

Curriculum Vitae

Dr. Hamed A. Al-Sewaidan

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Nationality : Saudi .

Occupations and Responsibilities :

- **Associate Professor**, Department of Physics and Astronomy, King Saud University.
- Formerly Secretary of the Department of Physics and Astronomy, King Saud University.
Formerly Secretary of the Permanent Committee of Radiation Protection, King Saud University.
- Head of Radiation Committee at Physics and Astronomy Department, King Saud University.

Academic qualifications and Certificate:

- Ph.D in “ Medical Physics, University Collage of Wales, Swansea, UK”, 1991
- MSc in “ Physics and Technology of Nuclear Reactors, University of Birmingham, UK “ 1986.
- BSc in Physics, College of Science, King Saud University. Riyadh, Saudi Arabia, 1980, very good with honour.
- Radiation Expert certificate in Radiation protection , National Center for Radiation Protection , Saudi Arabia.

Research Expertise and Lecturing Experience

- **Research work in the biomedical field, especially in ionizing radiation measurements and simulation.**
- **Teach physics at all levels, from introductory courses for the general public to advanced topics for students, in both Arabic and English."**
- **Provide Physics lectures tailored to different audiences, offering both general introductions and in-depth explorations, in Arabic and English.**

Books and Scientific Essays in Arabic:

- Physics of elementary particles, Chemistry magazine, No.23, Oct., 2005.
- Biomagnetism, KACST Science and Technology Magazine, No.62, June, 2002.
- Ionizing radiations and its interactions with matter, KACST Science and Technology Magazine, No.21, July, 1992.
- Co-Author of “Assisting Physics Book for Secondary School”, 2009.
- Translated Book “Heat Transfer “, King Saud University Approved , 2010.

Selected Supervision:

- Co-supervisor of MSc thesis “ Assessment of beam characteristics of some X-ray units at Security Forces Hospital and their applications in pediatric dose calculation ” 2006.
- Supervisor of MSc thesis “ Comparison study of reflected and transmitted thermal neutron flux in water and other moderators “,2007.
- Supervisor of MSc thesis “ COMPUTER SIMULATION OF BACKSCATTERED NEUTRONS FROM BURIED MATERIALS IN SOIL “,2013.
- Supervisor of MSc thesis “ Comparative Study on backscattered thermal neutrons from buried hydrogenous materials “,2013.
- Supervisor of MSc thesis “4D Monte Carlo simulation of a beating heart phantom for cardiac CT imaging applications.“,2016
- Supervisor of MSc thesis “Monte Carlo simulation of an anthropomorphic beating heart: Application of Geant4 for cardiac SPECT imaging.“,2016.
- Supervisor of MSc thesis " Photoconductivity of Melanin Thin Films under Ionizing Radiation " , submitted, Dec.,**2020**.
- Supervisor of MSc thesis " Establishment of scatter factors for use in shielding calculations for rooms of CT scanners with wide beams technology(submitted ,Dec.**2020**).
- Supervisor of MSc thesis " Optimization of imaging characteristics of I-124 using micro PET/CT system,Submitted June–**2022**.
- Supervisor of MSc thesis " Monte Carlo evaluation of Absorbed Doses for neutron sources in various Body Organs of an anthropomorphic Phantom in the presence of a heavy metal oxide glass shield.**In progress**.

Selected Scientific papers,Conferences and Training :

- Monte Carlo simulation enhancement of neutron backscattering from buried CHNO materials using a carbon reflector .Proceeding of the 12th Arab Conference on the Peaceful Uses of Atomic Energy,16-20 May **2015**,Shar El Sheikh ,Egypt.
- Nanostructural Changes in the Cell Membrane of Gamma-Irradiated Red Blood Cells, Indian J Hematol Blood Transfus, (**2016**). DOI 10.1007/s12288-016-0657-z.
- Training Program “2015 King Saud University Academic Science Summer Seminar ,July,**2015**,Kansas State University,**USA**.
- Training Program “Using Technology In Higher Education Program”,June,**2013**,York University, **Canada**.
- Assessing silicon deposits in Zilfi province, Saudi Arabia, using XRF and XRD techniques, in “X-ray Spectrometry “,August (**2016**). DOI 10.1002/xrs.2708
- Natural radioactivity measurements and dose rate assessment of selected ceramic and cement used in Riyadh city,Saudi Arabia ,Science Journal of King Saud University,31(**2019**).
- Design and optimization of a source (reflector/shielding)performance test system based on(241Am-Be)-paraffin thermal neutron irradiation device. Nuclear Engineering & Technology,2024

General Lectures :

- 1-“ Awareness with ionizing Radiations “ college of Science – physics & Astronomy Department, 13/10/2015.
- 2-“ Benefits and challenges of the Peaceful Nuclear Program “Scientific Forum “ Energy and its impacts on global security “, Riyadh 29-30/3/2016, Naif Arab University for security science.
- 3-“Introduction to Nuclear materials “,Training lectures , , Naif Arab University for security science ,**Riyadh 4/2/2018.**
- 4- “Basics of Safe Handling with Radioactive Materials “college of Science – physics & Astronomy Department, **3/4/2018.**
- 5- “Protection from Ionizing Radiation “,General Lecture on Day of evacuation exercise , College of Food and Agricultural Sciences,**18-12-2019.**
- 6- Safety procedures in laboratories from ionizing radiation “On-line Lecture College of Science – physics & Astronomy Department,online- **9th Feb/2022.**
- 7- Radiation around us . “On-line Lecture College of Science – physics & Astronomy Department,online- **29-1 /2024**
- 8- Nuclear Reactors for Power generation. On-line Lecture College of Science – physics & Astronomy Department,online- **4-12 /2024**

سلسلة أكسفورد لمبادئ الكيمياء

انتقال الحرارة

Heat Transfer

تأليف

ر. هـ. س. ونترتن

R. H. S Winterton

كلية الهندسة الميكانيكية والصناعية

جامعة برمنجهام - المملكة المتحدة

ترجمة

د. حامد بن عبد الرزاق السويدان

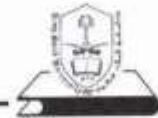
أستاذ مساعد - قسم الفيزياء والفلك

كلية العلوم - جامعة الملك سعود

منشورات جامعة أكسفورد

النشر العلمي والمطابع - جامعة الملك سعود

ص.ب. ٦٨٩٥٣ - الرياض ١١٥٣٧ - المملكة العربية السعودية



الواضح في الفيزياء

للفصل الأول الثانوي

الفصل الأول

للبنين والبنات

د. حامد عبدالرزاق السويدان
أ. مناهل عبدالرزاق السويدان

