

**AHMAD CHADDAD**

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 Citizenship: Canadian
 Status: Married (+ 2 kids)
 Date of birth: February 1, 1984
 Languages: English and French

CURRENT POSITION

- **Professor:** School of Artificial Intelligence (SAI), Guilin University of Electronic Technology (GUET).
- **Chair of research laboratory:** Artificial Intelligence for Personalized Medicine
- **Research team leader:** AI for Multidisciplinary topics, SAI, GUET
- **Master and Ph.D. Supervisor:** AI topics

RESEARCH INTERESTS

- *AI directions:* Radiomics, Federated learning, Explainable AI, multi-omics (genomics + proteomics + transcriptomics), Survival analysis, ...
- *Health-related field:* Cancers, Disorder diseases, COVID19, Immunotherapy, Biomarkers, ...
- *Technical topics:* Domain shifting, Quantitative features, Classifier optimizing, ...

EDUCATION

2009 – 2012	Ph.D., Engineering systems (Machine learning, image processing and analysis, embedded systems), University of Lorraine, France
2007 – 2008	Master-DEA , Bio-mechanical and Biomedical Engineering, University of Technology Compiegne, France
2002 – 2007	B. Eng. , Biomedical Engineering, Lebanese University, Lebanon

EXPERIENCE

2022 (01) – ongoing	Full Professor , School of Artificial Intelligence, Guilin University of Electronic Technology, Guilin, Guangxi, China
2020(01) – 2021(12)	Associate Professor , School of Artificial Intelligence, Guilin University of Electronic Technology, Guilin, Guangxi, China
2017 – 2019	Project Director , MUHC & JGH, McGill University, Canada JGH: Radiomics/radiogenomics analysis for patients with prostate cancer MUHC: Radiomics/radiogenomics analysis for predicting the recurrent GBM
2017 – 2019	Adjunct professor , Ecole de Technologie Supérieure, Canada
2015–2017	Post-doc/scientist , McGill University, Canada (Machine learning techniques applied on medical data: GBM, Autism, Alzheimer, Lung and Colorectal)
2013 – 2015 18 months	Post-doc research fellow , University of Texas MD Anderson Cancer Center, USA (Machine learning models applied on tumor data)
2013 7 months	Post-doc research fellow , Villanova University, USA Detection indoor human targets in Through-the-Wall Radar imagery (classification models, features extraction applied on radar images)
2012–2013 6 months	Research associate , Ecole Polytechnique de Montréal, Canada Near infrared spectroscopy (NIRS) for evaluate brain function (denoising signal, new channels of optical receivers for NIRS)
2009-2012	Instructor , University of Lorraine (France) and AUL University (Lebanon)

ACADEMIC AND SCIENTIFIC ACTIVITIES

2021-ongoing	Associate editor , Frontier in Nuclear Medicine, Radiomics and Artificial Intelligence https://www.frontiersin.org/journals/nuclear-medicine/sections/radiomics-and-artificial-intelligence#editorial-board Guest editor for a special issue in applied science: Artificial Intelligence for Personalized Medicine https://www.mdpi.com/journal/applsci/special_issues/Personalised_Medicine
2019-2021	Committee member in MICCAI workshop on Radiomics and Radiogenomics in Neuro-oncology using AI. https://sites.google.com/view/rno-ai2019/committees?authuser=0
2017	Chair of special session , The seventh International Conference on Image Processing Theory, Tools and Applications (IPTA 2017).
2016	Assistance for students at summer school innovation and technological design program, June 30 - July 29, 2016, ETS, Montreal, Canada.
2015	Chair of special session , 45th International Conference on Computers & Industrial Engineering http://cie45.event.univ-lorraine.fr/sessions/TanouagastChaddad_SessionSpeciale_CIE45.pdf (Machine learning on medical data).
2014	Chair of special session , IEEE International Conference on Control, Decision and Information Technologies. http://codit2014.event.univ-lorraine.fr/docs/SessionSpecialeBiomedical.pdf .

STUDENT SUPERVISION**Ph.D.**

2022-2025	Merwan Ben-Akka , University of Lorraine, France Hardware implementation for AI models
2013 – 2018	Hawraa Haj-Hassan , University of Lorraine, France Détection et Classification temps réel de bio-cellules anormales par technique de segmentation d'images (http://theses.fr/2018LORR0043)

Master 2 R: research, P: Professional

2023-ongoing @ GUET, China	Jia Ping yue (P) Zhao Xin Yuan (P) Lu Yunyao (R)
2022-ongoing @ GUET, China	Binbin Wen (P) Enhancing lesion detection in medical imaging based on explainable artificial intelligence Yan Hu (R) Explainable personalized federated learning in medical images
2012@ University of Lorraine, France	Houssein Hajj-Hassan , FPGA implementation for texture analysis

Undergraduate Final Projects

2023-ongoing	<ul style="list-style-type: none">• Deep Learning-based Lung Nodule Detection• Classification based models for lung cancer using medical images• Stream efficient learning for medical image classification• Medical image classification algorithm based on multi-modal interpretive AI• Reinforcement learning to improve the classifier performance• Information flow analysis based on XAI model• Radiomic stability analysis for diagnosis patients with brain tumor
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Undergraduate Research program

2021-ongoing	17 students, Guilin University of Electronic Technology, China Topics: Radiomics, XAI, Federated learning, Domain adaptation, etc.
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GRANTS AND FUNDING

2023/01-2026/12	NSFC: Regional Science Foundation Project (National grant) PI: Chaddad A. Collaborators: Ismail Ben Ayed, Christian Desrosiers and Ahmed Bouridane Title: An interpretable deep radiomics model for personalized treatment of brain tumors Approved budget: 330.000 RMB Project ID: 82260360 Country: China
2023/05-2026/05	Guangxi Science and Technology Base and Talent Project: The introduction of high-level talents at home and abroad PI: Chaddad A. Title: AI-based personalized treatment of COVID-19 patients. Approved budget: 190.000 RMB Project ID: 2022AC18004 Country: China
2023/06-2025/06	Guilin Innovation Platform and Talent Program (C26) PI: Chaddad A. Title: AI-based prediction of brain tumor treatment Approved budget: 600.000 RMB Project ID: 20222C264164 Country: China
2023/05-2026/05	Guangxi Science and Technology Base and Talent Project: Young scientific and technological innovation talents PI: Chaddad A. Title: Radiomics analysis of brain tumors Approved budget: 200.000 RMB Project ID: 2022AC21040 Country: China
2021/01-2022/12	Foreign Young Talents Program (National grant) PI: Chaddad A. Title: Radiomics analysis for predicting Autism Spectrum Disorder. Requested budget: 300.000 RMB Status: approved (account: ZQT ZN04) Project ID: QN2021033002L Country: China

2020/01-2021/12	<p>Foreign Young Talents Program (National grant) PI: Chaddad A. Title: Deep radiomic models for the personalized management of prostate cancer. Requested budget: 150.000 RMB Status: approved Project ID: QN20200233001 Country: China</p>
2021-2023	<p>Research Nova Scotia; ACURA PI: Kucharczyk MJ. Co-Investigators: Chaddad A., Clarke S., Rendon R., Beyea S., Mason R., Bowen C. & Matheson K. Title: Can Magnetic Resonance Imaging of the Prostate combined with a Radiomics Evaluation Determine the Invasive Capacity of a Tumour (Can MRI-PREDICT). Project ID: RNS-NHIG-2020-1384 Requested budget: \$97.680 CAD. Status: approved Country: Canada</p>
2021-2024	<p>Guilin University of Electronic Technology PI: Chaddad A. Title: Artificial intelligence for personalized medicine. Requested budget: 200.000 RMB. Status: approved Project account ID: UF20051Y Country: China</p> <p>Guilin University of Electronic Technology PI: Chaddad A. Research platform services Requested budget: 300.000 RMB. Status: approved Project account ID: YXRSZN04 Country: China</p>

Funds to support student projects

2024-2025	<p>Guangxi province project for undergraduate student Title: Research on medical image classification based on federated domain adaptation based on vision-language model Requested budget: 6.000 RMB. Status: approved Country: China</p>
2024-2026	<p>GUET project for master student Title: Interpretable Personalized Federated Learning Method for Medical Diagnostic Tasks Requested budget: 10.000 RMB. Status: approved Project ID: 2024YCXS196 Country: China</p>
2023-2024	<p>National project for student Title: Research on federated domain adaptation model in personalized medicine Requested budget: 20.000 RMB. Status: approved Project account ID: C23ZNM00ZN0N Project ID: 202310595083 Country: China</p>
2021-2023	<p>GUET funds for Undergraduate research projects Requested budget: 11.000 RMB. Status: approved Project account ID: C23ZNM00ZNAL Country: China</p>

A TOTAL OF 108(55J+53C) COMPLETE PEER-REVIEWED PAPERS: >>>>>>>> FIRST AUTHOR: 82 PAPERS (43 JOURNALS + 39 CONFERENCES)

***AFFILIATED TO SCHOOL OF ARTIFICIAL INTELLIGENCE, GUET, GUILIN, CHINA (50 PAPERS: 26 JOURNALS AND 24 CONFERENCES)**

*MOST SIGNIFICANT PAPERS

1. [Chaddad A.](#), Tanougast C., 2023 "CNN approach for predicting survival outcome of patients with COVID-19", *IEEE Internet of Things*, DOI: 10.1109/JIOT.2023.3262882 (March 2023). [[Impact Factor=10.6](#)]
2. [Chaddad A.](#), lu Q., Li J, Katib Y., Kateb R., Tanougast C., Bouridane A., Abdulkadir A., 2022 "Explainable, Domain-Adaptive, and Federated Artificial Intelligence in Medicine", *IEEE/CAA Journal of Automatica Sinica.*, vol.10, no.4, DOI: 10.1109/JAS.2023.123123 (March 2023). [[Impact Factor=11.8](#)]
3. [Chaddad A.](#), Hassan L., Desrosiers, C., 2022 "Deep Radiomic Analysis for Predicting Coronavirus Disease 2019 in Computerized Tomography and X-ray Images", *IEEE Transactions on Neural Networks and Learning Systems.*, vol. 32, DOI: 10.1109/TNNLS.2021.3119071. [[Impact Factor=10.4](#)]

4. Chaddad A., Sargos P., Desrosiers, C., 2021 “Modeling texture in deep 3D CNN for survival analysis”, *IEEE Journal of Biomedical and Health Informatics*, DOI: 10.1109/JBHI.2020.3025901. [Impact Factor=7.7]
5. Chaddad, A., Daniel, P., 2019. Novel Radiomic Features Based on Joint Intensity Matrices for Predicting Glioblastoma Patient Survival Time. *IEEE Journal of Biomedical and Health Informatics* 23, 795–804. <https://doi.org/10.1109/JBHI.2018.2825027>. [Impact Factor=7.7]

PEER-REVIEWED JOURNALS PUBLICATIONS

6. Chaddad, A., Liang X., Stability of Radiomic Models and Strategies to Enhance Reproducibility, *IEEE Transactions on Radiation and Plasma Medical Sciences*, (Digital Object Identifier or DOI: 10.1109/TRPMS.2024.3365778), accepted February 10, 2024.
7. Chaddad, A., Wu Y, Desrosiers C. Federated Learning for Healthcare Applications. *IEEE Internet of Things Journal*. 2023; (Accepted Oct. 16).
8. Chaddad, A., Hassan L., Katib Y, 2023. A texture-based method for predicting molecular markers and survival outcome in lower grade glioma. *Applied Intelligence*, <https://doi.org/10.1007/s10489-023-04844-6>.
9. Rathore S., Iftikhar M., Chaddad, A, Singh, A., Gillani, Z., Abdulkadir, A., 2023, Imaging phenotypes predict overall survival in glioma more accurate than basic demographic and cell mutation profiles, *Computer Methods and Programs in Biomedicine*, <https://doi.org/10.1016/j.cmpb.2023.107812>.
10. Chaddad, A., Tan G., Liang X., Hassan L., Rathore S., Desrosiers C., Katib Y., Niazi T., 2023. Advancements in MRI-Based Radiomics and Artificial Intelligence for Prostate Cancer: A Comprehensive Review and Future Prospects. *Cancers*, 2023, 15(15), 3839, <https://doi.org/10.3390/cancers15153839>.
11. Chaddad, A., Wu Y, Kateb R, Bouridane A. Electroencephalography Signal Processing: A Comprehensive Review and Analysis of Methods and Techniques. *Sensors*. 2023; 23(14):6434. <https://doi.org/10.3390/s23146434>
12. Chaddad, A., Hassan L., Katib Y., and Bouridane A., 2023. Deep survival analysis with clinical variables for COVID-19. *IEEE Journal of Translational Engineering in Health and Medicine*, vol.11, pp: 223-231, DOI:10.1109/JTEHM.2023.3256966
13. Chaddad, A., Peng, J., Xu, J. and Bouridane, A., 2023. Survey of Explainable AI Techniques in Healthcare. *Sensors* 2023, 23(2), 634; <https://doi.org/10.3390/s23020634>
14. Longzhao Huang; Yujie Li; Xu Wang; Haoyu Wang; Ahmed Bouridane; Ahmad Chaddad[#]. 2022 “Gaze estimation approach using deep differential residual network”, *Sensors* 2022, 22(14), 5462; <https://doi.org/10.3390/s22145462>
15. Chaddad A., Daniel P., Zhang M., Rathore S., Sargos P., Desrosiers, C., Niazi T., 2022 “Deep radiomic signature with immune cell markers predicts the survival of glioma patients”, *Neurocomputing*, <https://doi.org/10.1016/j.neucom.2020.10.117>.
16. Chaddad A., Hassan L., Desrosiers, C., et al., 2021 “Can Autism Be Diagnosed with Artificial Intelligence? A Narrative Review”, *Diagnostics* 2021, 11, 2032. <https://doi.org/10.3390/diagnostics11112032>
17. Zhang, M., Zhang, M., Zhang, F., Chaddad A., and Evans, A., 2022 “Robust brain MR image compressive sensing via re-weighted total variation and sparse regression”, *Magnetic Resonance Imaging*, 85, 271-286, <https://doi.org/10.1016/j.mri.2021.10.031>
18. Giraud N, Benziane N, Schick U, Beauval J-B, Chaddad A., Niazi T, Faye MD, Supiot S, Sargos P and Latorzeff I., 2021 “Post-Operative Radiotherapy in Prostate Cancer: Is It Time for a Belt and Braces Approach?” *Front. Oncol.* 11:781040. doi: 10.3389/fonc.2021.781040
19. Chaddad A., Hassan L., Desrosiers, C., et al., 2021 “Deep CNN models for predicting COVID-19 in CT and x-ray images”, *SPIE Journal of medical imaging*, 8(S1), 1-13, <https://doi.org/10.1117/1.JMI.8.S1.014502>.
20. Rathore S., Chaddad A., Iftikhar M., Bilello M., Abdulkadir A., 2021 “Combining MR and Histologic Imaging Features for Predicting Overall Survival in Patients with Glioma”, *Radiology: Imaging Cancer*, 2021; 3(4):e200108, <https://doi.org/10.1148/rycan.2021200108>.
21. Chaddad A., Hassan L., Katib Y., “Future Artificial Intelligence tools and perspectives in medicine”, *Current Opinion in Urology*, Volume 31 - Issue 4 - p 371-377, doi: 10.1097/MOU.0000000000000884.
22. Chaddad A., Kucharczyk M., Cheddad A., EClarke S., Hassan L., Ding S., Rathore S., Zhang M., Katib Y., Bahoric B., Abikhzer G., Probst S., Niazi T., 2020 “Magnetic Resonance Imaging Based Radiomic Models of Prostate Cancer: A Narrative Review”, *Cancers* 2021, 13(3), 552; <https://doi.org/10.3390/cancers13030552>.
23. Chaddad A., Kucharczyk MJ, Desrosiers, C., et al., 2020 “Deep radiomic analysis to predict Gleason Score in Prostate Cancer”, *IEEE Access*, DOI: 10.1109/ACCESS.2020.3023902
24. Ji, L., Zhang, R., Han, H., Chaddad, A., 2020 “Image Magnification Based on Bicubic Approximation with Edge as Constraint”, *Appl. Sci.*, 10, 1865. <https://doi.org/10.3390/app10051865>
25. Saima Rathore *, Tamim Niazi, Aksam Iftikhar, Ashish Singh, Batool Rathore, Michel Bilello, Chaddad, A., 2020 “Multi-modal ensemble-based segmentation of white matter lesions and analysis of their differential characteristics across major brain regions”, *Appl. Sci.* 2020, 10(6), 1903; <https://doi.org/10.3390/app10061903>
26. Rathore S., Niazi T., Iftikhar A., Chaddad, A., 2020 “Glioma grading via analysis of digital pathology images using machine learning”, *Cancers* 2020, 12, 578. <https://doi.org/10.3390/cancers12030578>
27. Kucharczyk MJ, Tsui JMG, Khosrow-Khavar F, Bahoric B, Souhami L, Anidjar M, Probst S, Chaddad A, Sargos P and Niazi T (2020) Combined Long-Term Androgen Deprivation and Pelvic Radiotherapy in the Post-operative Management of Pathologically Defined High-Risk Prostate Cancer Patients: Results of the Prospective Phase II McGill 0913 Study. *Front. Oncol.* 10:312. doi: 10.3389/fonc.2020.00312

28. Rathore S., Iftikhar A., Chaddad, A., et al., "Segmentation and grade prediction of colon cancer digital pathology images across multiple institutions". *Cancers*, 2019, 11, 1700. <https://doi.org/10.3390/cancers11111700>
29. Chaddad, A., Daniel P., Sabri S., Desrosiers C., Abdulkarim B., 2019. "Integration of Radiomic and Multi-omic Analyses Predicts Survival of Newly Diagnosed IDH1 Wild-Type Glioblastoma", *Cancers*, 2019, 11, 1148. <https://doi.org/10.3390/cancers11081148>. [Impact Factor=6.5]
30. Chaddad, A., Toews, M., Desrosiers C., Niazi, T., 2019. "Deep Radiomic analysis Based on Modeling Information flow in Convolutional Neural Networks", *IEEE Access*, 10.1109/ACCESS.2019.2930238
31. Chaddad, A., Desrosiers, C., Abdulkarim, B., Niazi, T., 2019. "Multimodal radiomic features for predicting the gene status and survival outcome of lower-grade glioma patients", *IEEE Access*, vol.7, 75976-75984, 10.1109/ACCESS.2019.2920396
32. Chaddad, A., Michael, J.K., Daniel, P., Sabri, S., Jean-Claude, B., Niazi, T., Abdulkarim, B., 2019. Radiomics in glioblastoma: current status and challenges facing clinical implementation. *Frontiers in oncology*, DOI: 10.3389/fonc.2019.00374
33. Elakshar, S., James, M.G.T., Michael, J.K., Tomic, N., Fawaz, Z.S., Bahoric, B., Papayanatos, J., Chaddad, A., Niazi, T., 2019. Does interfraction cone beam computed tomography improve target localization in prostate bed radiotherapy? *Technology in Cancer Research and Treatment* 18. <https://doi.org/10.1177/1533033819831962>
34. Daniel, P., Sabri, S., Chaddad, A., Meehan, B., Jean-Claude, B., Rak, J., Abdulkarim, B.S., 2019. Temozolomide induced hypermutation in glioma: Evolutionary mechanisms and therapeutic opportunities. *Frontiers in Oncology* 9. <https://doi.org/10.3389/fonc.2019.00041>
35. Chaddad, A., Desrosiers, C., Niazi, T., 2018b. Deep radiomic analysis of MRI related to Alzheimer's disease. *IEEE Access* 6, 58213–58221. <https://doi.org/10.1109/ACCESS.2018.2871977>
36. Chaddad, A., Niazi, T., Probst, S., Bladou, F., Anidjar, M., Bahoric, B., 2018d. Predicting gleason score of prostate cancer patients using radiomic analysis. *Frontiers in Oncology* 8. <https://doi.org/10.3389/fonc.2018.00630>
37. Chaddad, A., Kucharczyk, M.J., Niazi, T., 2018c. Multimodal radiomic features for the predicting gleason score of prostate cancer. *Cancers* 10. <https://doi.org/10.3390/cancers10080249>
38. Chaddad, A., Sabri, S., Niazi, T., Abdulkarim, B., 2018e. Prediction of survival with multi-scale radiomic analysis in glioblastoma patients. *Medical and Biological Engineering and Computing* 56, 2287–2300. <https://doi.org/10.1007/s11517-018-1858-4>
39. Chaddad, A., Daniel, P., Niazi, T., 2018a. Radiomics evaluation of histological heterogeneity using multiscale textures derived from 3D wavelet transformation of multispectral images. *Frontiers in Oncology* 8. <https://doi.org/10.3389/fonc.2018.00096>
40. Chaddad, A., Desrosiers, C., Toews, M., 2017b. Multi-scale radiomic analysis of sub-cortical regions in MRI related to autism, gender and age. *Scientific Reports* 7. <https://doi.org/10.1038/srep45639>
41. Chaddad, A., Desrosiers, C., Toews, M., Abdulkarim, B., 2017c. Predicting survival time of lung cancer patients using radiomic analysis. *Oncotarget* 8, 104393–104407. <https://doi.org/10.18632/oncotarget.22251>
42. Chaddad, A., Desrosiers, C., Hassan, L., Tanougast, C., 2017a. Hippocampus and amygdala radiomic biomarkers for the study of autism spectrum disorder. *BMC Neuroscience* 18. <https://doi.org/10.1186/s12868-017-0373-0>
43. Haj-Hassan, H., Chaddad, A., Harkouss, Y., Desrosiers, C., Toews, M., Tanougast, C., 2017. Classifications of multispectral colorectal cancer tissues using convolution neural network. *Journal of Pathology Informatics* 8. https://doi.org/10.4103/jpi.jpi_47_16
44. Chaddad, A., Tanougast, C., 2017. Texture Analysis of Abnormal Cell Images for Predicting the Continuum of Colorectal Cancer. *Analytical Cellular Pathology* 2017. <https://doi.org/10.1155/2017/8428102>
45. Chaddad, A., Desrosiers, C., Hassan, L., Tanougast, C., 2016b. A quantitative study of shape descriptors from glioblastoma multiforme phenotypes for predicting survival outcome. *British Journal of Radiology* 89. <https://doi.org/10.1259/bjr.20160575>
46. Chaddad, A., Tanougast, C., 2016b. Extracted magnetic resonance texture features discriminate between phenotypes and are associated with overall survival in glioblastoma multiforme patients. *Medical and Biological Engineering and Computing* 54, 1707–1718. <https://doi.org/10.1007/s11517-016-1461-5>
47. Chaddad, A., Desrosiers, C., Bouridane, A., Toews, M., Hassan, L., Tanougast, C., 2016a. Multi texture analysis of colorectal cancer continuum using multispectral imagery. *PLoS ONE* 11. <https://doi.org/10.1371/journal.pone.0149893>
48. Chaddad, A., Tanougast, C., 2016a. Quantitative evaluation of robust skull stripping and tumor detection applied to axial MR images. *Brain Informatics* 3, 53–61. <https://doi.org/10.1007/s40708-016-0033-7>
49. Chaddad, A., Tanougast, C., 2015a. Real-time abnormal cell detection using a deformable snake model. *Health and Technology* 5, 179–187. <https://doi.org/10.1007/s12553-015-0115-1>
50. Chaddad, A., Tanougast, C., 2015b. High-Throughput Quantification of Phenotype Heterogeneity Using Statistical Features. *Advances in Bioinformatics* 2015. <https://doi.org/10.1155/2015/728164>
51. Chaddad, A., 2015. Automated feature extraction in brain tumor by magnetic resonance imaging using gaussian mixture models. *International Journal of Biomedical Imaging* 2015. <https://doi.org/10.1155/2015/868031>
52. Chaddad, A., 2014. Low-Noise Front-End Receiver Dedicated to Biomedical Devices: NIRS Acquisition System. *Circuits and Systems* 05, 191. <https://doi.org/10.4236/cs.2014.58021>
53. Chaddad, A., 2014. Brain Function Diagnosis Enhanced Using Denoised fNIRS Raw Signals. *Journal of Biomedical Science and Engineering* 07, 218. <https://doi.org/10.4236/jbise.2014.74025>
54. Chaddad, A., Tanougast, C., Golato, A., Dandache, A., 2013. Carcinoma cell identification via optical microscopy and shape feature analysis. *Journal of*

55. Chaddad, A., Tanougast, C., Dandache, A., Bouridane, A., 2011c. Extracted haralick's texture features and morphological parameters from segmented multispectral texture bio-images for classification of colon cancer cells. *WSEAS Transactions on Biology and Biomedicine* 8, 39–50.

PEER-REVIEWED CONFERENCE PUBLICATIONS

56. Wu Y., Desrosier C., Chaddad A.*, Jiang Y., “FACMIC: Federated Adaptive Clip Model for Medical Image Classification”, MICCAI 2024 (accepted)
57. Chaddad A., Jiang Y., “Reinforcement Learning for Medical Image Classification Based on Deep Deterministic Policy Gradients”, ISBI 2024 (accepted)
58. Chaddad A., Wu Y., “Domain Adaptation in Machine Learning: A Practical Simulation Study”, IEEE ICTAI 2023, (accepted) USA.
59. Chaddad A., Wu Y., “Enhancing Classification Tasks through Domain Adaptation Strategies”, IEEE BIBM 2023, (accepted), Istanbul, Turkey.
60. Chaddad A., Jiang Y., «Medical Metaverse: A New Virtual Health Experience”, BIBE 2023 (accepted).
61. Chaddad A., He C., Jiang Y., “ChatGPT: An Artificial Intelligence-Based Approach to Enhance Medical Applications”, BIBE 2023 (accepted).
62. Chaddad A., « Acceleration of Convolutional Neural Networks”, BIBE 2023 (accepted).
63. Hu Y., Chaddad A., “Boosting Classification Tasks with Federated Learning: Concepts, Experiments and Perspectives”, BIBE 2023 (accepted).
64. Chaddad A., “A Comprehensive Analysis of Lung Sound Signals”, Healthcom 2023, accepted,
65. Chaddad A., “Stability in Radiomics Analysis: Advancements and Challenges”, Healthcom 2023, accepted.
66. Chaddad A., Wu Y., “A practical simulation for domain adaptation models”, Healthcom 2023, accepted.
67. Chaddad A., Wu Y., Kateb R., “Building a Better Metaverse: How Federated Learning is Revolutionizing Virtual Worlds”, Healthcom 2023, accepted.
68. Chaddad A., Jiang Y., He C., “OpenAI ChatGPT: A Potential Medical Application”, Healthcom 2023, accepted.
69. Hu Y., Chaddad A., “Potential of Federated Learning in Healthcare”, Healthcom 2023, accepted.
70. Wen B., Chaddad A., “The Use of Explainable Artificial Intelligence in Medicine”, Healthcom 2023, accepted.
71. Chaddad A., Wang Y., Feng J., “Radiomics for a Comprehensive Assessment of Glioblastoma Multiforme”, Healthcom 2023, accepted.
72. Chaddad A., Tanougast C., “Advances in MRI-Based Radiomics for Prostate Cancer”, IEEE ISBI 2023, 18-21 April 2023, Colombia.
73. Chaddad A., Tanougast C., “A One-Dimensional Convolutional Neural Network Model for Predicting the Survival Outcome of Coronavirus Disease 2019”, IEEE ISBI 2023, 18-21 April 2023, Colombia.
74. BEN-AKKA M., TANOUCAST C., DIOU C., Chaddad A., An Efficient Hardware Implementation of the Double Q-Learning Algorithm, International Conference on Electrical, Computer, Communications and Mechatronics Engineering (ICECCME 2023), 19-20 July 2023, Spain.
75. Li Y., Tan B., Shuxue D., Desrosiers C., Chaddad A.#, “Symmetry Structured Analysis Sparse Coding for Key Frame Extraction”, ML4CS 2022, LNCS 13655, pp. 1–18, 2022. https://doi.org/10.1007/978-3-031-20096-0_44
76. Chaddad A., Zhang M., Hassan L., Niazi T., “Modeling of textures to predict immune cell status and survival of brain tumour patients”, 2021 IEEE International Symposium on Biomedical Imaging (ISBI), pp. 1067-1071, 2021. <https://ieeexplore.ieee.org/document/9434053>.
77. Zhang M., Zhang F., Zhang J., Chaddad A., Guo F., Zhang W., Zhang Ji., Evans A., “AutoEncoder for Neuroimage”, 32st International Conference on Database and Expert Systems Applications, 2021, vol 12924, https://doi.org/10.1007/978-3-030-86475-0_9
78. Zhang M., Zhao Z., Zhang W., Chaddad A., Evans A., Poline J.B., “Deep Discriminative Learning for Predicting Autism Spectrum Disorder”, 31st International Conference on Database and Expert Systems Applications, Pages 435-443, 2020, https://doi.org/10.1007/978-3-030-59003-1_29.
79. Chaddad, A., Zhang, M., Desrosiers, C., and Niazi, T., “Deep radiomic features from MRI scans predict survival outcome of recurrent glioblastoma” MICCAI RNO-AI 2019. Pages 36-43, https://rd.springer.com/chapter/10.1007/978-3-030-40124-5_4
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TECHNICAL REPORTS (VILLANOVA UNIVERSITY AND DEFENSE R&D CANADA)

1. Chaddad, A., et al. “Feature Selection for Target and Clutter Discrimination”, Villanova university, 2014.
2. Chaddad, A., et al. “Target and Clutter Discrimination Based on Features Extracted using Many Techniques”, Villanova university, 2014.

THESES

1. Detection and classification of cancer cell histological images for the development of configurable biomedical instrumentation to assist with real-time diagnostics. Chaddad, A., Ph.D. thesis, 2012. (<http://www.theses.fr/s188348>)
2. Study of the cyclostationarity in the EMG signal in isometric condition. Chaddad, A., Master’s thesis, 2008.
3. Electronic tensiometer. Chaddad, A., B.Eng. project, 2007. (https://achaddad.weebly.com/uploads/2/0/6/2/2062368/rapport_finale_de_genie_biomedical.pdf)

COURSE DEVELOPMENT AND LECTURING

2020-ongoing	1. Digital signal processing (Course, full TD and TP, GUET, China) 2. Digital system and design (Course, full TD and TP, GUET, China) 3. Computer vision (Course, full TD and TP, GUET, China)
2015 – 2019	4. Biometric system, (Ecole de Technologie Supérieure, Canada), 36h 5. Analog and digital (Electronic) circuits (Ecole de Technologie Supérieure, Canada), 252h 6. Computer vision (Ecole de Technologie Supérieure, Canada), 108h
2009 – 2012	7. Digital and analog electronics (Course, University of Lorraine 2009, Arts sciences & technology university in Lebanon 2010), 81h 8. Digital and analog communications (TD and TP, Arts sciences & technology university in Lebanon 2010), 45h 9. Programming language Matlab (TD and TP, Arts sciences & technology university in Lebanon 2010), 45h

ACADEMIC REVIEWER / COMMITTEE MEMBER

- IEEE JBHI, IEEE TNNLS, IEEE TMI, Neuroimage, MIA, IJBI, ...
- NEJM, Scientific reports, PLOS One, Digital signal processing, Frontiers in oncology, Neuroimaging, ...
- CVPR, MICCAI, ICPR, ICIP, ISBI, IPTA, ...

RESPONSIBILITIES

2018 – ongoing	Associate member, LIVIA, ETS, Montreal, Canada
2014 – ongoing	Research associate at LCOMS lab., University of Lorraine, Metz, France

INVITED SPEAKER

2023	Hospital of Guilin Medical College, Guilin, China Presentation title (June): Artificial intelligence for Personalized medicine
	Hospital of Guangxi Zhuang Autonomous Region Presentation title (June): Artificial intelligence in Healthcare http://m.gxhospital.com/djwh_wthd/2023/oeEX3ld0.html
	Department of Community Health Sciences, Manitoba University , Canada Presentation title (Nov.): Artificial intelligence for complex health data
2019	School of Artificial intelligence, Guilin University , China Presentation title (June.): Artificial intelligence for personalized treatment https://www.guet.edu.cn/sai/info/1012/1049.htm
	Université laval , Qc, Canada Presentation title (Jan.): Deep radiomic analysis for personalized medicine https://www.ift.ulaval.ca/recherche-et-innovation/seminaires/
	St. Jude Children’s Research Hospital , Memphis, TN, USA Chalk Talk (Dec.): Radiomics with artificial intelligence for personalized medicine
2018	St. Jude Children’s Research Hospital , Memphis, TN, USA Presentation title (Sept.): The development of biomedical imaging’s fledgling and future star
	Cold Spring Harbor Laboratory , NY, USA Presentation title (July): Deep radiogenomic features for personalized medicine
	XLIM , University of Poitiers, France Presentation title (Mar.): “ <i>Développement radiomiques pour des applications en imagerie biomédicale</i> ”
	Marshall University , Huntington, WV, USA Presentation title: Deep learning and machine learning application for medical images
2017	McGill University Health Centre , Montreal, Canada Presentation title: Development of radiomic applications for oncologic imaging
	Radiomic Symposium, Princess Margaret Cancer Centre , Toronto, Canada

Presentation title: Radiomic application on medical images

2016

International Summit on Biomarkers and Therapeutic Advances in Radiation Oncology,
[McGill University](#), Montreal, Canada
Presentation title: Radiomic analysis of GBM patients

2014

Seminar at the LCOMS laboratory
[University of Lorraine](#), Metz, France
Presentation title: Continuum analysis of colorectal pathology tissues

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Reference available upon Request