




# Zianou AHMED SEGHIR

Professor

## PROFIL

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## LANGUES

Arabic 

Frensh 

English 

## ♥ Education and Degrees

**November 2018** **University Habilitation in Computer Science**  
University Mohamed Khider de Biskra

**Jun 2012** **Ph.D. in Computer Science**  
University of Constantine

**January 2006** **Master in Computer Science**  
Location: Université LARBI BEN M'HIDI-  
OUM EL BOUAGHI Algeria.

## Occupation and Academic Titles

- **Current Position:** Professor, University Abbès LAGHROUR Khenchela, Algeria (since July 2023)
- **Specialty:** Computer Science
- **University Rank:** Professor
- **Research Rank:** Research Master
- **Affiliated Laboratory:** Knowledge Engineering and Computer Security (ICOSI) Laboratory, University of Khenchela, Algeria



## Publications and Communications

### A. International Publications:

1. Benamor, Z., Seghir, Z.A., Djeddar, M., Hemam, M. (2023). **A comparative study of machine learning algorithms for intrusion detection in IoT networks**. *Revue d'Intelligence Artificielle*, Vol. 37, No. 3, pp. 567-576. <https://doi.org/10.18280/ria.370305>
2. Tahar Gherbi, Ahmed Zeggari, Zianou Ahmed Seghir, Fella Hachouf: « **Entropy-Guided Assessment of Image Retrieval Systems: Advancing Grouped Precision as an Evaluation Measure for Relevant Retrievability** ». *Informatica (Slovenia)* 47(7) (2023)
3. Tahar Gherbi, Ahmed Zeggari, Zianou Ahmed Seghir, Fella Hachouf: « **An evaluation metric for image retrieval systems, using entropy for grouped precision of relevant retrievals.** » *J. Intell. Fuzzy Syst.* 45(3): 3665
4. Zianou Ahmed Seghir, Meriem Djeddar, Mounir Hemam, Ahmed Zeggari, Fella Hachouf, "Stereo image quality assessment using deformed pixels and Sobel magnitude", *Journal of Intelligent & Fuzzy Systems*, 44 (5), 7599-7611 (2023) <https://content.iospress.com/articles/journal-of-intelligent-and-fuzzy-systems/ifs223375>
5. Ahmed Zeggari, Zianou Ahmed Seghir, Mounir Hemam, Fella Hachouf, Meriem Djeddar, "Color Distortion and Edge Feature for Perceptual Quality Assessment", *Informatica an international journal of computing and informatics*, 46 (6), 53–65, (2022) <https://doi.org/10.31449/inf.v46i6.3953>
6. Oussama Messai, Aladine Chetouani, Fella Hachouf, Zianou Ahmed Seghir, "3D saliency guided deep quality predictor for no-reference stereoscopic images", *Neurocomputing*, Volume 478, 2022, Pages 22-36, ISSN 0925-2312, <https://doi.org/10.1016/j.neucom.2022.01.002>.
7. Meriem Djeddar, Mounir Hemam, Zianou Ahmed Seghir " Generation Of Heterogeneous Semantic Annotations Of Xml Pages: A Multi-Viewpoints Approach", *Informatica an international journal of computing and informatics*, (2021) <https://doi.org/10.31449/inf.v45i7.3669>
8. Ahmed Zeggari, Zianou Ahmed Seghir, Mounir Hemam, "Perceptual image quality assessment based on gradient similarity and Ruderman operator, " *Int. J. Comput. Vis. Robotics* 11(2): 151-174 (2021) <https://www.inderscienceonline.com/doi/abs/10.1504/IJCVR.2021.113402?journalCode=ijcvr>
9. Oussama Messai, Fella Hachouf, and Zianou Ahmed Seghir, "AdaBoost neural network and cyclopean view for no-reference stereoscopic image quality assessment," Elsevier, *Signal Processing: Image Communication*, Volume 82, March 2020, 115772. <https://www.sciencedirect.com/science/article/pii/S0923596519300736>
10. Z.A. Seghir, F. Hachouf, "Full-reference image quality assessment scheme based on deformed pixel and gradient similarity", *Optik - International Journal for Light and Electron Optics*, vol. 126, issue 24, pp. 5946-5951 <http://www.sciencedirect.com/science/article/pii/S0030402615008931>
11. Z.A. Seghir, F. Hachouf. "Edge-region information measure based on deformed and displaced pixel for Image Quality Assessment", Elsevier, *Signal Processing: Image Communication*, Volume 26, Issue 8-9, pp. 534-549. <http://www.sciencedirect.com/science/article/pii/S0923596511000695>
12. Z.A. Seghir, F. Hachouf. "Image Quality Assessment Measure based on Visual Region and displacement with distorted pixels for compressed Images" *J. Automation & Systems Engineering*, vol 4, no. 3, pp. 196-211, September 2010. [http://journal.esrgroups.org/jes/jase/papers/4\\_3\\_6\\_10.pdf](http://journal.esrgroups.org/jes/jase/papers/4_3_6_10.pdf)  
ISSN 1112-8542

## B. International communication :

- 1- T Gherbi, A Zeggari, Z Ahmed Seghir, "**A global precision view for information retrieval evaluation adapted to image retrieval systems**", The First International Conference on Advances in Electrical and Computer Engineering, Tebessa, Algeria (Ma 2023)  
<https://icaece2022.sciencesconf.org/resource/page/id/11>
- 2- MM Hafidi Mohamed Madani, Meriem Djezzar, Mounir Hemam Zianou Ahmed Seghir, "**Semantic Models and Machine Learning Approach in CPS : A Survey**", Conference: International Workshop on Semantic IoT (SIoT) 3335, 130-149  
[https://ceur-ws.org/Vol-3335/SIoT\\_Paper1.pdf](https://ceur-ws.org/Vol-3335/SIoT_Paper1.pdf)
- 3- Ahmed Zeggari, Zianou Ahmed Seghir and F. Hachouf, "**Re-weighting features selection based on wrapper filter and genetic algorithms for figurative images recognition**", Conference: 2021 5th International Conference on Pattern Recognition and Image Analysis (IPRIA), DOI: [10.1109/IPRIA53572.2021.9483538](https://doi.org/10.1109/IPRIA53572.2021.9483538)
- 4- Oussama Messai, Aladine Chetouani, Fella Hachouf, and Zianou Ahmed Seghir, "**No-reference Stereoscopic Image Quality Predictor using Deep Features from Cyclopean Image**," in IS&T International Symposium on Electronic Imaging 2021, Image Quality and System Performance XVIII, pp. 297-304.  
<https://doi.org/10.2352/ISSN.2470-1173.2021.9.IQSP-297>
- 5- Oussama Messai, Aladine Chetouani, Fella Hachouf, and Zianou Ahmed Seghir, "**Deep Quality evaluator guided by 3D Saliency for Stereoscopic Images**," in IS&T International Symposium on Electronic Imaging 2021, Image Quality and System Performance XVIII, pp. 110-115.  
<https://doi.org/10.2352/ISSN.2470-1173.2021.11.HVEI-110>
- 6- Oussama Messai, Fella Hachouf, and Zianou Ahmed Seghir, "**Automatic Distortion Type Recognition for Stereoscopic Images**," in 2019 International Conference on Advanced Electrical Engineering 2019 (ICAEE 2019) . IEEE, 2019, pp.XX-XX.  
<https://ieeexplore.ieee.org/document/9015082>
- 7- Oussama Messai, Fella Hachouf, and Zianou Ahmed Seghir, "**Deep learning and cyclopean view for no-reference stereoscopic image quality assessment**," in 2018 International Conference on Signal, Image, Vision and their Applications (SIVA). IEEE, 2018, pp. 1-6.  
<https://ieeexplore.ieee.org/document/8661143/>
- 8- ZA Seghir, F Hachouf, M Hemam, F Morain-Nicolier, A ZEGGARI "**Quality Evaluation Algorithm: New Structural Similarity by Using Distance Transform Approach and Gradient Similarity**" ,” in 2018 International Conference on Signal, Image, Vision and their Applications (SIVA). IEEE, 2018.  
<https://ieeexplore.ieee.org/document/8661089/>
- 9- Meriem Djezzar, Mounir Hemam, Moufida Maimour, Fatima Zahra Amara, Khaoula Falek, Zianou Ahmed Seghir "**An approach for Semantic Enrichment of Sensor Data**," PAIS 2018,pp. 1-7.  
<https://ieeexplore.ieee.org/document/8598506/>
- 10- M Hemam, M Djezzar, ZA Seghir, "**Multi-Viewpoints Ontological Knowledge Representation: A Fuzzy Description Logics Based Approach**,"Proceedings of the Fourth International Conference on Engineering & MIS 2018, 63  
<https://dl.acm.org/citation.cfm?id=3234761>
- 11- O Messai, F Hachouf, Z Ahmed Seghir, "**Blind stereoscopic image quality assessment using cyclopean view and neural network** ", The fifth IEEE Global Conference on Signal and Information Processing (GlobalSIP)At: Montreal, Quebec, Canada on November 14-16, 2017,Page: 196-200.  
<https://ieeexplore.ieee.org/document/8308631>  
<https://pdfs.semanticscholar.org/2fa4/c9f90979e224e61f3ee8d40c0bf7cdc3bf65.pdf>
- 12- Zianou Ahmed Seghir, Yousfi Walid, S Beneulmi, Fella Hachouf. "**Structural Similarity Index based on Gradient Similarity**. The 2nd International Conference on Pattern Analysis and Intelligent Systems (Pais)November 16-17, 2016 , Pages: 139 - 143,
- 13- Zianou Ahmed Seghir, Fella Hachouf. "**Image quality assessment scheme based on gradient similarity and color distortion**. 12th International Symposium on

- Programming and Systems (ISPS) , Pages: 1 - 8, DOI: 10.1109/ISPS.2015.7244985 (IEEE)  
<https://ieeexplore.ieee.org/document/7244985/>
- 14- Zianou Ahmed Seghir, Fella Hachouf: **Color Image Quality Assessment Based on Gradient Similarity and Distance Transform**. ACIVS 2015: 591-603(Springer)  
[http://link.springer.com/chapter/10.1007%2F978-3-319-25903-1\\_51](http://link.springer.com/chapter/10.1007%2F978-3-319-25903-1_51)
- 15- Z.A. Seghir, F. Hachouf "**Full-Reference Image Quality Assessment Measure Based on Color Distortion**" in Proc. 5th IFIP TC 5 International Conference, CIIA 2015 Saida, Algeria, May 20–21, 2015, pp. 66–77, 2015. (Springer)  
[http://link.springer.com/chapter/10.1007/978-3-319-19578-0\\_6](http://link.springer.com/chapter/10.1007/978-3-319-19578-0_6)
- 16- D.B. Eddine, F. Hachouf, Z.A. Seghir, , “**A New No-Reference Image Quality Assessment Based On SVR Fusion**” in *Proc. 5th European Workshop on Visual Information Processing (EUVIP)*, 2014,France, Dec 10 – 12, pp. 1-6.  
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- 17- Z.A. Seghir, F. Hachouf, F. Nicolier “**Blind Image Quality Metric for Blurry and Noisy Image**” in *Proc. 2013 IEEE Second International Conference on Image Information Processing*, Jaypee University of Information Technology, India, Dec 9 – 11, pp. 193-197.  
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- 18- Z.A. Seghir, F. Hachouf, F. Nicolier “**Distance transform measure based on edge-region information: An algorithm for image quality assessment**” in *Proc. 3th Congress on Nature and Biologically Inspired Computing (IEEE, NaBIC2011)*, Salamanca, Spain, Oct 19-21, pp. 125-130.  
<https://ieeexplore.ieee.org/document/6089447/>
- 19- Z.A. Seghir, F. Hachouf. “**Edge-region information with distorted and displaced pixels measure for image quality evaluation**” in *Proc. 10th International Conference on Information Science, Signal Processing and their Applications (IEEE, ISSPA 2010)*, Kuala Lumpur, Malaysia, May 10- 13, pp. 77-80.  
<https://ieeexplore.ieee.org/document/5605504/>
- 20- Z.A. Seghir, F. Hachouf. “**Image Quality Assessment based on Edge-region information and Distorted pixel for JPEG and JPEG2000**”, in *Proc. ACIVS 2009*, (Springer), Bordeaux, France, Sept.28 - Oct.2, LNCS 5807, pp. 156-166.  
<http://www.springerlink.com/content/742718072855788q/>
- 21- Seghir, Z.A. ;Hachouf, F.; Zeggari, A.; “**A Generic Methodology for Image Segmentation Evaluation** “ 2<sup>nd</sup> IEEE International Conference OnInformation and Communication Technologies, 2006. ICTTA '06. 2nd Volume 1, 24-28 April 2006 Page(s):1794 – 1799. *Damascus, Syria*.  
<https://ieeexplore.ieee.org/document/1684658/>
- 22- Hachouf, Zeggari Ahmed, A. Seghir, Z “**An Image Segmentation Algorithm Based on Fuzzy Clustering and Genetic Algorithms with a New Distance**” Proceedings of the 6th WSEAS Int. Conf. on EVOLUTIONARY COMPUTING, Lisbon, Portugal, June 16-18, 2005 (pp141-145)  
[www.wseas.us/e-library/conferences/2005lisbon/papers/496-255.pdf](http://www.wseas.us/e-library/conferences/2005lisbon/papers/496-255.pdf)
- 23- Z.A. Seghir, F. Hachouf. “**Image Quality Assessment Measure based on Region-displacement with distorted pixels for compressed Images**”, Third International Conference on Electrical Engineering Design and Technologies (ICEEDT09), Oct. 31-Nov. 2, 2009, Sousse, Tunisia.  
<http://journal.esrgroups.org/jes/iceedt/registredpapers.htm>
- 24- Z.A. Seghir, F. Hachouf. “**Edge-displacement measure for Image Quality Assessment**”, in *Proc. International conference On Applied Informatics (ICAI09)*, November 15-17, 2009, Academic centre of Bordj Bou Arreridj, Algeria, vol III image processing, pp. 250-255.  
<http://www.icaio9.org/index.php?page=ip&PHPSESSID=a7cc6c5a84fd36d8dc71c0b49b5920de>
- 25- Z.A. Seghir, F. Hachouf. “**Full Reference Image Quality Assessment for Compressed Image**”, International Conference on System and Information Processing (ICSIP'09), May 2-4, 2009, Guelma, Algeria.  
<http://www.univ-guelma.dz/icsip09/program.pdf>

- 26- Z.A. Seghir, F. Hachouf, “**Etude comparative des méthodes d'évaluation de la qualité d'image**“, ISPA2010, Second International Conference on Image and Signal and their Application, 6-8 décembre 2010, Biskra university, Algeria,  
[http://www.univ-biskra.dz/ispa2010/files/Programme ISPA2010 final.pdf](http://www.univ-biskra.dz/ispa2010/files/Programme_ISPA2010_final.pdf)
- 27- Seghir, Z.A. ;Hachouf, F.; Zeggari, A, “**Élaboration de Méthodes d'Evaluation d'Algorithmes de Segmentation d'Images**“ (I3SPA) The 3rd International Summer School on Signal Processing and its Applications, 08 – 12 Juillet 2006, **Université de Jijel**
- 28- Seghir, Z.A. ;Hachouf, F.; Zeggari, A , “**Une méthode non supervisée d'évaluation d'algorithmes de segmentation d'images**“. (CIIE'06)Conférence Internationale sur Ingénierie de Electronique 06-Mai/28-29 , **Université des Sciences et de la Technologie, Oran, Mohamed Boudiaf.**
- 29- Seghir, Z.A. ;Hachouf, F.; Zeggari, A. “**Evaluation D'algorithmes De Segmentation D'images Couleur**“; (Cia05) Congres International En Informatique Appliquée Bordj Bou Arréridj 19 – 21 Novembre 2005.

C. **National communication :**

1. Z.A. Seghir, F. Hachouf, S. Chikhi, “Full Reference Image Quality Assessment Measure based on Color and Position“, (SNIB'2008), 6-8 Mai 2008, Biskra university, Algeria, pp. 227-232, 2008.  
<http://www.univ-biskra.dz/manifestations/snib2008/Sessions.htm>
2. Z.A. Seghir, F. Hachouf, S. Chikhi, “**Image Quality Assessment Measure Based on Intensity and Position**“, (C V A ' 2007), 18-19-20 November 2007, faculty of Electronic engineering and computing, University of Mouloud Mammeri, Tizi-Ouzou, Algeria, pp. 223-226, 2007.
3. Seghir, Z.A. ;Hachouf, F.; Zeggari, A.; “**Evaluation D'algorithmes De Segmentation D'images Couleur Par De Nouvelles Distances**“ (CNTSA 2005) Colloque National sur le Traitement du Signal et ses Applications, 19-20 Septembre 2005, Guelma, Algérie.

<http://www.univ-guelma.dz/recherche/labs/laig/LAIG2009/Programme.CNTSA05.htm>