

Curriculum Vitae

Dr. Haidar Jawad Mohamad

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PERSONAL SUMMARY:

Asst. Prof. Dr. Haidar Jawad Mohamad received a Ph.D. degree in physics from the University of Exeter – the UK in 2015. The dissertation focused on the fabricate, optical measurement, and simulate different Nanofilms thickness. The ultrafast laser system from Coherent with femtosecond pulse width gives a good opportunity to measure electron behavior in the femtosecond time scale. The outcome of this work reflects a publication in the Clarivate journal. There is much cooperation during the dissertation period like the USA for the semimetal CrO₂ samples and Leeds University for multilayer thin film. The Spin current was the main project aim, the multilayer sample of Py/Cu/YIG/GGG used to be the candidate for this purpose.

Dr. Haidar joined back the members of the physics department in 2016 and reflects the experiences by helping his colleagues in all fields. Soon became one of the important committee members within the University and College positions. Moreover, became a supervisor for many postgraduate students and one of the viva committees on different occasions.

EDUCATION:

- Ph.D. #1: 2015 [Exeter University, UK]
- M.Sc. #2: 2003 [Mustansiriyah University, College of Science, Department of Physics]
- B.Sc. #3: 2000 [Mustansiriyah University, College of Science, Department of Physics]

ACADEMIC HONORS AND AWARDS:

- #1: Many academic honors received from the head of physics department.
- #2: Many academic honors received from the dean of faculty.
- #3: Many academic honors received from the rector of Mustansiriyah University.

ACADEMIC /TEACHING EXPERIENCE:

- #1: Anticipate as a reviewer like “Journal of Theoretical and Applied Physics (JTAP)” in the Scopus journals and IEEE.
- #2: Teaching.
- #3: Programming.
- #4: Work in the lab and publish papers.

COURSES TAUGHT:

Undergraduate
Postgraduate

Supervisor for:

- 1- **MSc** thesis for **Murtadha Kasim Jawad** "Contrast Images Enhancement Using Adopted Algorithms based on Fuzzy-Logic" 2020.
- 2- **MSc** thesis for **Nedaa Monther Salman** "Quantitative Analysis for The Outdoor Shadow Objects Image to Model Shadow Length and Time" 2020.
- 3- **MSc** thesis for **Muhaiman Ali Abdul-Hussain** "Ultrafast Laser Simulation for Multilayer Thin Film" 2021.
- 4- **MSc** thesis for **Emtinan Jawad** "Retinal Images Enhancement using color restoration and intensity Adjustment" 2022.
- 5- **MSc** thesis for **Nawras Badee Mohamad** "Design adaptive metrics to determine the fused image quality based on the detection of edges of added and deleted images" 2023.
- 6- **MSc** thesis for **Raed Jumaa yaseen** "Numerical Investigation of Metal Nanostructure Attached to Few Layers of Graphene Nanosheets for Sensing Application" 2023.
- 7- **PhD** thesis for **Alaa Jassim Mohamad** "Analytical study to direct and focus electromagnetic spectrum beams within the microwave range" 2024.
- 8- **MSc** thesis for **Zainab Jameel Kamil** "Laser-induced Breakdown Spectroscopy for Plants components" 2024.
- 9- **PhD** thesis for **Rajaa Nader Ketan** "Laser-induced breakdown spectroscopy as a tool in the elemental cosmetic analysis" 2025.
- 10- **MSc** thesis for **Saffa Issam Mohamed Ali Alkafaji** "Simulation and theoretical analysis for ultrafast laser for optical applications" 2025.
- 11- **PhD** thesis for **Sura Allawi Obaid** "Employing Laser-induced breakdown spectroscopy technique to study metal concentrations for chronic and non-chronic diseases" 2026

PROFESSIONAL AFFILIATIONS:

- Member in IOP.
- Exeter Alumni - UK.
- Mustansiriyah University, College of Science, Department of Physics, Baghdad - Iraq.

PUBLICATIONS:

1. Heba Khudhair Abbas, **Haidar Jawad Mohamad**, & Khloud Falih Abbas “Ultrasound image smoothing based on adaptive and non-adaptive filters” Journal of the Pakistan Medical Association, 74(10 (Supple-08), S345-S351. (2024-09-28) <https://doi.org/10.47391/JPMA-BAGH-16-79>
2. Zainab Jameel Kamil, Muayyed Jabar Zoory, Haidar J. Mohamad, “Application of a new method to estimate micronutrient concentration percentages in dried celery plants using LIBS and XRF techniques” Journal of Optics, **25 September 2024**. <https://doi.org/10.1007/s12596-024-02258-2>
3. Rajaa Nader Ketan, **Haidar J. Mohamad**, Muayyed Jabar Zoory "Comparison of heavy metals concentrations in toothpaste using atomic absorption analysis and laser-induced breakdown". Journal of Optics. **05 September 2024**, <https://doi.org/10.1007/s12596-024-02195-0>.
4. Ahmed Asaad Zaeen, Nawras Badaea Mohammed, **Haidar J. Mohamad**, Heba Kh. Abbas, Anwar. H. Al-Saleh, and Ali A. Al-Zuky “Suggested Fusion techniques applied to smoothed images in image processing” **Accepted in IJS vol. 66, no. 3 and will be published in March-2025**.
5. Shaymaa H. Kafi, Asmaa A. Abdul Razaq, Rasha Awad Abtan, Ali A AL-Zuky, Anwar H Al-Saleh, Duaa A. Taban, **Haidar J. Mohamad** “Analysis and simulation of surface plasmon resonance in tantalum pentoxide and gold layers on a prism”. Journal of Optics, **31 July 2024**, <https://doi.org/10.1007/s12596-024-02078-4>.
6. Alaa J. Mohammed, Muayyed J. Zoory, and **Haidar J. Mohamad** “Design of a Simulated Tri-Bandwidth circular patch with slot for X and C bands applications” MJPS, Vol. (11), No. (1), **1 Jun 2024**. DOI: [10.52113/2/11.01.2024/29-41](https://doi.org/10.52113/2/11.01.2024/29-41)
7. Zainab Jameel Kamil, Muayyed Jabar Zoory, **Haidar J. Mohamad**, “Estimate of macronutrient concentration in dried flaxseed plants using LIBS technique.” Journal of Optics, **13 July 2024** <https://doi.org/10.1007/s12596-024-02041-3>.
8. Nawras Badaea Mohammed, **Haidar J. Mohamad**, Heba Kh. Abbas “Fusion Images Techniques for Motion Pixel in A blurred Image”, Iraqi Journal of Science, vol. 65, no. 6, pp. 3536–3549, **2024-06-30**, [doi: 10.24996/ijs.2024.65.6.44](https://doi.org/10.24996/ijs.2024.65.6.44).
9. **Haidar J. Mohamad**, Shaymaa Hasan Kafi, and Farah Jawad Kadhum “Surface Plasmon Resonance Analysis for Benzene Sensing Media Using Silver and Ta₂O₅ Thin Films” Malaysian Journal of Science 43(2): 96-103 (2024-06-30), <https://doi.org/10.22452/mjs.vol43no2.10> [View of SURFACE PLASMON RESONANCE ANALYSIS FOR BENZENE SENSING MEDIA USING SILVER AND Ta₂O₅ THIN FILMS \(um.edu.my\)](https://www.um.edu.my/view/surface-plasmon-resonance-analysis-for-benzene-sensing-media-using-silver-and-ta2o5-thin-films)
10. Zainab Jameel Kamil, Muayyed Jabar Zoory, **Haidar J. Mohamad**, “LIBS technique for plant mineral ratio analysis and environmental and agricultural importance: a comprehensive review” Eur. Phys. J. D 78, 27 (2024). **15 March 2024** <https://doi.org/10.1140/epid/s10053-024-00818-6>
11. Nawras Badaea Mohammed, **Haidar J. Mohamad**, Heba Kh. Abbas, and Ali Aqeel Salim “Quantitative Analysis of Blurry Color Image Fusion Techniques Using Color Transform” Al-Mustansiriyah Journal of Science, Volume 34, Issue 3, **30-9-2023**. DOI: <http://doi.org/10.23851/mjs.v34i3.1373>
12. Nedal Ali Hussain, Lamyaa A. Latif, **Haidar J. Mohamad** “Preparation of Silver Sulphide (Ag₂S) Thin Films by Chemical Bath Deposition for Application in Photocatalytic”. Indonesian Journal of Electrical

- Engineering and Computer Science Vol. 31, No. **2**, August 2023, pp. 692~699 ISSN: 2502-4752, DOI: 10.11591/ijeecs.v31.i2.pp692-699
13. Noor M Hashem, Heba Kh Abbas and **Haidar J Mohamad** "Optical system to recognize car plate ownership" Malaysian Journal of Fundamental and Applied Sciences, **26-05-2023**, Vol. 19, pp 406-416, <https://doi.org/10.11113/mjfas.v19n3.2991>
 14. **Haidar J. Mohamad**, Shaymaa H. Kafi, Duaa A. Taban "Ag/CdS Surface Plasmon Simulation Systems for Gas Sensor" Kuwait Journal of Science, **19 May 2023**, ISSN 2307-4108, <https://doi.org/10.1016/j.kjs.2023.05.007>
 15. Teeba A. Touma, Heba Kh. Abbas, **Haidar J. Mohamad** and Ali A. Al-Zuky, " Intelligent Detection of Traffic Lights Using Morphological Operations" (**31 March 2023**) AIP Conference Proceedings 2475, 090020 (2023); <https://doi.org/10.1063/5.0102888>.
 16. Noor M. Hashem, Heba Kh. Abbas, **Haidar J. Mohamad** "Detection and Recognition of Car Plates in Parking Lots at Baghdad University" Iraqi Journal of Science, **28-02-2023**, Vol. 64, No. 2, pp: 1018-1029, DOI: 10.24996/ij.s.2023.64.2.43. ([Detection and Recognition of Car Plates in Parking Lots at Baghdad University | Iraqi Journal of Science \(uobaghdad.edu.iq\)](https://www.uobaghdad.edu.iq/index.php/eijs/article/view/7735))
 17. Rasha Awad Abtan, Anwar H. Al-Saleh, **Haidar J. Mohamed**, Heba Kh. Abbas, Ali A. Alzuky "Texture Features of Grey Level Size Zone Matrix for Breast Cancer Detection" Iraqi Journal of Science, **2023**, Vol. 64, No. 1, pp: 492-502. <https://www.ij.s.uobaghdad.edu.iq/index.php/eijs/article/view/7735>
 18. Teeba.A Touma, Heba Kh. Abbas, Anwar H. Al Saleh, **Haidar J. Mohamad** "Determine Distances and Area of Traffic Lights using image processing algorithms" AIP Conference Proceedings 2547, 050004 (2022); <https://doi.org/10.1063/5.0113085> Published Online: **02 December 2022** *AIP conference proceedings, 9th International Conference of Applied Science and Technology- Karbala University (ICAST2021)*
 19. Uday Ali Al-Jarah, **Haidar J. Mohamad**, Yahya M. Abdul-Hussein, "CdS doped with silver as CO₂ gas sensor using Pyrolysis technique" Indonesian Journal of Electrical Engineering and Computer Science, Vol. 28, No. 2, November 2022, pp. 686~692, DOI: 10.11591/ijeecs.v28.i2.pp686-692. <https://ijeecs.iaescore.com/index.php/IJEECS/article/view/28022>
 20. Emtinan Mohammed Jawad, Hazim G. Daway, **Haidar J. Mohamad** "Retinal Image Enhancement by using Adapted Histogram Equalization based on Segmentation and Lab Color Space" International Journal of Intelligent Engineering and Systems, Vol.15, No.3, **31 October 2022**. DOI: 10.22266/ijies2022.0630.52 (https://inass.org/publications/contents/?y=2022&mo_num=10&mo_en=Oct&mo_enf=October&report_day=31&volume=15&issue=5)
 21. Emtinan Mohammed Jawad, **Haidar J. Mohamad**, Hazim G. Daway, "Enhancement of the Retinal Images Based on Wavelet Fusion Technique Using Adaptive Histogram Equalization Method" International Journal of Intelligent Engineering and Systems, Vol.15, No.5, **30 Jun 2022** DOI: 10.22266/ijies2022.1031
 22. R. A. Alsaigh, L. R. Shelford, **H. J. Mohamad**, A. Shalini, U. A. S. Al-Jarah, V. Bragaglia, A. Giussani, R. Calarco, G. P. Srivastava, and R. J. Hicken "Characterisation of optical phonons within epitaxial GST/InAs(111) structures", Solid State Communications. Volume 351, **2022**, 114788, ISSN 0038-1098, <https://doi.org/10.1016/j.ssc.2022.114788>.

23. Muhaiman A. Abdul-Hussain, **Haidar J. Mohamad**, and Ahmed Al-Haddad “1-D Simulation of Ultrafast-Pulsed Laser into Nano-Sized Multilayered Structure for Memory Device Applications” Iraqi Journal of Science, **2022-03-30**, Vol. 63, No. 3, pp: 1045-1054. <https://ijs.uobaghdad.edu.iq/index.php/eijs/article/view/4805>
24. Muhaiman A. Abdul-Hussain, **Haidar J. Mohamad** “Thermal Effect in a 3-D Simulation within Multilayer Thin Film of Ultrafast-Pulsed Laser” Al-Mustansiriyah Science Journal. Vol 32, No 4, pp. 104-109, (20/11/2021). DOI: <http://doi.org/10.23851/mjs.v32i4.1039>.
25. Noor H. Resham, Heba Kh. Abbas, **Haidar J. Mohamad**, Anwar H. Al-Saleh “Noise Reduction, Enhancement and Classification for Sonar Images” Iraqi Journal of Science, **2021-12-23**, Vol. 62, No. 11(Special Issue), pp: 4439-4452. DOI: 10.24996/ijs.2021.62.11(SI).25.
26. Heba Kh. Abbas, **Haidar J. Mohamad** “Feature Extraction in Six Blocks to Detect and Recognize English Numbers” Iraqi Journal of Science, **30-10-2021**, Vol. 62, No. 10, pp: 3790-3803, DOI: 10.24996/ijs.2021.62.10.37.
27. Murtadha K Jawad, Hazim G Daway, **Haidar J Mohamad** Esraa G. Daway “Lightness Enhancement by Fuzzy Logic Depending on Power Membership Function” Journal of Physics: Conference Series **2021/09/01** Vol. 1999 Issue 1 Pages 012129. <http://dx.doi.org/10.1088/1742-6596/1999/1/012129>
28. Noor H. Rasham, Heba Kh. Abbas, Asmaa A. Abdul Razaq and **Haidar J. Mohamad**, “Simulate Speckle Noise in Image Processing Methods” Computer Networks and Inventive Communication Technologies, vol 75, pp. 489-501, Springer, Singapore. 14 September **2021**. https://doi.org/10.1007/978-981-16-3728-5_37.
29. Nedaa M Salman, Ali A AL-Zuky, **Haidar J Mohamad**, S H Kafi, A H Al-Saleh “Introducing two Mathematical Models using Data Functional Approximation to Determine the Shadow Angles and Lengths in North of Baghdad City”, Journal of Physics: Conference Series 1963 (26 July **2021**) 012036, <https://doi.org/10.1088/1742-6596/1963/1/012036>.
30. Duaa A. Taban, Ali Al-Zuky, Shaymaa H. Kafi, Anwar H. Al-Saleh, **Haidar J. Mohamad** “Smart Electronic Switching (ON/OFF) System Based on Real-time Detection of Hand Location in the Video Frames”, Journal of Physics: Conference Series 1963 (26 July **2021**) 012002, <https://doi.org/10.1088/1742-6596/1963/1/012002>.
31. Heba Kh. Abbas, Nada A. Fatah, **Haidar J. Mohamad**, “Brain Tumor Detection Using Texture Feature Extraction” International Laser Technology and Optics Symposium 2020 (ILATOS2020) in Conjunction with Photonics Meeting 2020 (PM2020). Journal of Physics: Conference Series, 1892 (**03 May 2021**) 012012, <https://iopscience.iop.org/article/10.1088/1742-6596/1892/1/012012>.
32. Heba Abbas, Anwar Al-Saleh, **Haidar Mohamad**, Ali Al-Zuky “New algorithms to Enhanced Fused Images from Auto-Focus Images” Baghdad Science Journal, Mar 10, **2021**, DOI: <https://doi.org/10.21123/bsj.2021.18.1.0124>
33. **Haidar J Mohamad**, Yahyah Mustafa Abdul-Husaain, Uday Ali Sabeeh Al-Jarah “The Structural, Optical and Morphological Properties of NiO-Cu Prepared by Spray Pyrolysis Technique”, Microwave and Optical Technology Letters (Wiley), Volume 62, Issue 11, pp. 3519-3526, **July 2020**. <https://doi.org/10.1002/mop.32500>.

34. Aya S Derea, Heba Kh Abbas, **Haidar J Mohamad**, and Ali Al-Zuky “Adopting Run Length Features to Detect and Recognize Brain Tumor in Magnetic Resonance Images” DOI: [10.1109/CAS47993.2019.9075718](https://doi.org/10.1109/CAS47993.2019.9075718). IEEE Xplore: 23 April 2020. Mustansiriyah University, Education College, Computer Science Department, Baghdad, Iraq
35. Duaa A. Taban, Ali Al-Zuky, Anwar H. Al-Saleh, **Haidar J. Mohamad**, Hazim G. Daway, “ON/OFF Switch Control of Smart Home Prototype using Palm and Fist Hand gesture” AIP Conference Proceedings 2290, 040007 (2020); <https://doi.org/10.1063/5.0027540>, 04 December 2020.
36. Heba Abbas, Anwar Al-Saleh, Nada Fatah, **Haidar Mohamad** “Statistical Analysis of Satellite Images Merge Techniques based on Edge Detection” AIP Conference Proceedings 2290, 050017 (2020); <https://doi.org/10.1063/5.0027390> , 04 December 2020.
37. Nedaa M. Salman, Ali A. AL-Zuky, **Haidar J. Mohamad** and Anwar H. Al-Saleh “General Model to Find Shadow Length for different Objects” Neuro Quantology, **May 2020**, Volume 18, Issue 5, Page 43-49, doi: 10.14704/nq.2020.18.5.NQ20166
38. Nedaa M. Salman, Ali A. AL-Zuky, **Haidar J. Mohamad** and Anwar H. Al-Saleh “New Models to Estimate Daytime and Shadow Length by Tracking the Shadow” International Journal of Psychosocial Rehabilitation, Vol. 24, Issue 05, **2020**. ISSN: 1475-7192. DOI: [10.37200/IJPR/V24I5/PR2020109](https://doi.org/10.37200/IJPR/V24I5/PR2020109).
39. Murtadha K Jawad, Hazim G Daway, **Haidar J Mohamad** “Color Image Enhancement Depending on Fuzzy Logic and Nonlinear Transform” IOP Conf. Series: Materials Science and Engineering **871 (2020)** 012073 IOP Publishing. doi:[10.1088/1757-899X/871/1/012073](https://doi.org/10.1088/1757-899X/871/1/012073)
40. Aya S Derea, Heba Kh Abbas, Anwar H Al-Saleh and **Haidar J Mohamad**, “Adopting Texture Features to Detect and Recognize Brain Tumors in Magnetic Resonance Images”, Published 1 March **2020**. Published under licence by IOP Publishing Ltd. IOP Conference Series: Materials Science and Engineering, Volume 757, 1st International Conference in Physical Science and Advance Materials (PAM 2019) 20-25 September 2019, Saresa Hotel, Istanbul, **Turkey**., doi:[10.1088/1757-899X/757/1/012029](https://doi.org/10.1088/1757-899X/757/1/012029).
41. Duaa A. Taban, Ali Al-Zuky, Anwar H. Al-Saleh and **Haidar J. Mohamad**, “Machine intelligent system algorithm recognize different shaped color targets” Journal of the college of Education, No. 3, pp. 51-63, **2019**.
42. Duaa A. Taban, Ali Al-Zuky, Anwar H. Al-Saleh and **Haidar J. Mohamad**, “Smart Home Prototype Controller using Human Hand Locations within Head and Shoulders Level”, Indian Journal of Natural Sciences, Vol.9, Issue 54, June- **2019**.
43. D. A Taban, A A Al-Zuky, A H AlSaleh and **H J Mohamad** “Different Shape and Color Targets Detection Using Auto Indexing Images in Computer Vision System” IOP Conf. Series: Materials Science and Engineering Institute of technology – Baghdad 518 (**2019**) 052001, <https://iopscience.iop.org/article/10.1088/1757-899X/518/5/052001/meta>
44. **Haidar J. Mohamad**, Seham A. Hashim, Anwar H. Al-Saleh “Recognize printed Arabic letter using new geometrical features” Indonesian Journal of Electrical Engineering and Computer Science (IJEECS) Vol. 14, No. 3, pp. 1518~1524, June **2019**. DOI: [10.11591/ijeecs.v13.i3.pp1518-1524](https://doi.org/10.11591/ijeecs.v13.i3.pp1518-1524)
45. Sarah H. Ali, Ali Abid D. Al-Zuky, Anwar H. Al-Saleh, **Haidar J. Mohamad** “Measure liquid viscosity by tracking falling ball Automatically depending on image processing algorithm”, Published 1 September **2019**

<https://iopscience.iop.org/article/10.1088/1742-6596/1294/2/022002>

46. Heba Kh. Abbas, Anwar H. Al-Saleh, **Haidar J. Mohamad**, and Ali A. Al-Zuky “Modelling vision angles of optical camera zoom using image processing algorithm” Published 1 July **2019**. Published under licence by IOP Publishing Ltd, IOP Conference Series: Materials Science and Engineering, Volume 571, The Second International Scientific Conference (Pure Sciences, Brilliant Creativity and Renewed Building) 15 April **2019**, University of Kerbala, Iraq. <https://iopscience.iop.org/article/10.1088/1757-899X/571/1/012117/meta>
47. Shaymaa H. Kafi, Ali Al-Zuky, Anwar H. Al-Saleh and **Haidar J. Mohamad**, “Determine Distortion in a Color Target Behind Moving Object”, Journal of College of Education, No. 5, **2018**, <https://www.iasj.net/iasj/article/192297> .
48. Rasha Awad, Ali A. Al-Zuky, Anwar H. Al-Saleh and **Haidar J. Mohamad**, “Enhance Video Film using Retnix method”, Published 1 May **2018**. Published under licence by IOP Publishing Ltd Journal of Physics: Conference Series, Volume 1003, IBN AL-HAITHAM FIRST INTERNATIONAL SCIENTIFIC CONFERENCE 13–14 December 2017, Baghdad, Iraq, <http://iopscience.iop.org/article/10.1088/1742-6596/1003/1/012124>.
49. Rasha Awad Abtan, Ali A. Al-Zuky, Anwar H. Al-Saleh, **Haidar J. Mohamad**, “Movi-color target analysis based on using minimum distance classification” Journal of College of Education, ISSN: 18120380, Volume: 1, Issue: 3, Pages: 45-60, **2017**, <https://www.iasj.net/iasj?func=article&aId=140493>.
50. **H. J. Mohamad**, L. R. Shelford, M. Aziz, U. A. S. Al-Jarah, R. Al-Saigh, R. A. J. Valkass, S. Marmion, B. J. Hickey, and R. J. Hicken, “Thermally induced magnetization dynamics of optically excited YIG/Cu/Ni₈₁Fe₁₉ trilayers”, PHYSICAL REVIEW B 96, 134431 (**2017**).
51. Rasha Awad, Ali A. Al-Zuky, Anwar H. Al-Saleh, Haidar J. Mohamad “Built background image using correlation method “, IEEE Xplore: 13 July **2017**, DOI: 10.1109/NTICT.2017.7976102
52. Ali Jabbar Karam, Ali Abid D. Al -Zuky, Anwar H. Mahdy, **Haidar J. Mohamad** “Investigate Edge Distortion Within Captured Image Under Low Lighting” Journal of College Of Education. **2016**, NO.3, issue 17, pp 13-30.
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<https://edumag.uomustansiriyah.edu.iq/index.php/mjse/article/view/274>
53. C. J. Durrant, M. Jokubaitis, W. Yu, **H. Mohamad**, L. R. Shelford, P. S. Keatley, Gang Xiao, and R. J. Hicken “Ferromagnetic resonance of patterned chromium dioxide thin films grown by selective area chemical vapour deposition” Journal of Applied Physics 117, 17B707 (**2015**); doi: 10.1063/1.4907766.
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55. **Haidar Mohamad**, Leigh Shelford, Mustafa Aziz, Uday Al-Jarah, Scott Marmion, Bryan Hickey, Robert Hicken, “Time resolved optical study of spin Seebeck effect (SSE) within a YIG/Cu/Ni₈₁Fe₁₉ trilayer” OPCNF conference, Exeter, UK, **2015**.
56. Ali A. Al-Zuky and **Haidar J. Al- Taa'y**, “A Study of Edge Detection Filter”, Al- Mustansiriyah J. Sci Vol. 22, No 1, **2011**.

57. Ali A. Al - Zuky, Firas Sabeeh Mohammed, **Haidar Jawad M. Al-Taa'y**, "Evaluate the quality of satellite image depending on the correlation", IEEE, DOI: 10.1109/MSPCT.2009.5164203, ISBN: 978-1-4244-3602-6, 2009.
58. Ali A. D. Al-Zuky & **Haidar Jawad M. Al-Taa'y**, "Estimation Optimal Threshold Value for Image Edge Detection", Ibn Al- Haitham J. For Pure & Appl. Sci Vol.22 (2) 30-6-2009, <http://jihcoed.com/ihj/index.php/j/article/view/1228>.
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60. **Haidar Jawad M. AL-Taa'y** "Calculate the Error for Image Rotation Depending on Image Edges", Iraqi Association of Information Technology,337, 2009.
61. Ali A. D. Al-Zuky, Baidaa K. Hamed, Ahmad A. Darweesh & **Haidar Jawad M. Al-Taa'y**, "Modify Additive Lee's Filter for filtering images corrupted by film grain noise", Journal of College of Education, No.6, 2009, <https://iasj.net/iasj/article/52662>
62. Suha H. Ibrahiem, Baidaa K. Hamed, **Haidar Jawad M. Al-Taa'y** & Dr. Ali Abid D. Al -Zuky" Filtering the Corrupted Image by Different Rate of Gaussian Noise" Journal of College of Basic Education Vol. 56, pp. 57-68, 2009. <https://www.iasj.net/iasj/download/390a4ee09f6dc1e6>
63. Ali A. D. Al-Zuky & **Haidar Jawad M. Al-Taa'y**, "Least Square Line Fitting Algorithm for Image Edge Detection", Al-Mustansiriyah J. of Science, 2002.
64. Ali A. Al-Zuky and Haidar J. Al- Taa'y, "Adaptive Thresholding Method for Image Edge Detection"

PROFESSIONAL DEVELOPMENT

1. Participate in IOP and IEEE conferences in Iraqi Universities.
2. Participate by poster in conference, Exeter, UK, 2015.
3. Participate by oral presentation in IOP Magnetism 2015 conference, Leeds, UK, 2015.
4. Measure samples in synchrotron Diamond Light Source, Oxfordshire, UK, 8 May 2014.
5. Participate by poster in IOP Magnetism 2014 conference, Manchester, UK, 2014.
6. Attend safety course "Introduction to Laser Safety Course", Exeter, UK, 2014.
7. Attend in the conference of the International Advanced School on Magnonics, Italy, 2012.
8. Attend IOP Magnetism 2012 conference, York, UK, 2012.

السيرة الذاتية

د. حيدر جواد محمد

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ملخص شخصي

حصل الدكتور حيدر جواد محمد على درجة الدكتوراه في الفيزياء من جامعة اكستر - المملكة المتحدة في عام 2015. ركزت الأطروحة على التصنيع والقياس البصري ومحاكاة سماكة الأغشية النانوية المختلفة. يوفر نظام الليزر فائق السرعة من Coherent عرض نبضة فيمتو ثانية فرصة جيدة لقياس سلوك الإلكترون في مقياس زمن الفيمتو ثانية. نتيجة هذا العمل كان بحث منشور في مجلة Clarivate. كان هناك العديد من التعاون خلال فترة الأطروحة منها الولايات المتحدة الأمريكية لعينات شبه CrO_2 وجامعة ليدز في تزويد للأغشية الرقيقة متعددة الطبقات. كان Spin current هو الهدف الرئيسي للمشروع، وكانت العينة متعددة الطبقات لـ Py / Cu / YIG / GGG هي المرشح لهذا الغرض. عاد الدكتور حيدر إلى أعضاء قسم الفيزياء في عام 2016، انعكست خبرته من خلال مساعدة زملائه في جميع المجالات. سرعان ما أصبح أحد أعضاء اللجنة المهمين داخل مناصب الجامعة والكلية. علاوة على ذلك، أصبح مشرفاً للعديد من طلاب الدراسات العليا وأحد لجان المناقشات في مجالات مختلفة.

التحصيل الدراسي:

- دكتوراه من بريطانيا جامعة أكستير 2015
- ماجستير من الجامعة المستنصرية – كلية العلوم – قسم الفيزياء 2003
- بكالوريوس من الجامعة المستنصرية – كلية العلوم – قسم الفيزياء 2000

الجوائز والمكافآت الأكاديمية:

- العديد من كتب الشكر من رئيس الجامعة المستنصرية
- العديد من كتب الشكر من عميد كلية العلوم
- العديد من كتب الشكر من رئيس قسم الفيزياء

الخبرات الأكاديمية والتعليم:

- مقيم علمي في مجلات علمية تابعة الى سكوبس مثل JTAP من المجالات العالمية
- التدريس
- البرمجة

كورسات التعليم:

الدراسات العليا
البكالوريوس

الإشراف العلمي:

- 1- أطروحة ماجستير للطالب مرتضى قاسم جواد 2020 " تحسين تباين الصور باستخدام خوارزميات مقترحة تعتمد على المنطق المضرب "
- 2- أطروحة ماجستير للطالبة نداء منذر سلمان 2020 " التحليل الكمي لصور ظلال الأجسام في الهواء الطلق لنمذجة طول وزمن الظل "
- 3- أطروحة ماجستير للطالب مهيم علي عبد الحسين 2021 " محاكاة الليزر فائق السرعة لأغشية رقيقة متعددة الطبقات "
- 4- أطروحة ماجستير للطالبة امتنان محمد جواد 2022 " تحسين صور شبكية العين باستخدام استعادة اللون وتعديل الشدة "
- 5- أطروحة ماجستير للطالبة نورس بديع محمد 2023 " تصميم مقاييس تكيفية لتحديد جودة الصورة المدمجة بناءً على اكتشاف حواف الصور المضافة والمحذوفة "
- 6- أطروحة ماجستير للطالب راند جمعة ياسين 2023 " التحقيق العددي لتراكيب معدن نانوية متصلة بطبقات قليلة من شرائح الجرافين النانوية للتطبيقات التحسسية "
- 7- أطروحة دكتوراه للطالب علاء جاسم محمد 2024 "دراسة تحليلية لتوجيه وتركيز حزم الطيف الكهرومغناطيسي ضمن مدى الأشعة المايكروية "
- 8- أطروحة ماجستير للطالبة زينب جميل كامل 2024 " مطياف الانهيار الناتج عن الليزر لمكونات النباتات "
- 9- أطروحة دكتوراه للطالبة رجاء نادر كيضان محسن 2025 " مطياف الانهيار الناجم عن الليزر كأداة في تحليل عناصر التجميل "
- 10- أطروحة ماجستير للطالبة صفا عصام محمد علي 2025 " المحاكاة والتحليل النظري لليزر فائق السرعة للتطبيقات البصرية "
- 11- أطروحة دكتوراه للطالبة سرى علاوي عبيد 2026 " توظيف تقنية LIBS لدراسة تراكيز المعادن للأمراض المزمنة وغير المزمنة "

العنوان الأكاديمي:

1. عضو في مؤسسة الفيزياء البريطانية IOP
2. الجامعة المستنصرية – كلية العلوم – قسم الفيزياء

المهارات الخاصة والمشاركات

1. Participate in IOP and IEEE conferences in Iraqi Universities.
2. Participate by poster in conference, Exeter, UK, 2015.
3. Participate by oral presentation in IOP Magnetism 2015 conference, Leeds, UK, 2015.
4. Measure samples in synchrotron Diamond Light Source, Oxfordshire, UK, 8 May 2014.
5. Participate by poster in IOP Magnetism 2014 conference, Manchester, UK, 2014.
6. Attend safety course "Introduction to Laser Safety Course", Exeter, UK, 2014.
7. Attend in the conference of the International Advanced School on Magnonics, Italy, 2012.

8. Attend IOP Magnetism 2012 conference, York, UK, 2012.