – 2021

Master's internship in Computer Science,

Guelma, Algeria

LabSTIC Laboratory, 08 Mai 1945 University

Title: *Management of surveillance cameras for tracking moving objects in the Internet of Video Things (IoVT).*

(Download description PDF [↗](#))

Students: BADJI AHMED AMIN

Level: 4th year (Master 1)

Type: Master 1 internship

2020 – 2021

Master's in Computer Science,

Guelma, Algeria

Computer Science Department

Title: *A new indexing structure for object tracking process data in the Internet of Video Things -IoVT-* (Download description PDF [↗](#)) (see the proceeding paper here [↗](#))

Students: Allele Imane

Level: 5th year

Type: Project to obtain a master's degree in Computer Science

2020 – 2021

Master's internship in Computer Science,

Guelma, Algeria

LabSTIC Laboratory, 08 Mai 1945 University

Title: *Development of a multi-camera video surveillance system for tracking moving objects.* (Download description PDF [↗](#))

Students: BRAHMIA ABDELBA CET

Level: 4th year

Type: Master 1 internship

2020 – 2021

Master's in Computer Science -Co-Supervisor-,

Guelma, Algeria

Department of Computer Science

Title: *Optimization of the BCCF-tree indexing structure for heterogeneous data in an Edge/Fog/Cloud Computing environment* (see the proceeding paper here [↗](#))

Students: Ibtissem Kemouguette

Level: 5th year

Type: Project to obtain a master's degree in Computer Science

2022 – present

Ph.D. in Computer Science -Co-Supervisor-,

Zhejiang Gongshang University, Hangzhou, China

Title: *Security and Privacy in the Fleet Management System*

Students : Sarra Boukansous

Jun 2022	Vehicle detection, counting and speed estimation for traffic monitoring based on image processing, <i>Master's thesis in Image and Speech Processing and Analysis</i>	Zian Achour University, Computer Science Department
Jun 2022	Design and implementation of a pointing system based on image processing, <i>Master's thesis in Image and Speech Processing and Analysis</i>	Zian Achour University, Computer Science Department
Jun 2022	Color image encryption and decryption based on multiple chaotic maps, <i>Master's thesis in Image and Speech Processing and Analysis</i>	Zian Achour university, Computer Science department

 **COLLABORATORS**

Dr. Farou Brahim (DSc, HDR), Associate Professor in Computer Science, 08 Mai 1945 University
farou.brahim@univ-guelma.dz

Pr. Seridi Hamid (Full Professor), Professor in Computer Science, 08 Mai 1945 University
seridi.hamid@univ-guelma.dz

Dr. Kouahla Zineddine (Ph.D., HDR), Associate Professor in Computer Science, 08 Mai 1945 University
kouahla.zineddine@univ-guelma.dz

Dr. Mohamed Amine Ferrag (Ph.D., HDR), Associate Professor in Computer Science, 08 Mai 1945 University
ferrag.mohamedamine@univ-guelma.dz

Pr. Muhammet Kurulay (Full Professor), Professor in mathematical engineering, Yıldız Technical University
mkurulay@yildiz.edu.tr

Dr. Adeel Anjum, Associate Professor, Quaid-i-Azam University, Islamabad, Pakistan
adeelanjum2001@hotmail.com

Dr. Alia Asheralieva, Assistant Professor, Southern University, Shenzhen, China
asheralievaa@sustech.edu.cn

Dr. Gattal Elhachemi, Searcher, LabSTIC Laboratory, Guelma, Algeria
elhachmig@gmail.com