



Curriculum Vitae



Name : Fathi Awad Taha Hassan
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Academic Qualifications:

Degree	University/Institution	Specialization	Year
Ph.D	Anna University, India	Medical Physics	2014
M.Sc	Al Neelain University, Sudan.	Medical Imaging	2007
B.Sc	Al Neelain University, Sudan	Medical Physics	2002

- UAE - MOE equivalency (M.Sc. & Ph.D.)

Academic positions:

- **Assistant Professor** (full-time), Department of Allied Health Professional (Medical Diagnostic Imaging), Liwa College of Technology, Faculty of Medical and Health Sciences, Liwa College of Technology, UAE (2019 – date)
- **Associate Professor** and Head, Department of Medical Physics, Faculty of Applied Sciences, Red Sea University, Sudan, (May 2016 – October 2018).
- **Visiting Scientist**, Friedrich Schiller University Jena, Germany, 2017.
- **Assistant Professor**, Department of Medical Physics, Faculty of Applied Sciences, Red Sea University, Sudan (2014 – 2017).

- **Lecturer**, Department of Medical Physic, Faculty of Applied Sciences, Red Sea University, Sudan (2007 - 2010).

- **Teaching assistant**, Department of Medical Physics, Faculty of Applied Sciences, Red Sea University, Sudan (2003 - 2007).

Certification & Registration:

- **Consultant (Medical Physics)** – Registration No26020010 – National Council for Medical & Health Professions- Sudan.
- **First Specialist (Medical Physics)** – Registration No26020010 – National Council for Medical & Health Professions- Sudan.
- **Second Specialist (Medical Physics)** – Registration No26020010 – National Council for Medical & Health Professions- Sudan.

Administration positions:

- Medical Diagnostic Imaging Program coordinator, Liwa College of Technology, (2020-2023).
- Advisory Board Coordinator, Faculty of Medical and Health Sciences, Liwa College of Technology, UAE (2021 – 2023)
- Editorial manager, Red Sea University Scientific Journals, Red Sea University, Sudan (2016- 2018).
- Secretary, Committee for Applied and Scientific Research, Red Sea University, Sudan (2016 -2018)

Academic committees

- Member of the Merging Committee – Liwa College and Al Khawarizmi College, 2023)
- Head of Course File Audit Unit, Faculty of Medical & Health Sciences, Liwa College of Technology (February 2022).
- Coordinator, Faculty of Medical & Health Sciences council, (2021-date).
- Member of the accreditation Committee
- Member of the equivalency Committee

Research Interests

- Cancer diagnosis and treatment.
- Radiation dosimetry and radiation protection.
- Photodiagnosis and Photodynamic Therapy.

Teaching the following courses:

Mathematics for Health Sciences. Physics I & Physics II (engineering students). Medical Physics - Introduction to medical diagnostic imaging- Physics of radiology - Radiation biology and Radiation protection - Digital image processing and analysis - Principles of Diagnostic Imaging 1 - Principles of Diagnostic Imaging 2 – Ultrasound – Nuclear Medicine - Quality control in medical imaging - Scientific Research Methodology -Biostatistics.

Continues development Courses & workshops:

- *Ethics in Radiation Protection for Medical Diagnosis and Treatment*, International Commission on Radiological, 2 June 2023.
- *Radiological Protection of the Patient in Radiation Oncology*, Cleveland Clinic Abu Dhabi, 13-15 December 2022.
- *Instructional Design and Educational Technology*, Abu Dhabi University, 24 November 2022.
- *Designing and Evaluating Assessments*, Abu Dhabi University, 30 September 2022.
- *2022 International Training Workshop on Open Science and SDG*, Organized by TWAS, 29 August – 8 September, 2022.
- *Creating Educational Videos Using AI*, Abu Dhabi University, 9 September, 2022.
- *Create Interactive Contents Using H5P*, Liwa College of Technology, (23 June, 2022)
- *Awareness for OSHAD, ISO 45001, ISO 14001 – 2nd Training Course*, Liwa College of Technology, (15 April, 2022)
- *Training Course on the Blinded Learning System*, Liwa College of Technology, (7 April, 2022)
- *Awareness for OSHAD, ISO 45001, ISO 14001 – 1st Training Course*, Precise consultancy UAE, 8th April 2022. Liwa College of Technology.

- ***Training Courses on Needs Assessment on Healthcare Technology***, Tesla Training Centre, (11– 16 January ,2022).
- ***Introduction to Scopus Workshop***, Liwa College of Technology, Organized by Elsevier, 24 November 2021.
- ***Diversity and Inclusion in the Classroom***, 27 September, 2021, Organized by US Embassy Abu Dhabi.
- ***Etiquette in Dealing with People of Determination (POD)***, Sunday, 12th September 2021, Zayed Higher Organization for People of Determination.
- ***Basic Ultrasound Physics***, Afro-Asian Institute of Medical Sciences Webinar, 24 April 2021.
- ***2021 Virtual MEFOMP Medical Physics Conference***, 5-7 April 2021.
- ***Training Course on How to Conduct Monitored Exams Using LockDown Browser & Respondus Monitor***, Liwa College of Technology, UAE, 17-17 Jan. 2021.
- ***International Forum on Higher Education and Research, Ministry of Education***, UAE, 15-16 December.
- ***Training Course on Master Managing e-portfolio***, Liwa College of Technology, UAE, 5th Nov. 2020.
- ***Training Course on Master Delivering Lectures via Zoom Meeting***, Liwa College of Technology, UAE, 5th Nov. 2020.
- ***IEEE International Conference on Image Processing***, 25 -28 October,UAE
- ***Training Course in Online Course File***, Liwa College of Technology, UAE, 29 June, 2020.
- ***IT Security Basic Awareness Training***, Liwa College of Technology, UAE, 23 June, 2020.
- ***Training Course in ProctorU exams***, Liwa College of Technology, UAE, 5 June 5 2020.
- ***Training Course in Zoom Distance Teaching***, Liwa College of Technology, UAE, 15 March 2020.
- ***Lecture on Four Methods for Supporting the distance Learners***, Hamdan Bin Mohammed Smart University, UAE, 12 May 2020.
- ***Training Course in Learning Management system***, Liwa College of Technology, UAE, February 2020.

- *Two Days Workshop in Nanotechnology Applications in Energy, Environment, Electronics and Medicine, Promotion, Potential and Challenges*, University of Khartoum, Sudan .7-8 March, 2018.
- *Training Course in Strategy Planning for Higher Education*, 19-20 December 2017.
- *Training Course in Academic Counseling*, Red Sea University, 10-11 May, 2016.
- *One Day Workshop on Data Analysis Using SPSS*, 29.5.2013, Anna University, Chennai, India.
- *Special Lecture on How to Do a good Ph.D. Thesis*, 10-12 April, 2012, Anna University, Chennai, India.
- *International Workshop on Biomedical Sciences & Technologies*, 02-04 March 2011, Anna University Chennai, India.
- *INDO - ITALIAN Advanced Level Workshop on Semiconductor Nanostructures, Ultra Thin Films and Applications* (08-10 September 2010).
- *Workshop on Development and Evolution of Nervous Systems, ICTP*, Trieste, Italy (10 - 27 April 2008).
- *Professional Training Course for Medical physicists* (Radiation & Isotopes Centre, Khartoum, Sudan, (June 2006 – September 2006).
- *Training Course in Laser Physics and Application of Lasers* (University of Al Neelain, Khartoum, Sudan, and March 2005).
- *Introductory Training Course in LABVIEW* (University of Al Neelain, Khartoum, Sudan, April 2005).
- *Advanced Training Course in LABVIEW* (University of Al Neelain, Khartoum, Sudan,(January 2006).
- *Training Course in Educational Preparation* (Staff Development Centre, University of Khartoum, October 2007.

Reviewer for journals and international conferences:

- Journal of Radiation Research and Applied Sciences
- Journal of fluorescence.
- The 1st International Conference on Scientific Research & Innovation, 2022.
- The 2nd International Conference on Scientific Research & Innovation 2023.
- Red Sea University Journal of Basic and Applied Sciences.

Membership – National & International Organizations:

- Health Physics Society (USA).
- Alumniportal Deutschland.
- India Alumni – AlmaConnect.
- Sudanese Breast Cancer Organization.
- Sudanese Medical Physicists Association .

Conferences organized:

- Ist International Conference on Engineering and Applied Sciences, Port Sudan, Sudan, February 2017. (Member of Scientific Committee – Applied Physics track Chair).

Research Projects:

Establishing Quality Management Systems for Diagnostic Radiology in the Republic of Sudan Based on IAEA Methodology for Remote and Automated QC in Planar Imaging, 2021- 2022 (*investigator*).

Research supervision:

S.N	Degree	Completed	Ongoing
1	B.Sc	75	-
2	M.Sc.	9	
3	Ph.D.	-	2

Papers published in international journals:

1. **Fathi Awad**, Mamdouh Yassin, Quality control of real-time B-mode ultrasound scanners in Sudan/Khartoum, AIP Conference Proceedings, 2820.1,2023. <https://doi.org/10.1063/5.0150383>.
2. Ahmed Yassen; **Fathi Awad**; Fawzia Elsadig; Sulieman Mohammed; Khalid Yagoub; Amel Omer; Sahar Omer, Development of a universal medical phantom for quality control of X-ray equipment, AIP Conference Proceedings, 2820.1,2023. <https://doi.org/10.1063/5.0150384>.

3. **Fathi Awad**, Waheeb Abolgasim, Awareness of Radiation Protection among Medical Professionals in Khartoum Hospitals. *International Journal of Radiology*. July 2021; 19(1): 01-04.
4. Rekha Pachaiappan¹ , Lorena Cornejo-Ponce , Rathika Rajendran , Kovendhan Manavalan, Vincent Femilaa Rajan,**Fathi Awad**, A review on biofiltration techniques: Recent advancements in the removal of volatile organic compounds and heavy metals in the treatment of polluted water. *BIOENGINEERED* 7 (1), 213-222.
5. **Awad F**, Al Naem F, Gemea A, Wedaa N, Mohammed Z, et al. (2021) X-Ray Film Reject Analysis in Radiology Departments of Port Sudan Hospitals. *Int J Radiol Imaging Technol* 7:072. doi.org/10.23937/2572-3235.1510072
6. **Fathi. A**, Fathalrahman A, Wala H and Tahir M, Natural Radioactivity of Beach Sand Samples in Port Sudan, Red Sea State, Red Sea University Journal of Basic and Applied Sciences, 2(2), 2017:182-198.
7. Fathalrahman A, **Fathi A**, and Isam S, Estimation of the Patients Doses in Conventional Radiography in Red Sea State, Red Sea State, Red Sea University Journal of Basic and Applied Sciences, 2(2), 2017: 1858-7658.
8. **Fathi A**, Christina Wichmann, Petra Rösch, and Jürgen Popp. Raman Spectroscopy for Characterization of Antimicrobial Photodynamic Therapy against *Staphylococcus epidermidis*. *J Raman Spectrosc*. 2018;1–4. [https://doi.org/ 10.1002/jrs.5486](https://doi.org/10.1002/jrs.5486).
9. Fathalrahman A, **Fathi A**, and Isam S, Estimation of the Patients Doses in Computed Tomography in Red Sea State, Red Sea State, Red Sea University Journal of Basic and Applied Sciences, 2(2), 2017: 1858-7690.
10. **Fathi. A**, Fathalrahman A, Hiba A, Khadija A and Tahir M, Measurement of Gamma Radiation Levels in Soil Samples from Port Sudan and Estimation of Population Exposure, Red Sea University Journal of Basic and Applied Sciences, 2(1), 223-238.
11. **Fathi, A**, Chandrasekaran, R, Narayanasamy, M, Prakasa, RA & Singaravelu, G 2014, 'Steady-state and Fluorescence Lifetime Spectroscopy for Identification and Classification of Bacterial Pathogens', *Journal Of Biomedical Spectroscopy & Imaging*, doi.10.3233/BSI-140095.
12. **Fathi, A**, Chandrasekaran, R, Narayanasamy, M, Prakasa, RA & Singaravelu, G 2014, 'Optical Fiber-based Steady state and Fluorescence Lifetime Spectroscopy for Rapid Identification and Classification of Bacterial Pathogens Directly from Colonies on Agar Plates', *International Scholarly Research Notices (Microbiology)*, vol.2014,doi.org/10.1155/2014/430412.
13. **Fathi, A**, Chandrasekaran, R, Kanniyappan, U, Narayanasamy, M, Prakasa, RA & Singaravelu, G 2014, 'In vitro Photodynamic Antimicrobial Activity of Protoporphyrin IX in the Presence of Hydrogen Peroxide against *Staphylococcus aureus* and *Pseudomonas aeruginosa*', *British Microbiology Research Journal*, vol. 4, no. 11.

14. **Fathi, A**, Chandrasekaran, R, Shanmugam, S, Narayanasamy, M, Prakasa, RA & Singaravelu, G 2013, 'Influence of Hydrogen Peroxide or Gold Nanoparticles in Protoporphyrin IX Mediated Antimicrobial Photodynamic Therapy Against Staphylococcus aureus', African Journal of Microbiology Research, vol. 7, no. 37, pp. 4617-4624.
15. **Fathi, A**, Chandrasekaran, R, Narayanasamy, M, Prakasa, RA & Singaravelu, G 2012, 'Evaluation of Protoporphyrin IX-Light Emitting Diode Based Antimicrobial Photodynamic Therapy against Staphylococcus aureus', International Journal of Applied Physics and Mathematics, vol.2, no. 3, pp. 218-220.
16. Kanniyappan, U, Manoharan, Y, **Fathi, A**, Vadivel, J & Prakasa, RA, Dornadula, K & Munusamy BD & Singaravelu, G 2013, 'Native fluorescence and Time resolved fluorescence spectroscopic characterization of normal and malignant oral tissues under UV excitation - an *in vitro* Study', Journal of Fluorescence, doi: 10.1007/s10895-013-1335-2.

Book Chapters:

Rekha Pachaiappan, Lorena Cornejo Ponce , Kovendhan Manavalan , **Fathi Awad**, Vincent Femilaa Rajan, Nanoparticles as an exotic antibacterial, antifungal, and antiviral agents, In: Advances in Nanotechnology for Marine Antifouling. 2023, Pages 231-270, <https://doi.org/10.1016/B978-0-323-91762-9.00005-8>.

Papers presented in international conferences:

1. Safea Hafez, **Fathi Awad**, ElMubarak Siddig, Estimation of Radiation Dose to Thyroid Gland for patients Undergoing CT Brain Examination, Journal of Medical Dosimetry (*Accepted*, International Commission of Radiation Protection Conference , Japan, November 2023).
2. **Fathi Awad**, Sivabalan Shanmugam, Prakasa Rao Aruna, Singaravelu Ganesan, Synchronous Fluorescence Spectroscopy for Diagnosis of Oral Submucous Fibrosis, MEFOMP, 19-22 May 2023, Muscat, Oman.
3. **Fathi Awad**, Effect of Photodynamic Therapy on Staphylococcus aureus, 2nd Annual Conference of ESCM, Khalifa University, 7-9 December 2022.
4. **Fathi, A**, Prakasa, RA & Singaravelu, G, 'Investigation of Steady-state Fluorescence Spectroscopy for Identification and Classification of Bacterial Pathogens', International Science Symposium on HIV and Infectious Diseases, 30-1 February, 2014, Chennai, India.
5. **Fathi, A**, Prakasa, RA & Singaravelu, G, 'Optical Fiber-Based Steady-state Fluorescence Spectroscopy for Identification and Classification of Bacterial Pathogens Directly from Colonies on Agar Plates', Proceedings of National Laser Symposium (NLS-22), Manipal University, Manipal. 8-11 January 2014.

6. **Fathi, A**, Chandrasekaran, R, Narayanasamy, M, Prakasa, RA & Singaravelu, G, 'Evaluation of Protoporphyrin IX Antimicrobial Photodynamic Therapy Against *S. aureus* and *P. aeruginosa*', 2nd Annual Conference of Clinical Infectious Disease Society, 25-26 August 2012, Chennai, India.
7. Singaravelu, G , **Fathi, A**, Chandrasekaran, R, Narayanasamy, M & Prakasa, RA, 'Antimicrobial Photodynamic Therapy of *Staphylococcus aureus* using Gold Nanoparticles in Conjunction with Protoporphyrin IX, 1st International Conference on Emerging Advanced Nanomaterials, 22-25 October 2012 Brisbane, Australia.
8. **Fathi, A**, El Hussain,H, Entrance Surface Doses to Patients Undergoing Selected X-ray Examinations in Port Sudan Hospitals, 2010 American Statistical Association Conference on Radiation and Health, 2010, USA, Maryland.
9. **Fathi,A**, Mamdouh, Y, Quality Control Program of Real-Time Medical Ultrasound Machines in Sudan, Great Wall International Congress on Medical Physics, Beijing, China, November 2008.

Scholarships & Awards:

- TWAS-DFG Cooperation Visit fellowship for Scientist from Sub- Saharan Africa. 2016
- ICCR Ph.D.Scholarship 2010.
- New Investigator Award, 2010 American Statistical Association Conference on Radiation & Health, USA, Maryland.

References:

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