

*Curriculum Vitae***Prof. Dr. Yousif Mohamed Yousif Abdallah**

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**Career Path & Intentions**

I certainly enjoyed my experience in Radiotherapy and Nuclear Medicine, particularly it has been in different institutions and hospitals with different Medical Cultures and allocated resources. Radiotherapy and Nuclear Medicine Technology has always been my aspiration and my life. As years passed I accumulated a tremendous amount of skills and knowledge in Radiotherapy and Nuclear Medicine, Conventional Radiology, Radiation Protection, Bioinformatics Technology, PACS, Image processing, clinically and lecturing that will enable me to provide a valuable service to the community as a Researcher and Consultant in this field. My method of translating this into day to day in clinical practice is non-exhaustible and my habit of exchanging knowledge and expertise with others in those fields is the code and secret of success.

**Education**

- B.Sc. Radiological Science, October 2005, Sudan University of Science and Technology
- M.Sc. Radiological Science, November 2009, Sudan University of Science and Technology
- Ph.D. Radiological Science, June 2013, Sudan University of Science and Technology; graduate work in radiation therapy technology, radiation therapy and radiation oncology.
- M.Sc. Radiological Science, March 2015, National cancer Institute, University of Gazeria: graduate work in nuclear medicine.

**Professional Experience**

- Professor, Radiological science and Medical Imaging, Majmaah University, Nov. 2022-current.
- Associate Professor, Radiological science and Medical Imaging, Majmaah University, Nov. 2018- Oct. 2022.
- Assistant Professor, Radiological Science and Medical Imaging, Majmaah University, March. 2015- Oct. 2018.
- Assistant Professor of Radiological Science and Medical Imaging, Sudan University of Science and Technology, Sudan, Jun. 2013- March 2015.
- Lecturer, Radiological Science and Medical Imaging, Sudan University of Science and Technology, Sudan, Dec. 2008- Jun. 2013.
- Teaching Assistant/Instructor, Radiological Science and Medical Imaging, Sudan University of Science and Technology, Sudan, Sept. 2006- Oct. 2009.

## Thesis:

- Jan 2012 – Sep 2014* **Assessment of Quality Control Program for Accepted  $^{99}\text{Mo}$ - $^{99\text{m}}\text{Tc}$  Generator and Kids**  
University of Gezira  
Master of Science, Nuclear Medicine  
Wad Medani, Sudan
- Apr 2010 – Apr 2013* **Evaluation of Chest Organs Motion in External Beam Radiotherapy**  
Sudan University of Science and Technology  
Doctor of Philosophy, Radiation Therapy  
Khartoum, Sudan
- Nov 2007 – Nov 2009* **Computed Verification of Light and Radiation Field Size on Cobalt-60 machine**  
Sudan University of Science and Technology  
Master of Science, Radiation Therapy Technology  
Khartoum, Sudan
- Oct 2001 – Oct 2005* **Design Mold Room in Radiation and Isotopes Center of Khartoum (RICK)**  
Sudan University of Science and Technology  
Bachelor of Science, Radiation Therapy  
Khartoum, Sudan

## Research

The main themes of my research are on Medical Applied Research, Clinical Experimental Research, Radiation Therapy and Nuclear Medicine, IGRT, IMRT, Tomotherapy & Conformal Therapy, Oncology Experimental Researches, Radiation Physics and Quality Assurance, Medical Imaging and Image processing, Radiation Mold Technology, Applied Radiation Protection, Computer Application in Radiology, Picture Archiving and Communication Systems (PACS). I am also interested in science and environmental education.

## Honors and awards

- Second rank of university research Prize for Academy year (1443-1444H), , Majmaah University, Majmaah, Saudi Arabia.
- Dean Excellency Prize for Academy year (1442-1443H), College of Applied Medical Science, Majmaah University, Majmaah, Saudi Arabia.
- Dean Excellency Prize for Academy year (1440-1441H), College of Applied Medical Science, Majmaah University, Majmaah, Saudi Arabia.
- Dean Excellency Prize for Academy year (1436-1437H), College of Applied Medical Science, Majmaah University, Majmaah, Saudi Arabia.

## Editorial Board and reviewer Service:

### Editorial Board Membership:

1. Manager Editor Journal of Nuclear and radiation Science, Saudi Nuclear Society, Majmaah University
2. Scientific and Technical Committee & Editorial Review Board on Medicine and Health Sciences, World Academy of Science, Engineering, and Technology
3. International Journal of Science and Research (IJSR)

4. Consulting Editor, Journal of Research and Reports in Focused Ultrasound
5. Consulting Editor, Journal of Reports in Medical Imaging
6. Guest Editor, American Journal of Physics and Applications (AJPA)
7. International Journal of Biomedical Science and Engineering (IJBSE)
8. Journal of Oncology Research and Experimental Medicine (JOREM)

#### **Peer Reviewer**

1. Asian Journal of Medical Radiological Research
2. International Journal of Health and Rehabilitation Sciences (IJHRS)
3. Journal of Oncology Research and Experimental Medicine (JOREM)
4. Journal OncoTargets and Therapy
5. International Journal of Medical Imaging
6. Journal of Cancer Management and Research
7. Journals of Reports in Medical Imaging
8. Journal of Research and Reports in Focused Ultrasound
9. Journal of Research and Reports in Nuclear Medicine
10. American Journal of Educational Research
11. American Journal of Cancer Prevention
12. American Journal of Medical and Biological Research
13. Applied Soft Computing
14. British Medical Journal
15. Imaging Insight
16. Computers in Biology and Medicine
17. Engineering Applications of Artificial Intelligence
18. Journal of Medical Imaging and Radiation Sciences
19. Journal of Radiation Research and Applied Sciences
20. Radiation Physics and Chemistry

#### **Book Chapters**

1. An Introduction to Dental Radiography: Theory and Practice 11/2018; LAMBART Academic Publishing GmbH & Co. KG, Germany, ISBN: 9783848421169
2. Quality Control of Technetium-99 Generator, Theory and Practice, 03/2012; LAMBART Academic Publishing GmbH & Co. KG, Germany, ISBN: 9783848421169
3. A short Textbook on Care of patient in Radiotherapy Department., 03/2012; LAMBART Academic Publishing GmbH & Co. KG, Germany., ISBN: 9783848432318
4. An Introduction to PACS in Radiology Service: Theory and Practice. 02/2012; LAP LAMBERT Academic Publishing, ISBN: 978-3846588987
5. Analysis of Respiratory Motion in Chest Organs: During External Beam Radiotherapy. 01/2012; LAP LAMBERT Academic Publishing., ISBN: 978-3847335726
6. Application of Analysis Approach in Noise Estimation: Using Image Processing Program. 12/2011; LAP LAMBERT Academic Publishing, ISBN: 978-3847331544
7. A Short Guide To Radiation Mold Technology, A manual for daily use. 12/2010; LAMBART Academic Publishing GmbH & Co. KG., ISBN: 9783843371827
8. A Computed Verification of Radiation and Light Field Size on Cobalt-60\_ Verification of Fields Size using Image Processing Technique. 10/2010; Lambert Academic Publishing., ISBN: 978-3-838399096

9. Characterization of Brain Stroke Using Image and Signal Processing Techniques, Biomedical Signal and Image Processing. IntechOpen, 2021. ISBN: 9781839684456
10. The Role of Magnetic Resonance Imaging (MRI) in Autonomic Nervous System Monitoring, Autonomic Nervous System Monitoring - Heart Rate Variability. IntechOpen, 2019. ISBN: 9781838805197
11. Application of Medical Imaging in Diagnosis and Assessment of Myocarditis and Pericarditis, Inflammatory Heart Diseases. IntechOpen, 2020. ISBN: 9781789852769
12. Research in Medical Imaging Using Image Processing Techniques, Medical Imaging - Principles and Applications. IntechOpen, 2019. ISBN: 9781789238723

### **Funded Projects:**

- Appraisal of Radiation Dose Received in Traumatic Patients in Majmaah Area, Deanship of Scientific Research, at Majmaah University funded this research. September 2018-September 2019: project: 138/47:MUREC-Nov.21/COM-2018/9.
- Evaluation of Computed tomography Dosage and Image quality at Majmaah hospital, Saudi Arabia Deanship of Scientific Research, at Majmaah University funded this research. September 2019- September 2020: project: 1439/80
- Radiation dose from medical imaging modalities: A dosimetric study using fabricated phantoms, Monte Carlo methods, dosimeters and commercial software packages. Deanship of Scientific Research, at Najran University for funding this research. April 2021-April 2022: Project No. NU/RG/MRC/11/3.
- Investigation of the Awareness Level Concerning Radiation Safety among Radiology Healthcare Professionals in Saudi Arabia, Deanship of Scientific Research, at Majmaah University for funding this research. April 2022: project No. R-2022-59.
- Valuation of Radiation Dose Received in Computed Tomography Majmaah Area, Saudi Arabia, Deanship of Scientific Research, at Majmaah University for funding this research. June 2022: project No. R-2022-129.
- Using of Image Registration Software Packages in Segmentation of left Ventricle Tissues in SPECT Images, Deanship of Scientific Research, at Majmaah University for funding this research. September 2022: project No. R-2022-291.

### **Invited Presentations (conferences and workshops)**

1. Estimation of radiation Dosage for Traumatic Patients in Majmaah Area, Saudi Arabia. The eighth International Conference on Radiation in Various Fields of Research, Faculty of Electronic Engineering, University of Niš, Serbia; 06/2020
2. Segmentation of Brain Stroke Lesions using Marker-based Algorithms in CT images. 3rd International Conference on Computer Applications and Information Security, college of Computer Science, King Saud University, Riyadh, Saudi Arabia with collaboration with IEEE Saudi Arabia branch; 03/2020
3. Applications of Medical Imaging Analysis in Myocardial Tissues study. International Conference on Radiation Medicine (ICRM 2020); 02/2020
4. Computer investigation of breast cancer tumor treatment using microwave ablation (MWA). International Conference on Radiation Medicine (ICRM 2018); 02/2018
5. Medical Imaging Analysis using Image Processing Techniques. International Conference on Radiation Medicine (ICRM 2018); 02/2018
6. A Precise Improvement of Nuclear Cardiology Images Using Equivalent-Computing Methods. International Conference on Radiation Medicine (ICRM 2018); 02/2018

7. A retrospective study: The medical radiation exposure and possible injuries in Saudi Arabia. Injury Symposium, College of Medical Applied Science, Majmaah University: 05/2016
8. Valuation of Radiation Dose Received in Knee Joint Injuries. Injury Symposium, College of Medical Applied Science, Majmaah University: 05/2016
9. Outdoor Dose calculation in treatment of breast Cancer using radiotherapy TPS. International Conference on Radiation Medicine (ICRM 2016); 02/2016
10. Using Basic Morphology Tools in Improvement of Kidneys Detection. International Conference on Radiation Medicine (ICRM 2016); 02/2016
11. Detection and GTV Definition of Brain Tumors in MRI Images using Image Processing Technique. International Conference on Radiation Medicine (ICRM 2016); 02/2016
12. Lungs Detection in Ventilation and Perfusion Scintigraphy using Watershed Transform. International Conference on Radiation Medicine (ICRM 2016); 02/2016
13. Segmentation of Salivary Glands in nuclear medicine Images Using Edge Detection Tools. International Conference on Radiation Medicine (ICRM 2016); 02/2016
14. Detection of Brain Tumors Using Segmentation techniques. 8th International Conference on Medical Physics and Engineering, King Fahad medical City, Riyadh, Saudi Arabia; 10/2015
15. Improvement of Brain Tumors Detection Using Markers and Boundaries Transform. 17th International Conference on Medical Image and Signal Computing, Oslo, Norway; 07/2015
16. Enhancement of X-Rays Images Intensity Using Pixel Values Adjustments Technique. 17th International Conference on Medical Image and Signal Computing, Oslo, Norway; 07/2015
17. Improvement of Nuclear Medicine images using Processing Technique. Third International Conference on Radiation and Applications in Various Fields of Reesrach, Slovenska Plaza, Budva, Montenegro; 06/2015
18. Measurement of Dose Received by Organs in Knee Joint x-ray examination. Third International Conference on Radiation and Applications in Various Fields of Reesrach, Slovenska Plaza, Budva, Montenegro; 06/2015
19. Assessment of Dose Received By Organ in Lumbosacral Examination. Third International Conference on Radiation and Applications in Various Fields of Reesrach, Slovenska Plaza, Budva, Montenegro; 06/2015
20. Calculation of Dose Received By Organ in Cervical Vertebrae (C/S) Examination. Third International Conference on Radiation and Applications in Various Fields of Reesrach, Slovenska Plaza, Budva, Montenegro; 06/2015
21. Data Extraction in Dental X-Ray Images using Texture Study. Third International Conference on Radiation and Applications in Various Fields of Reesrach, Slovenska Plaza, Budva, Montenegro; 06/2015
22. Improvement of Bone Scintigraphy Image Using Image Texture Analysis. 16th International Conference on Nursing Informatics and Technology, Holiday Inn Paris Montparnasse, Avenue Du Maine, Paris, 75014 France; 08/2014
23. Characterization of Coronary Artery Obstruction and Related Findings in Ischemic Heart Patients Using Cardiac Scintigraphy. 16th International Conference on Nursing Informatics and Technology, Holiday Inn Paris Montparnasse Avenue Du Maine, Paris, France; 06/2014

24. Calculation of Lungs Physiological Lung Motion in External Lung Irradiation. 16th International Conference on Radiation Medicine, Crowne Plaza Dubai Deira, Salahuddin Road, Deira , 8668, Dubai, UAE; 03/2014
25. Calculation of Organs Radiation Dose in Cervical Carcinoma External Irradiation Beam Using Day's Methods. 16th International Conference on Radiation Medicine, Crowne Plaza Dubai Deira, Salahuddin Road, Deira , Dubai, UAE; 03/2014
26. Assessment of Ultrasound images using Image Texture analysis. International Conference on Radiation Medicine (ICRM 2014); 02/2014
27. Study of Orthopantomograph (OPG) Images Enhancement Using Image Processing Technique (MatLab). International Conference on Radiation Medicine; 02/2014
28. Error Estimation of Radiotherapy Patient Posture by using Three-Dimensional Motion Analysis. International Conference on Radiation in Medicine (ICRM); 02/2014
29. Contrast Improvement of Chest Organs in Computed Tomography Images using Image Processing Technique. The International Arab Conference on Information Technology (ACIT'2013), Coral Hotel, Khartoum, Sudan; 12/2013
30. Estimating Environmental and Occupational Contribution to Cancer in Sudan, 11th Conference on Peaceful Uses of Radiation Sources. Friendship Hall, Khartoum, Sudan; 03/2012
31. Computed Verification of light and Radiation field size Superimposition on Cobalt-60. International Conference on Radiation Medicine (ICRM 2010), King Faisal Specialist Hospital and Research Centre, Riyadh, Saudi Arabia; 03/2010
32. Evaluation of entrance and Existence dose in Tangential Treatment of Breast Carcinoma. 2nd International Conference on cancer, Radiation and Isotopes enter of Khartoum (RICK), Friendship Hall, Khartoum, Sudan; 03/2010
33. Mobile phone base stations and childhood cancers. Mobile Phone Mast Workshop, Faculty of Science, Department of Chemistry with collaboration with Congress of Khartoum State, Khartoum, Sudan; 04/2009

## Journal Publications

1. Mohammed K Saeed, Hassan, Yousif M Abdullah Abdelmoneim Sulieman, Assessment of patient radiation dose during skull X-ray examinations in King Khalid Hospital in Majmaah, Radiation Physics and Chemistry, 2022(11), 201.
2. Mohammed K Saeed, Hassan A Alshamrani, Abdelmoneim Sulieman, Youssef M Abdullah, Mohamed Yousef, Ali S A M Ali, Khalaf A Alshamrani, , Automated Estimation of Patient's Size Using Autowed Tool and Indosect Program: A Dosimetric Study for Paediatric Head CT Examinations, Radiation Protection Dosimetry, 2022, 198(16), 1238–1243
3. Bahaedin Elkhader, Yousif M. Abdallah, Pediatric Scrotal Ultrasound for Detection of Infertility Etiology, Journal of Research in Medical and Dental Science, 2022, 04(04)
4. Sami Elgak, Yousif M. Abdallah, Bahaedin Elkhader, Role of ultrasound in the diagnosis of gallbladder disorders in KSA-Asian Patients in associated of nationally and occupation, Magna Scientia Advanced Research and Reviews, 2022, 04(01), 039–048
5. Yousif M. Abdallah, Sami Elgak, Mohamed Alanzi, Norah Alshahrani, Ghaliah Alfuraih,

- Mohamed Rafiq, Nagi Ali, Color-Based Clustering Algorithms Segmentation of Malignant Leukemia Cells, *International Journal of Science and Research (IJSR)*, 11(2),2022, 1220 – 1225
6. Yousif M. Abdallah, Nouf Abuhadi, Alabbas Abiad, Bahaeldin Atta, Abdulrahman M. Alzandi, Study of lung respiratory motion influence in patients undertake external beam radiotherapy, *Oncology and Radiotherapy* 16 (1) 2022: 30- 37
  7. Abdallah Y. Detection of Cardiac Tissues using K-means Analysis Methods in Nuclear Medicine Images. *Open Access Maced J Med Sci*. 2021;9(A):1272-1276.
  8. Yousif M. Abdallah, Study of the guidelines and approaches of breast carcinoma management during the COVID-19 pandemic, *Onkologia i Radioterapia*. 2021.15(10)16-21.
  9. Yousif Abdallah, Galaleldin Ibrahim, Nouf Abuhadi, Ghazali M. Abdel Gadir & Elabbas Ebaid, Characterization of myocardium anomalies using watershed-based segmentation approaches in nuclear cardiology, *Imaging in Medicine* (2021)13:9:1 - 6
  10. Yousif M. Abdallah, Mohamed M. Yousef, Eltayeb W. Eltayeb, Automated Enhancement of Myocardium Images using Image Processing Methods, *International Journal of Science and Research (IJSR)*, 10(7) 2021:557 - 564
  11. Yousif M. Abdallah, Mohamed M. Yousef, Eltayeb W. Eltayeb, Characterization of Myocardial Diseases Using Image Processing Technique, *International Journal of Science and Research (IJSR)*, 10(6),2021, 1170 - 1174
  12. Abdallah Y. Measurement of Entrance Skin Dose in Radiographic Examinations of Pediatric Patients. *Curr Med Imaging*. 2021;17(11):1385-1389.
  13. Tagwa H Basheer, Mohamed Ahmed, Elimam Ounsa, Yousif M. Abdallah, Comparison of Sociodemographic Characteristics and Fetal Outcome, *J Res Med Dent Sci*, 2021,9(2): 12-16.
  14. Yousif M. Abdallah, Nouf H Abuhadi, Maryam Hasan Hugri, Enhancement of Dental X-rays Images Using Image Processing Techniques, *J Res Med Dent Sci*, 2021, 9 (2): 12-16.
  15. Yousif M Abdallah, Nouf H Abuhadi, Hanan A Aldousari, Assessment of Mean Glandular Dose and Entrance Surface Dose in Mammography, *J Res Med Dent Sci*, 2021, 9 (2): 8-11.
  16. Yousif M. Abdallah, Delineation of brain tumours for radiotherapy patients using image segmentation techniques, *Onkologia i Radioterapia*. 2020. 14(5).
  17. Yousif M. Abdallah, Mujtaba E Abdullah, Tariq Alqahtani and Nouf H. Abuhadi, Study of a five years survival rate of cancer in Sudanese, *Onkologia i Radioterapia*. 2020. 14(3)
  18. Hussam Zain, Yousif Abdallah, Wifag Mustafa , Rayan G Albarakati, Cesarean Delivery in Majmaah, Saudi Arabia: prevalence, indications and complications, *Majmaah Journal of Health Sciences* ,2020: 8,(3):37
  19. Y. Abdallah, Segmentation of Brain Stroke Lesions using Marker-based Algorithms in CT images, 3rd International Conference on Computer Applications & Information Security (ICCAIS), 2020, pp. 1-4,
  20. Yousif M. Abdallah, NH Abuhadi. Entrance Skin Dose Measurement for Diagnostic Spinal Radiographic Examinations in King Khalid Hospital, Saudi Arabia: A Prospective Study. *J Clin of Diagn Res*.2020; 14(3):TC01-TC04.
  21. Yousif M. Abdallah, , Zaki, W., Ahmadoun, B., & Musa, A.. Design of Reference Phantom for Quality Control of Conventional X-ray Radiography Units in Port Sudan.

- Journal of Biomedical Engineering and Medical Imaging, (2020):7(1), 01–09.
22. Hussam Zain, Rayan G Albarakati, Yousif M. Abdallah, Almuteri Hayfallah , Sami Elgak, Elsadig Y. Mohamed, Elabbas A. Ebaid, Clinical analysis of ectopic pregnancies in Majmaah, Saudi Arabia. *Journal of Biomedical Research-India* 09/2019; 30(5).
  23. Yousif M. Abdallah, Nouf Hussain Abuhadi, Dalia Bilal, Characterisation of Breast Cancer Lesions using Image Processing Based Technique, *Journal of Clinical and Diagnostic Research Current* , 08(2019); 13(8). 06-09
  24. Nagi I. Ali, Sami N.A. Elgak, Yousif M. Abdallah, Hajo Idriss. Assessment of Iodine Supplementation Program on Thyroid Function in Sudan, *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*. 13 (2019):678-680
  25. Yousif M. Abdallah, Sami Elgak, Hosam Zain, Mohammed Rafiq, Elabbas A. Ebaid, Alaeldein A. Elnaema, Breast cancer detection using image enhancement and segmentation algorithms. *Journal of Biomedical Research-India* 01(2019); 29(1).
  26. Yousif M. Abdallah, Improvement of Sonographic Appearance Using HAT-TOP Methods, *Journal of Biomedical Engineering and Medical Imaging* 10/2018; 5(6).
  27. Yousif M. Abdallah, Abdallah O. Alamoudi. Segmentation of Myocardium Tissues Using Assembly and Color Analysis Methods, *Current Medical Imaging Reviews*, 08/2018; 13(4)
  28. Yousif M. Abdallah, History of Medical Imaging. *Archives of Medicine and Health Science* 2018;5:275-8.
  29. Nagi I. Ali, Abdullah O. Alamoudi, Yousif M. Abdallah, The Use of Nuclear Medicine Invitro Technology to Study the Effect of Malnutrition on children's Thyroid Function. *Majmaah Medical Journal* 11/2017:13(5)
  30. Yousif M. Abdallah and Eltom M. Evaluation of Palliative Care, Pain Management in Patients Receiving Chemo-Radiation in Sudan. *SMU Medical Journal* 07/2017; 4(2).
  31. Fahad A. Mohamed, Yousif M. Abdallah, and Mohamed E.M. Gar-elnabi. (2017). Tumor metastasis Dilemma: bone scan and PSA level in relation to prostatic malignancy among Sudanese. *International Journal of Research - Granthaalayah*, 5/2017:5(5), 275-280.
  32. Yousif M. Abdallah, Evaluation of cardiac output, Ejection fraction and Stroke Volume using Nuclear medicine, *Majmaah Journal of Health Science*, 05/2017; 5(1)
  33. Yousif M. Abdallah, Segmentation of heart tissues using gathering and colour analysis techniques, *Biomedical Research-India*, 03/2017; 28(6)
  34. Yousif M. Abdallah, Abdallah O. Alamoudi, Sami N.A. Elgak. Appraisal of mean glandular dose (MGD) during mammography examinations, *International Journal of Advanced and Applied Sciences* 02/2017; 4(2)
  35. Yousif M. Abdallah, Wafa F. Orsid, Calculation of Radiation Dose Received in Cervical Vertebrae (C/S) Examination. *International Journal of Scientific Research* 07/2016; 5(7).
  36. Yousif M. Abdallah, Eba'a Mohamed. Improvement of Bone Scintigraphy Image Using Image Texture Analysis. *International Journal of Clinical Medicine Research*. Vol. 3, No. 6, 2016, pp. 99-104.
  37. Yousif M. Abdallah, Segmentation of Salivary Glands in Nuclear Medicine Images Using Edge Detection Tools. *Journal of Biomedical Engineering and Medical Imaging* 04/2016; 3(2).
  38. Yousif M. Abdallah, Suha Mohamed: Automatic Recognition of Leukemia Cells using Texture Analysis Algorithm. *International Journal of Advanced Research (IJAR)* 02/2016; 4(1).



39. Yousif M. Abdallah: Increasing of Edges Recognition in Cardiac Scintigraphy for Ischemic Patients. *Journal of Biomedical Engineering and Medical Imaging* 02/2016; 2(6).
40. Yousif M. Abdallah, Ali Hayder: Assessment of Mean Glandular Dose (MGD) Received in Mammography Examination in Khartoum. *International Journal of Advanced Research (IJAR)* 01/2016; 4(1).
41. Yousif M. Abdallah, Nisreen A. Mohamoud: Estimation of Radiation Dose Received in Knee Joint x-ray Examination. *International Journal of Health and Rehabilitation Sciences (IJHRS)* 11/2015; 4(3).
42. Yousif M. Abdallah: Increasing the Precision of Edges Recognition in Static Renal Scintigraphy. *Indian Journal of Applied Research (IJAR)* 09/2015; 4(7):270-273.
43. Yousif M. Abdallah, Abdelazeem Ahamed Khalifa: Estimating Environmental and Occupational Factors that Contribute to Cancer in Sudan. *International Journal of Health and Rehabilitation Sciences (IJHRS)* 08/2015; 4(2): 115-121.
44. Nagi I. Ali, Yousif M. Abdallah: Assessment of Thyroid Status on Low Birth Weight Deliveries in Central Sudan by using Radioimmunoassay (RIA). *American Journal of Research Communication* 08/2015; 3(4):2141-2147.
45. Yousif M. Abdallah, Magbool A. H. Salih: Appraisal of Radiation Dose Received in Abdominal Computed Tomography Patients. *International Journal of Science and Research (IJSR)* 07/2015; 4(7):2383-2387.
46. Yousif M. Abdallah, Eltayeb Wagiallah, Mohamed M. Yousef: Improvement of Nuclear Cardiology Images for Ischemic Patients using Image Processing Techniques. *SMU Medical Journal* 07/2015; 2(2)
47. Yousif M. Abdallah: Lungs Detection in Ventilation and Perfusion Scintigraphy using Watershed Transform. *International Journal of Electronics Communication and Computer Engineering (IJECCCE)* 06/2015;2(3)
48. Yousif M. Abdallah: An Accurate Liver Segmentation Method Using Parallel Computing Algorithm. *Journal of Biomedical Engineering and Medical Imaging* 06/2015; 3(2).
49. Yousif M. Abdallah, Masheel Abdallah: Using Basic Morphology Tools in Improvement of Kidneys Detection. *International Journal of Science and Research (IJSR)* 05/2015; 4(5):1383-1386.
50. Yousif M. Abdallah, Mohamed Elfadil Gar-elnabi, Khalid H. Eltom: Making Sense of Radiation; A guide to Radiation and Its Health Affects. *International Journal of Health and Rehabilitation Sciences* 05/2015; 4(1):57-64. DOI:10.5455/ijhrs.000000074
51. Yousif M. Abdallah, Amel S. Algaddal, Mommen A. Alkhir: Enrichment of Ultrasound Images using Contrast Enhancement Techniques. *International Journal of Science and Research (IJSR)* 02/2015; 4(1).
52. Yousif M. Abdallah: Valuation of Radiation Dose in Lumbosacral Examination. *International Journal of Science and Research (IJSR)* 02/2015; 4(1).
53. Yousif M. Abdallah, Mommen A. Alkhir, Amel S. Algaddal: Improvement of Brain Tumors Detection Using Markers and Boundaries Transform. *International Journal of Science and Research (IJSR)* 01/2015; 4(1):2372-2376.
54. Abdoelrahman Hassan, Mohamed Gar-elnabi, Yousif M. Abdallah, Omer A. Omer: Outfield Dose Calculation in Treatment of Breast Cancer Using Radiotherapy TPs. *International Journal of Science and Research (IJSR)* 01/2015; 4(1):438(1).
55. Yousif M. Abdallah, Mohamed E.M. Gar-elnebi, Waleed A. Almahi, Nahid M. Matar

- Nagi Ibrahim Ali: Assessment of Microbiological Sterility in Radioimmunoassay Laboratory using SCDM and FTM Materials. *SMU Medical Journal* 01/2015; 2(1)
56. Yousif M. Abdallah, Abdalrahman Hassan: Segmentation of Brain in MRI Images Using Watershed-based Technique. *International Journal of Science and Research (IJSR)* 01/2015; 4(1):683-687.
  57. Yousif M. Abdallah, Rejab M. Bin Yousef: Enrichment of Ultrasound Images using Contrast Enhancement Techniques. *International Journal of Science and Research (IJSR)* 01/2015; 4(1):2381-2386.
  58. Yousif M. Abdallah, Nagah Khieder: Enhancement of Ultrasound Images using Top-hat and Blind Deconvolution Algorithms. *International Journal of Science and Research (IJSR)* 12/2014; 3(12):2485-2489.
  59. Yousif M. Abdallah, Eltayeb Wagiallah: Segmentation of Thyroid Scintigraphy Using Edge Detection and Morphology Filters. *International Journal of Science and Research (IJSR)* 11/2014; 3(11):2768-2771.
  60. Ahmed Yassine, Magdah M. Hassan, Yousif M. Abdallah: Assessment of <sup>99m</sup>Tc Dose Calibrator Performance in Nuclear Medicine Department. *International Journal of Science and Research (IJSR)* 11/2014; 3(11):36-39.
  61. Yousif M. Abdallah, Reham I. Abdelwahab: Application of Texture Analysis Algorithm for Data Extraction in Dental X-Ray Images. *International Journal of Science and Research (IJSR)* 10/2014; 3(10):1934-1938.
  62. Eltayeb Wagiallah, Yasir Ahmed, Yousif M. Abdallah: Correction Preprocessing Method for Cardiac Scintigraphy Images using Local Adaptive Filters. *International Journal of Science and Research (IJSR)* 09/2014; 3(9):2325-2329.
  63. Yousif M. Abdallah, Ali Hayder, Eltayeb Wagiallah: Automatic Enhancement of Mammography Images using Contrast Algorithm. *International Journal of Science and Research (IJSR)* 09/2014; 3(9):1885-1889.
  64. Yousif M. Abdallah, Reham I. Abdelwahab: Improvement of Orthopantography (OPG) Images using Texture Analysis. *International Journal of Science and Research (IJSR)* 08/2014; 3(8):1771-1775.
  65. Yousif M. Abdallah, Eltayeb Wagiallah: Enhancement of Nuclear Medicine Images using Filtering Technique. *International Journal of Science and Research (IJSR)* 08/2014; 3(8):916-921.
  66. Yousif M. Abdallah, Mohamed E Gar-Elnabi, Abdoelrahman H A Bakary, Alaa M H Eltoum, Abdelazeem K M Ali: Calculation of organs radiation dose in cervical carcinoma external irradiation beam using day's methods. *Global Advanced Research Journal of Medicine and Medical Science* 05/2014 3(5): 090-094
  67. Eltayeb Wagiallah, Yousif M. Abdallah, Mohamed E.M. Gar-elnabi, Mohamed A.A. Omer: Characterization of Coronary Artery Obstruction and Related Findings in Ischemic Heart Patients using Cardiac Scintigraphy. *Sudan Medical Monitor* 01/2014; 9(2): 6-9.
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- approach in radiotherapy using Laser beam Positioning System. Canadian Journal on Medicine 11/2011; 3(3)
71. Yousif M. Abdallah, Khalid Hassan Eltom, Mohamed Elfadil, M Gar-Elnabi: Prediction of Motion of Chest Organs during Radiotherapy Using Image Registration Technique.
  72. Yousif M. Abdallah, Arwa A Almoustafa, Gehan Elhadi, Mamdouh Mohammed, Osman Khalafallah, TayseerKhalid: Application of analysis approach in Noise Estimation in Panoramic X-rays images using image processing program (MatLab). Canadian Journal on Medicine 07/2011; 3(2)
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  74. Mohamed AA Omer, Mohamed E M Gar-Elnabi, E Saion, A A Al-Zahrany, Yousif M. Abdallah, M H Haron, Kh M Dahlan: Optical properties of radiopolymerized Polyaniline hydrochloride Hosted in polyvinyl-alcohol Matrix. Journal of Science and Technology 01/2011
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  76. Mohamed AA Omer, Mohamed E M Gar-Elnabi, E Saion, A A Al-Zahrany, , M H Haron, Yousif M. Abdallah, Kh M Dahlan: Gamma Radiation Synthesis and Characterization of polyvinyl Alcohol/Silver Nanocomposites Film . Journal of Science and Technology 10/2010; 4(10)
  77. Yousif M. Abdallah, Computed Verification of Light and Radiation Field Size Superimposition On Cobalt-60 machine. Sudan medical journal 04/2010; 2-5:147-156.

## Personal Skills and Competences

*Mother tongue(s):* Arabic

*Other languages:* English, French & Deutsch

### Organizational skills and competences

- During my PhD I participated in a seminar series on research methods

### Computer skills and competences

- Competent with Microsoft Office programs
- Have good experience with HTML
- Very good in dealing with computer (windows 3.1 up to Win XP, Office 97 up to office 2007, and Access).
- I have international Computer Licenses in Internet Computer Core Certificate (IC3)
- Very Good in dealing with Image Processing Programs (MatLab & IDL)

### Artistic skills and competences

- Got a high degree on Educational Preparation via Khartoum and Sudan University Staff Development Centers
- Good in drawing, painting, photography, Adobe Photoshop
- Other artistic skills.

### Other skills and competences

- Hard work and self-motivated
- Able to work in a team or individually

- Good ability to communicate with other people
- I aim to improve my personal skills and the firm

## **Training Courses**

- October 2003* **Training Course in Radiology**  
 Radiotherapy Department  
 National Cancer institute (NCI)  
 University of Cairo  
 Cairo, Egypt
- October 2003* **Training Course in Radiology**  
 Radiology Department  
 Nasser Institute Hospital  
 Ministry of Health and Population  
 Cairo, Egypt
- February 2007* **Authorization and Inspection of radiation sources in Radiotherapy**  
 Radiation Protection Technical Committee  
 Sudan Atomic Energy Agency  
 Ministry of Science and Technology  
 Khartoum, Sudan
- April 2007* **Radiation Protection and Safety**  
 Atomic Energy Commission (SAEC) & Department of Physics  
 Faculty of Science  
 University of Khartoum  
 Khartoum, Sudan
- October 2007* **Training Course in Radiotherapy**  
 Institute of Nuclear Medicine Molecular Biology and Oncology (INMO)  
 University of Gazeria  
 Wad Medani, Sudan
- February 2008* **Authorization and Inspection of radiation sources in Nuclear Medicine**  
 Radiation Protection Technical Committee  
 Sudan Atomic Energy Agency  
 Ministry of Science and Technology  
 Khartoum, Sudan
- March 2008* **Training Course in Radiotherapy**  
 Institute of Nuclear Medicine Molecular Biology and Oncology (INMO)

- University of Gazeria  
Wad Medani, Sudan
- October 2008* **Educational Preparation**  
Center of Staff Development Center  
University of Khartoum  
Khartoum, Sudan
- April 2009* **Training Course in Radiotherapy**  
National Cancer Institute (NCI)  
University of Gazeria  
Wad Medani, Sudan
- May 2009* **Authorization and Inspection of radiation sources in Nuclear Medicine**  
Radiation Protection Technical Committee  
Sudan Atomic Energy Agency  
Ministry of Science and Technology  
Khartoum, Sudan
- June 2009* **Authorization and Inspection of radiation sources in Radiotherapy**  
Radiation Protection Technical Committee  
Sudan Atomic Energy Agency  
Ministry of Science and Technology  
Khartoum, Sudan
- October 2009* **Training Course in Nuclear Medicine**  
National Cancer Institute (NCI)  
University of Gazeria  
Wad Medani, Sudan
- December 2009* **Educational Preparation**  
Staff Development Center  
College of Education  
Sudan University of Science and Technology  
Khartoum, Sudan.
- March 2010* **Tomotherapy, IMRT, Conformal, IGRT Applications and Innovative**  
Faisal Specialist Hospital and Research Centre  
Riyadh, Saudi Arabia
- May 2010* **Training Course in Radiotherapy**

- National Cancer Institute (NCI)  
University of Gazeria  
Wad Medani, Sudan
- June 2010* **Training Course in Magnetic Resonance Imaging (MRI)**  
Alia Specialist Hospital & National Cancer Institute (NCI)  
University of Gazeria  
Wad Medani, Sudan
- July 2010* **Image Processing and MatLab Applications**  
College of Computer Sciences and Information Technology (CCSIT)  
Sudan University of Sciences and Technology  
Khartoum, Sudan
- February 2011* **Advance CT Imaging, Quality Assurance & Quality Control in Radiology**  
Radiology Department  
National College for Medical and Technical Studies  
Khartoum- Sudan
- March 2011* **Advance Ultrasound**  
Golden Care Training Center  
Khartoum, Sudan
- Nov. 2011 – May 2012* **Nuclear Medicine , PET/CT and PET/MRI**  
Nuclear Medicine Department  
Carl Gastav University Hospital  
Technical University of Dresden  
Dresden , Germany
- Nov. 2011 – May 2012* **Radiotherapy and Radiation Oncology**  
Radiotherapy and Radiation Oncology Department  
Carl Gastav University Hospital  
Technical University of Dresden,  
Dresden , Germany
- January 2013* **Training Course in Radiotherapy**  
National Cancer Institute (NCI)  
University of Gazeria  
Wad Medani, Sudan
- July 2013* **Radiotherapy and Oncology**  
Wad Medani Heart Diseases and Surgery (WHDS)

- National Cancer Institute (NCI)  
University of Gazeria & Ministry of Health  
Wad Medani, Sudan
- February 2014* **Tomotherapy, IMRT, Conformal, IGRT Applications and Innovative**  
Faisal Specialist Hospital and Research Centre  
Riyadh, Saudi Arabia
- February 2015* **International Conference on Curricula**  
Red Sea University  
Port-Sudan, Sudan
- August 2015* **Using D2L system in Teaching**  
E-learning and distance Learning Deanship  
Majmaah University  
Majmaah, Saudi Arabia
- September 2015* **Desgin of Educational web sites and Bloggers**  
E-learning and distance Learning Deanship  
Majmaah University  
Majmaah, Saudi Arabia
- September 2015* **Teaching Technologis for Special Needs**  
E-learning and distance Learning Deanship  
Majmaah University  
Majmaah, Saudi Arabia
- September 2015* **Using Ipod in E-learning**  
E-learning and distance Learning Deanship  
Majmaah University  
Majmaah, Saudi Arabia
- October 2015* **Preparation Electronic Examination using**  
E-learning and distance Learning Deanship  
Majmaah University  
Majmaah, Saudi Arabia
- October 2015* **IEEE database library**  
Saudi Digital Library  
Ministry of Higher Education  
Riyadh, Saudi Arabia
- October 2015* **Using Marfia database library**  
Saudi Digital Library

Ministry of Higher Education

Riyadh, Saudi Arabia

*February 2016* **Tomotherapy, IMRT, Conformal, IGRT Applications and Innovative**

Faisal Specialist Hospital and Research Centre

Riyadh, Saudi Arabia

## **Workshops attended**

*December 2004* **One Day seminar on Advance in Ultrasound**

Sudan University with collaboration Afro-Asian Institute of Medical Science,

Lahore- Pakistan

Venue: Sudan University of Science and Technology

Khartoum Sudan

*April 2008* **International Congress on Environment, Immune- Mediated Disease and Cancer** Institute of Nuclear Medicine , Molecular Biology and Oncology (INMO) University of Gazeria

Wad Medani, Sudan

With collaboration with Ashiti University, Italy

Venue: Grand Holiday Villa, Khartoum, Sudan

*April 2009* **Mobile Phone Mast Workshop**

Faculty of Science, Department of Chemistry

with collaboration with Congress of Khartoum State

Khartoum, Sudan

*December 2009* **1<sup>st</sup> International Cancer Conference in Sudan**

Radiation and Isotopes Center of Khartoum (RICK)

Ministry of Health

Venue: Friendship Hall

Khartoum, Sudan

*March 2010* **International Conference on Radiation Medicine (ICRM)**

King Faisal Specialist Hospital and Research Centre

Riyadh, Saudi Arabia

*June 2010* **Bioinformatics**

College of Animal Production Science and Technology

Sudan University of Sciences and Technology

Khartoum, Sudan

with collaboration with Nasik Studies and Training Academy

Khartoum, Sudan



- 2<sup>nd</sup> International Cancer Conference in Sudan  
Radiation and Isotopes Center of Khartoum (RICK)  
Venue: Friendship Hall  
Khartoum, Sudan
- December 2010* **2nd international Conference in Laser technology and its application**  
Laser Institute  
University of Science and Technology  
Venue: Coroal Hotel  
Khartoum, Sudan
- March 2011* **Modern Power Presentation**  
Sudanese Turkish Center for Development  
College of Agricultural Studies  
Sudan University of Science and Technology  
Khartoum, Sudan
- April 2011* **Application of Ultrasound in Thyroid lesions detection**  
Sudanese Medical Radiology Association (SUMRA)  
College of Medical Radiological Science  
Khartoum, Sudan
- April 2011* **Application of Ultrasound in first Trimester pregnant women**  
Sudanese Medical Radiology Association (SUMRA)  
Venue: College of Medical Radiological Science  
Khartoum, Sudan
- July 2013* **Sudanese-Korean Conference on Cancer**  
National Cancer Institute (NCI) and Ministry of Health of Gazeria State  
Venue: Wad Medani Heart Diseases and Surgery,  
Wad Medani, Sudan
- 2-7 December 2013* **11<sup>th</sup> Conference on Peaceful Uses of Radiation Sources**  
Sudanese Atomic Energy Agency (SAEA)  
with Collaboration with Arab Atomic Energy Agency (AAEA)  
venue: Coral Hotel , Khartoum
- 17-19 December 2013* **14<sup>th</sup> International Arab Conference on Information Technology (ACIT'2013)** College of Computer Science  
Sudan University of Science and Technology  
Khartoum, Sudan  
with collaboration with College of Computing and Information Society (CCIS)  
Oman, Jordan  
Venue: Grand Hotel , Khartoum, Sudan
- March 2010* **International Conference on Radiation Medicine (ICRM)**  
King Faisal Specialist Hospital and Research Centre  
Riyadh, Saudi Arabia
- April 2014* **International Levels in the Preparation of Exams for Medical Specialists**

National Council for Sudanese Medical and Health Professionals  
 Khartoum, Sudan  
 Ministry of Human Resources Development  
 with collaboration with Medical University of Science and Technology  
 Khartoum, Sudan

- February 2015* **International Conference on Curricula**  
 Red Sea University  
 Port-Sudan, Sudan
- September 2015* **ELearning Management System (D2L)**  
 Deanship Of E-Learning and Distance Learning  
 Majmaah University  
 Majmaah, Saudi Arabia
- October 2015* **Websites Design and Educational Blogs**  
 Deanship Of E-Learning and Distance Learning  
 Majmaah University  
 Majmaah, Saudi Arabia
- October 2015* **Innovations and Scientific Research**  
 The Vice Deanship of Academic Affairs  
 College of Medical Applied Science  
 Majmaah University  
 Majmaah, Saudi Arabia
- October 2015* **E - learning technologies for people with special needs**  
 Deanship Of E-Learning and Distance Learning  
 Majmaah University  
 Majmaah, Saudi Arabia
- October 2015* **IEEE Database**  
 Saudi Digital Library  
 Riyadh, Saudi Arabia
- October 2015* **Use a digital knowledge Database**  
 Saudi Digital Library  
 Riyadh, Saudi Arabia
- September 2015* **Using iPad in Education**  
 Deanship Of E-Learning and Distance Learning  
 Majmaah University  
 Majmaah, Saudi Arabia

- November 2015* **Building of Electronic Tests**  
 Deanship Of E-Learning and Distance Learning  
 Majmaah University  
 Majmaah, Saudi Arabia
- November 2015* **Publishing in an International Scientific Journals**  
 Deanship Of E-Learning and Distance Learning  
 Majmaah University  
 Majmaah, Saudi Arabia
- January 2016* **Research in Medical imaging (Image Processing Techniques)**  
 Deanship Of E-Learning and Distance Learning  
 Majmaah University  
 Majmaah, Saudi Arabia
- February 2016* **Tomotherapy, IMRT, Conformal, IGRT Applications and Innovative**  
 Faisal Specialist Hospital and Research Centre  
 Riyadh, Saudi Arabia
- February 2016* **Study Schedules**  
 The Vice Deanship of Academic Affairs  
 College of Medical Applied Science  
 Majmaah University  
 Majmaah, Saudi Arabia
- February 2016* **MU Correspondence System**  
 The Vice Deanship of Academic Affairs  
 College of Medical Applied Science  
 Majmaah University  
 Majmaah, Saudi Arabia
- March 2016* **Healthy Computer Use**  
 The Vice Deanship of Academic Affairs  
 College of Medical Applied Science  
 Majmaah University  
 Majmaah, Saudi Arabia
- May 2016* **Injury Symposium**  
 College of Medical Applied Science  
 Majmaah University  
 Majmaah, Saudi Arabia

- February 2017* **Course Evaluation Planning**  
 College of Medical Applied Science  
 Majmaah University  
 Majmaah, Saudi Arabia
- April 2017* **Search Medical Databases**  
 Saudi Digital Library  
 Riyadh, Saudi Arabia
- April 2017* **EBSCO General Databases**  
 Saudi Digital Library  
 Riyadh, Saudi Arabia
- May 2017* **Journal on Ovid, Basic research on Ovid**  
 Saudi Digital Library  
 Riyadh, Saudi Arabia

## Research Experience

### Fields of Interest

- Medical Applied Research
- Clinical Experimental Research
- Radiation Therapy and Nuclear Medicine.
- IGRT, IMRT , Tomotherapy & Conformal Therapy
- Oncology Experimental Researches
- Radiation Physics and Quality Assurance.
- Medical Imaging and Image processing.
- Radiation Mold Technology.
- Applied Radiation Protection
- Computer Application in Radiology
- Picture Archiving and Communication Systems (PACS)
- Bioinformatics

### Future Trends and Researches:

#### Medical Physics Field

In the field of Medical Physics, I would like to conduct some works related to

- Quality Control test to Radiotherapy Machines (Cobalt-60 and Linear acceralator) using image processing technique.
- Quality Assurance of Radiotherapy & Nuclear Medicine machines
- Radiation protection for patients, Pubic and Staff

- Intrafraction and Interfraction Tumor motion tracking during respiration
- Radionuclide Applications in Nuclear Medicine (Diagnosis & Treatment) and Industrial/Environmental researches.

**Published Book:**

- **Computed Verification of Light and Radiation Field Size Superimposition On Cobalt-60 machine, Verification of Fields Size using Image Processing Technique** Published by LAP LAMBART Academic Publishing GmbH & Co. KG, Germany, **ISBN 9783838399096 (August 2010)**
- **Quality Control of Technetium-99 Generator, Theory and Practice** by LAP LAMBART Academic Publishing GmbH & Co. KG, Germany, **ISBN: 9783848421169 (February 2012)**

**Physics and Image Processing Field**

Some other works related to

- Computed Verification of Radiation and Light Field Size
- Superimposition in Radiotherapy Machines
- Application of analysis approach in Noise Estimation in Panoramic X-rays images using image processing technique
- 3-D MRI and CT images visualization using MatLab
- Detection of Organs Motion during Radiotherapy ( PhD thesis)
- Correction preprocessing technique for X-rays images
- Application of analysis approach in Noise Estimation in Panoramic X-rays images using image processing program (MatLab)
- Detection of Brain Tumors using Watershed Segmentation transform
- Segmentation of Liver using Parallel Computing Algorithm

**Published Book:**

- **Application of Analysis Approach in Noise Estimation, Using Image Processing Program**, by LAP LAMBART Academic Publishing GmbH & Co. KG, Germany, **ISBN: 9783847331544 (December, 2011)**

**Radiation Mold Technology**

The role of physics in Radiation Mold Technology research involved in some researches dealing with

- Design of Mold Room in Radiation and Isotopes Center of Khartoum
- A short Guide to Radiation Mold Technology.

**Published Book:**

- **A Short Guide To Radiation Mold Technology, A manual for daily use** by LAP LAMBART Academic Publishing GmbH & Co. KG, Germany **ISBN: 9783843371827 (October 2010)**

**Bioinformatics Technology**

In the field of Bioinformatics, I would like to conduct some works related to:

- Bioinformatics tools using , NCBI
- Databases search : ENTREZ, OMIM to work with different genes
- Nucleotides: pairwise sequence alignment (BLAST, FASTA)
- Proteins: pairwise and multiple sequence alignment (BLASTP, PSI-BLAST, FASTA, CLASTALW)
- Protein structure analysis: secondary and tertiary structure.
- Proteins Families: motifs, domains, clustering
- Phylogeny: tree reconstruction methods, gene duplication
- Genomics: Procaryotes and eucaryotes, gene hunting, splicing.
- The human Genome Project: drugs design, other genomes

- Gene expression analysis: DNA micro arrays (chips), clustering tools

**Training Courses:**

- Bioinformatics Workshop held at College of Animal Production Science and Technology – Sudan University of Sciences and Technology, Khartoum, Sudan with collaboration with Nasik Studies and Training Academy- Khartoum- Sudan (June-August 2010)

**Radiotherapy Technology:**

In the field of Radiotherapy, I would like to conduct some works related to:

- Human Body organs motion Tracking during External Beam Radiation Therapy
- IMRT , IGRT, Gamma Knife, Conformal Therapy Treatment

**Requirements**

- **Well Equipped Lab with tools as** Personal Computer, with Intel Pentium III or IV at 1.25 MHz (or higher), 512 MB RAM ( or higher), 40 GB HDD ( or Higher), 32 x CDDVD Drive , OS MS – Windows 9x (or higher) and Printer, Digitizer scanner, MatLab program (R2009a) version 7.8 (or higher) , SPSS version 13 (or higher), X-OMATV Film or X-OMAT TL film

- **Equipments** as (Intense Guided Radiotherapy requires consistent and precise definition of the target volume, clear protocols and independent delivery verification, so different types of image-guidance or imaging devices attached to and directing the localization of therapy will use. The study will base on the acquisition of fluoroscopic sequences using either Conventional or CT Simulator available at the area of the study with the facility of storage, provision and printing portal.

**My Role in Researches**

I could deal with all process and acquisition stages of the research from sampling preparation, measurement, characterization, analysis, discussion and papers and books publication after successful resultant research. Also I could teach and supervise the students in my specialty.

**National Center for Radiation Research in Oncology (OncoRay): Technische Universität Dresden**

Visiting Scientist in National Center for Radiation Research in Oncology (OncoRay): Technische Universität Dresden – Germany – Dresden

**Project title: "4D Radiotherapy of Lung Cancer with Integration of 4D PET/CT".**

Motion compensation techniques for radiation therapy: This includes on the one hand CT and PET-CT morphological and physiological imaging, respectively, for the purposes of radiotherapy treatment, i. e. for planning as well as for following up tumour irradiations. On the other hand, this comprises the installation of image guided and gating procedures at medical electron linear accelerators. (November 2011- April 2012)

**Published Book:**

- **Analysis of Respiratory Motion in Chest Organs, During External Beam Radiotherapy**, by LAP LAMBART Academic Publishing GmbH & Co. KG, Germany, ISBN: 9783847335726 (January, 2012)
- **A short Textbook on Care of patient in Radiotherapy** by LAP LAMBART Academic Publishing GmbH & Co. KG, Germany, ISBN: 9783848432318 ( March 2012)
- **A Short Guide to Breast Carcinoma Treatment, Introductory Notes on Breast Carcinoma** by LAP LAMBART Academic Publishing GmbH & Co.

KG, Germany, **ISBN: 9783846527450** ( **March 2012**)

## **Personal Skills and Competences**

*Mother tongue(s):* Arabic

*Other languages:* English, French & Deutsch

### **Organizational skills and competences**

- During my PhD I participated in a seminar series on research methods

### **Computer skills and competences**

- Competent with Microsoft Office programs
- Have good experience with HTML
- Very good in dealing with computer (windows 3.1 up to Win XP, Office 97 up to office 2007, and Access).
- I have international Computer Licenses in Internet Computer Core Certificate (IC3)
- Very Good in dealing with Image Processing Programs (MatLab & IDL)

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- Got a high degree on Educational Preparation via Khartoum and Sudan University Staff Development Centers
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- Other artistic skills.

### **Other skills and competences**

- Hard work and self-motivated
- Able to work in a team or individually
- Good ability to communicate with other people
- I aim to improve my personal skills and the firm

**Last update: January 2023**