

CURRICULUM VITAE

Feras M. O. Al-Dweri, PhD

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Personal Data

Born: October 4, 1970.
Place: Kitim – Irbid (Jordan)
Nationality: Jordanian.
Marital Status: Married with two children

Education

Ph. D. Medical Physics, Granada University, Spain, 2003.
B. S. Physics, Yarmouk University, Irbid, Jordan, 1994.

Title of Dissertation

1998-2003: Ph. D. Monte Carlo Study of the Gamma Knife Dosimetry.

History Job

2019-present: Associate Professor, Department of Physics, The Hashemite University Professor
2011-2019: Assistant Professor, Department of Physics, The Hashemite University.
2008-2011: Full-time Lecturer, Department of Physics. The Hashemite University
2006-2008: Research Associate, Facultat de Fisica (ECM), Barcelona University, Diagonal 647, 08028 Barcelona, Spain.
2005-2006: Assistant Professor, Physics Dept., Applied Science University, Amman, Jordan.
2003-2005: Postdoctoral, Modern Physics Dept., Granada University, Spain.

Research Interests

Radiotherapy, Monte Carlo Simulation, Dosimetry Radiation, Dose Sensitivity, Radio-Chromic Dosimeter, Magnetism

Scholarships

- **Postdoctoral**, Granada University and Group 'FQM0225 of the Junta de Andalucia, Spain.
- **AECI predoctoral fellowship**, Granada University, Spain.

Membership of Scientific and Professional Societies

- "Sociedad Espanola de Fisica Medica" (SEFM).
- Jordanian SESAME research group

Undergraduate Courses at The Hashemite University

Phys. 263: Applied Radiation Physics, Phys. 321: Physical of Optics, Phys. : Medical Physics, Phys. 351: Classical Mechanics, Phys. 371: Physics of Materials, Phys. 341: Thermal and Statistical Physics, Vibrations and Waves, Phys. 491: Seminar (student graduation projects on different topics in magnetism, materials science and engineering), Phys. 411: Advanced Laboratory II (different senior level experiments on modern and advanced physics), Phys. 101: General Physics I (Science and Engineering students), Phys. 102: General Physics II (Science and Engineering students), Phys. 107: General Physics III (life science), Phys. 109: General Physics IV (medical students)

PUBLICATIONS

Patents

1. Khalid A. Rabaeh, **Feras M. Aldweri**, Kefaia N. Al- Ahmad, "METHOD OF MAKING RADIOCHROMIC DOSIMETER USING CALCEIN DYE", US Patent App. 15/262695 (March 15, 2019)

Highlights

2. **Feras M.O. Al-Dweri**, Guirado D, Antonio M. Lallena and Pedraza V., "Effect on tumour control of time interval between surgery and postoperative radiotherapy in patients with head and neck squamous cell carcinomas: an empirical approach using Monte Carlo simulation.", *Physics in Medicine and Biology* 49 (2004) 2827-2839.

Papers

3. **Feras M. Aldweri**, Manar H. Abuzayed, Musab S. Al-Ajaleen, Khalid A. Rabaeh "Characterization of Thymol Blue Radiochromic Dosimeters for High Dose Applications", *Results in Physics*, Accepted for publication (2018)
4. Khalid A.Rabaeh, Musab S.Al-Ajaleen, Manar H.Abuzayed, **Feras M. Aldweri** "High dose sensitivity of N-(isobutoxymethyl) acrylamide polymer gel dosimeters with improved monomer solubility using acetone co-solvent", *Nuclear Instruments and Methods* 442 (2019) 67-72
5. **Feras M. Aldweri**, Manar H. Abuzayed, Musab S. Al-Ajaleen, Khalid A. Rabaeh "Characterization of Thymol Blue Radiochromic Dosimeters for High Dose Applications", *Results in Physics*, Accepted for publication (2018)
6. **Feras M.O. Al-Dweri**, Rojas EL and Antonio M. Lallena, "Effects of bone- and air-tissue inhomogeneities on the dose distributions of the Leksell Gamma Knife® calculated with PENELOPE", *Physics in Medicine and Biology* 50 (2005) 5665 - 5678
7. **Feras M. Aldweri**, Khalid A. Rabaeh, Kefaia N. Al-Ahmad "Novel radiochromic dosimeters based on Calcein dye for high dose applications", *Radiation physics and chemistry*, 139 (2017) 1-4.
8. Khalid A. Rabaeha, Molham M. Eyadeh, Tariq F. Hailat, **Feras M. Aldweri**, Samer M. Alheete, Rania M. Eid "Evaluation of ferrous Methylthymol blue gelatin gel dosimeters using nuclear magnetic resonance and optical techniques, *Radiation Measurements*, 108 (2018) 26 - 33.
9. Julio F. Almansa, Rafael Guerrero, **Feras M.O. Al-Dweri**, Marta Anguiano, Antonio M. Lallena, "Dose distribution in water for monoenergetic photon point sources in the energy range of interest in brachytherapy: Monte Carlo

simulations with PENELOPE and GEANT4”, Radiation Physics and Chemistry 76 (2007) 766–773.

10. Shatnawi, M., Alsmadi A. M., Bsoul, I., Salameh B., Mathai M., Alnawashi G., Alzoubi Gasseem M., **Al-Dweri F.**, Bawa'aneh M. S. "Influence of Mn doping on the magnetic and optical properties of ZnO nanocrystalline particles", Results in Physics 6 (2016) 1064-1071
11. M. Shatnawi, A.M. Alsmadi, I. Bsoul, B. Salameh, G.A. Alna'washi, **F. Al-Dweri**, F. El Akkad, "Magnetic and optical properties of Co-doped ZnO nanocrystalline", Journal of Alloys and Compounds 655 (2016) 244-252.
12. A.M. Alsmadi, I. Bsoul, S.H. Mahmood, G. Alnawashi, **F.M. Al-Dweri**, Y. Maswadeh, U. Welp "Magnetic study of M-type Ru-Ti doped strontium hexaferrite nanocrystalline particles", Journal of Alloys and Compounds 648 (2015) 419-427.
13. M.K. Al-Sugheir, **F.M. Al-Dweri**, G. Alna'washi, M.G. Shatnawi, "Thermodynamics of a repulsive and attractive harmonically-trapped one-dimensional atomic Bose gas", Physica B 408 (2013) 151–157.
14. S. Al-Omari, M. Al-Noaimi, K. Raba'eh, G. Alna'washi, M.S. Bawa'aneh, **F. Al-Dweri** and A.K.S. Aqili "Photophysical Properties of Sodium zinc(II)2,9,16,23-phthalocyanine Tetracarboxylate in Aqueous Solution", International Journal of Pure and Applied Physics, 7 (2011) 57–72.
15. **Feras M.O. Al-Dweri**, Antonio M. Lallena, "A simplified model of the source channel of the Leksell Gamma Knife testing multisource configurations with PENELOPE", Physics in Medicine and Biology 49 (2004) 3441-3453.
16. **Feras M.O. Al-Dweri**, Antonio M. Lallena and Manuel V., "A simplified model of the source channel of the Leksell Gamma Knife tested with PENELOPE", Physics in Medicine and Biology 49 (2004) 2687-2703.
17. Rojas EL, **Feras M.O. Al-Dweri**, Antonio M. Lallena, Bodineau C, and Galan P., "Dosimetry for radiocolloid therapy of cystic craniopharyngiomas", Medical Physics 30 (2003) 2482-2492.
18. **Feras M.O. Al-Dweri**, Guirado D, Antonio M. Lallena, "Simulacion de programas fraccionados de radioterapia: estudio del control tumoral y del efecto de la interrupción de tratamiento", Física Médica 2 (2001) 17.

Abstracts

1. **Feras M.O. Al-Dweri**, Dosimetry for radiocolloid therapy of cystic craniopharyngiomas with ^{186}Re , The XIIIth Congress of Technical Scientific ININ-SUTIN. Mexico (Mexico), December 2003.

2. **Feras M.O. Al-Dweri**, Guirado D and Antonio M. Lallena , “Efecto del intervalo de tiempo entre cirugía y radioterapia en pacientes con carcinomas de cabeza y cuello: metodo empirico basado en simulacion Monte Carlo”. XIV National Congress of Medical Physics. Vigo (Spain), June 2003.
3. Rojas EL, **Feras M.O. Al-Dweri**, Antonio M. Lallena, Dodineau C, and Galan P. “Dosimetria para el tratamiento de craneofaringiomas quisticos mediante radiocoloides”, XIV National Congress of Medical Physics. Vigo (Spain), June 2003.
4. Guirado D, **Feras M.O. Al-Dweri**, Antonio M. Lallena and Pedraza V., The time factor in cancer therapy, Primera Conferencia Atlantica del Cancer, Jandia, Fuerteventura (Spain), February 2002.
5. Guirado D, **Feras M.O. Al-Dweri**, Antonio M. Lallena and Pedraza V., The effect on the local control of the time interval between surgery and radiotherapy in patients with head and neck squamous cell carcinomas. An empirical approach using Monte Carlo simulation. The European Cancer Conference, Lisboa (Portugal), October 2001.
6. **Feras M.O. Al-Dweri**, Guirado D, Antonio M. Lallena, “Simulacion de programas fraccionados de radioterapia: estudio del control tumoral y del efecto de la interrupcion de tratamiento”. XIII National Congress of Medical Physics. Malaga (Spain), June 2001.

Professional and Scientific Meetings (Conferences, Conventions, Symposia and Training Courses)

- Progress In Electromagnetics Research Symposium, Marrakesh (Morocco), Mar. 20 – 23, 2011
- Radiotherapy planification, KHCC, Amman (Jordan), January 1 – February 29, 2008
- Third McGill Workshop on Monte Carlo Techniques in Radiotherapy Delivery and Verification, McGill University, Montreal (Canada), May 29 – June 1, 2007.
- 4th SESAME Users’ Meeting, Amman (Jordan), December 6 -8, 2005.
- XIV National Congress of Medical Physics. Vigo (Spain), June 2003.
- Second seminary on perspective of scientific and technological development in the National Accelerator Center. Sevilla (Spain), June 2002.
- First National Meeting on Radiation Applications in Physics. Granada (Spain), Mars 2002.
- XIII National Congress of Medical Physics. Málaga (Spain), June 2001.
- IVth. Workshop on Electromagnetically Induced Two Hadron Emission. Granada (Spain) May 1999.

Training Courses

- Advanced Training Course/Workshop on Electron-Photon Transport Modeling with PENELOPE-2003 Physics, Code Structure and Operation Barcelona (Spain), 18-21 October 2004.
- Clinical Radiobiology, Granada (Spain), 20-22 September 2004.
- Ultrasounds: Guarantee of Quality and Clinical Applications, Malaga (Spain), 27-29 March 2003.
- Geant4 User Workshop and Tutorials, Salamanca (Spain), 15-19 July 2002.
- Dosimetry in Braquitherapy, Malaga (Spain), 26 - 29 June 2001

Master students' supervisor of applied physics program

1. Manar Khalil Yousef Sowan " Developing of Polymer Gel Dosimeter Based on N-(Hydroxymethyl) acrylamide for Radiotherapy Treatment Planning System" 2017.
2. Ala'a Abdalsalam Juma Abu sa'aleek, " Preparation and Characterization of Arcylamide Polymer Gel Dosimeter for Radiation Therapy" 2016.
3. Nisrein Ismail Jum'ah Udwan, "Preparation and Characterization of Polymer Gel Dosimeter N-isopropylacrylamide for Radiation Therapy" 2016.
4. Manar H. Abuzayed, "Developing of Radio_Chromic Dosimeters Containing Thymol Blue For Radiation Dosimetry", 2015.
5. Kefaia N. Al-Ahmad, "Developing of Radio_Chromic Film Dosimeters Based on Calcein Dye and Polyvinyl_Alcohol Binder for High Dose Applications" 2015.
6. Kanan Jamal Mohammad Kanan, "Developing of Radio_Chromic Dosimeters Containing Congo Red For Radiation Dosimetry" 2014.
7. Maysa'a Fahmi Esmaael Adwan, " The Effects of Different Grades of Air Humidity on the Transportation of Electrons and Photons that Used in Curing Cancer Calculated with PENELOPE" 2012.

Professional References:

1. Prof. Antonio M. Lallena (my Ph.D supervisor)

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