

Curriculum Vitae for Dr. Khalid Sauliman Alzimami

Personal Data

Nationality: Saudi Arabia

Place of Birth: Riyadh, Saudi Arabia

Address:

Department of Radiological Sciences,
College of Applied Medical Sciences,
King Saud University,
PO.Box 10219
Riyadh 11433
Saudi Arabia
Kingdom of Saudi Arabia

Education

2006-2009:

PhD Medical Physics

University of Surrey, Guildford, UK.

- ❖ Thesis: The Potential Use of Cerium-doped Lanthanum Scintillators and Optimisation of Imaging Processing in SPECT.
- ❖ Research focused on:
 - Evaluating and validating of GATE Monte Carlo Simulation code as well as contribution to the code development.
 - Investigating of the potential use of LaBr₃:Ce and LaCl₃:Ce scintillator materials in single photon imaging compared to NaI(Tl).
 - Optimising 3D OSEM image reconstruction techniques with and without attenuation correction for ⁹⁹Tcm SPECT images at different noise levels.
 - Investigation of the potential of improving spatial resolution in SPECT systems that combine the LaBr₃:Ce detectors with 3D OSEM image reconstruction algorithms.
 - Validation of the basic principles and evaluation of the potential of using a new method for estimating random noise in SPECT images using non-cardiac gating technique.
- ❖ Collaborators:
 - The Nuclear Medicine Department at St George's Hospital, London.
 - The Nuclear Medicine Department at Guy's Hospital, London.
 - Joint Department of Physics, The Institute of Cancer Research / Royal Marsden NHS Foundation Trust.

2004-2005:

MSc Medical Physics (Distinction)

University of Surrey, Guildford, UK.

- ❖ Dissertation: Optimisation of computed radiography systems for chest imaging.
- ❖ Collaborators: The Department of Radiology at St George's Hospital, London.

1998-2002:

BSc Physics (4.65/5, Hons)

Final year project: The Application of Gas Lasers in Medicine (Literature review).

Additional Qualifications & Training

December 2009 – February 2010

10 weeks training placement in the Nuclear Medicine Department at the Royal Marsden NHS Foundation Trust, Sutton, UK.

16-18 February 2010

Nuclear Medicine Course

Joint Department of Physics, The Institute of Cancer Research, Royal Marsden NHS Foundation Trust, Sutton, UK.

23-25 October 2009

Experimental Design and Practical data Analysis in Positron Emission Tomography
Division of Neuroscience and Mental Health, School of Professional Development,
Imperial College London, UK.

October –December 2009

Career Management Skills Module:

Careers Inside and Outside Academia - Winning CVs and Applications - Career Choice
and Getting on with Colleagues - Creative Networking for Job Hunting - Successful
Interview Skills - Talking to the Media.

SPLASH Centre, University of Surrey, Guildford, UK.

4 June 2009

International Business Protocol Module

Lausanne Hospitality Consulting, Lausanne, Switzerland.

11 November 2008

Production, Use and Disposal of Radioisotopes in Nuclear Medicine
AstraZaneca R&D Charnwood, Loughbrough, UK.

11 May 2005 & 23 April 2008

Radiation Protection Refresher Course

Suffolk Radiation Technical Services (SRTS) Ltd., University of Surrey, Guildford, UK.

5-7 April 2006

Positron Emission Tomography: Technology and Application

Department of Chemistry and Centre for Professional Development, Imperial College
London and GlaxoSmithKline, London, UK.

7-9 April 2004

Diploma in the Art and Sciences of Neuro Linguistic Programming,

The International Trainers Association, , King Fahd Academy, London, UK

7-9 April 2004

Diploma in the Art and Sciences of Neuro Linguistic Programming,
The American Board of Neuro-Linguistic Programming, King Fahd Academy, London,
UK

Employment

July 2010-Present

Assistant Professor of Medical Physics
Department of Radiological Sciences, College of Applied Medical Sciences, King Saud
University, Riyadh, Saudi Arabia

May 2010-Present

University of Surrey, Guildford, UK
Visiting Researcher
Medical Physics Group, Faculty of Electronic Engineering and Physical Science

2006-2009

University of Surrey, UK
Teaching Assistant
Radiation Physics laboratory; supervision and demonstrating for MSc. students.

2006-2009

University of Surrey, UK
Dissertation Co-Supervisor
Supervision of projects leading to M.Sc. in Medical Physics

2002-2003

King Saud University
Demonstrator/Teaching Assistant

Publications

Peer-reviewed Journal Publications:

1. **K. Alzimami**, E. Abuelhia, Z. Podolyak, A. Ioannou and N. M. Spyrou, Investigation of LaBr₃:Ce and LaCl₃:Ce Scintillators for Gamma-ray Spectroscopy, *Journal of Radioanalytical and Nuclear Chemistry*, Volume 278, Number 3, 755-759, 2008.
2. E. Abuelhia, **K. Alzimami**, M. Alkhorayef, Z. Podolyák and N. M. Spyrou, Measurement of coincidence timing resolution of scintillation detectors compared to semiconductor detectors to image three-photon positron annihilation, *Journal of Radioanalytical and Nuclear Chemistry*, Volume 278, Number 3, 767-771, 2008.
3. **K. Alzimami**, S. Sassi, M. Alkhorayef, A.J. Britten, N.M. Spyrou, Optimisation of computed radiography systems for chest imaging, *Nuclear Instruments and Methods in Physics Research Section A*, Volume 600, Issue 2, p. 513-518 (2009).

4. M. Alkhorayef, E. Abuelhia, **K. Alzimami**, M. Marouli, M. P. W. Chin and N. M. Spyrou, Experimental comparison of the relative yield of $3\gamma/2\gamma$ positron annihilation using semiconductor and scintillation detectors, *Journal of Radioanalytical and Nuclear Chemistry*, Volume 280, Number 2, 315-318, 2009.
5. **K. Alzimami**, S. Sassi and NM Spyrou, Investigation the Potential Use of LaBr₃:Ce Scintillators for Scintimammography Imaging. *Nuclear Instruments and Methods in Physics Research Section A*. In press.
6. **K. Alzimami**, S. Sassi, L. Livieratos and NM Spyrou, Investigation of the Possibility of Improving Spatial Resolution in SPECT with the Combination of LaBr₃:Ce Based Detector and 3D OSEM Reconstruction Algorithms. *Nuclear Instruments and Methods in Physics Research Section A*. In press.

Proceedings and Conference Records:

1. **K. Alzimami**, S. Sassi and N. M. Spyrou, Investigation of LaBr₃:Ce and LaCl₃:Ce Scintillators for SPECT Imaging, *IEEE International Symposium on Biomedical Imaging Proceeding (ISBI'08)*, Paris May 2008, 1243-46.
2. **K. Alzimami**, S. Sassi, M. Alkhorayef and NM Spyrou. Optimisation of FBP with Using Butterworth, Metz and Weiner Reconstruction Filtering in 99Tcm SPECT Images, *the 2nd Saudi Innovation conference Proceeding (SIC'08)*, Leeds, June 2008, 78-82.
3. **K. Alzimami**, S. Sassi, and N. M. Spyrou, Optimization and Comparison of 3D-OSEM with FBP SPECT Imaging, *the 2008 International Conference of Signal and Image Engineering Preceding*, London July 2008, I: 632-636.
4. **K. Alzimami**, S. Sassi and NM Spyrou. Preliminary Monte Carlo Study Of 18-FDG SPECT Imaging with a LaBr₃:Ce Gamma Camera , *the 3rd Saudi International conference Proceeding (SIC'09)*, Guildford, June 2009.

Published Abstracts:

1. **K. Alzimami**, S. Sassi and N. M. Spyrou, Investigation of LaBr₃:Ce and LaCl₃:Ce Scintillators for SPECT Imaging, *Nuclear Medicine Communication*, 28(12), 958. 2007.
2. **K. Alzimami**, M. Demou, L. Livieratos and NM. Spyrou, Validation of the GATE Monte Carlo simulation code for modelling a SPECT system, *Nuclear Medicine Communications*, 29(5) 500, 2008.
3. **K. Alzimami**, S. Sassi and NM Spyrou, Optimization and Comparison of 3D-OSEM with FBP SPECT Imaging, *Nuclear Medicine Communications*, 29(5), 499-500. 2008.

Book Chapters:

1. **K.S. Alzimami**, S.A. Sassi and N. M. Spyrou, A Comparison Between 3D OSEM and FBP Image Reconstruction Algorithms in SPECT, Edited by Sio-Iong Ao and Len Gelman, Chapter 17:195-206, Springer, New York, 2009.

Edited Books & Proceedings:

1. Akram Aloqbi, Ibrahim Alsini and **Khalid Alzimami**, The 3rd Saudi International conference Proceeding (SIC'09), Guildford, June 2009. ISBN: 1-84469-020-2.

Oral and Poster Presentations at National and International Conferences

- ❖ The 2nd Gulf Nuclear Medicine Conference, November 2006, Dubai, UAE. **Oral.**
- ❖ The 2nd Gulf Nuclear Medicine Conference, November 2006, Dubai, UAE. **Poster.**
- ❖ The Autumn British Nuclear Medicine Society (BNMS) Meeting, September 2007, London, UK. **Oral.**
- ❖ The 12th International Conference “Modern Trends in Activation Analysis (MTAA12), September 2007, Tokyo, Japan. **Poster.**
- ❖ The 5th IEEE International Symposium on Biomedical Imaging (ISBI '08); 14–18 May 2008, Paris, France. **Poster.**
- ❖ The Annual British Nuclear Medicine Society (BNMS) Meeting, May 2008, Edinburgh, UK. **2 Posters.**
- ❖ The 2008 International Conference of Signal and Image Engineering; 2-4 July 2008, London, UK. **Oral.**
- ❖ The 3rd Saudi International Conference, 4-6 June 2009, Guildford, UK. **Poster.**
- ❖ The 11th International Workshop on Imaging Detector, 27th June – 2nd July 2009, Prague, Czech Republic. **Oral.**
- ❖ The 11th International Workshop on Imaging Detector, 27th June – 2nd July 2009, Czech Republic. **Poster.**

Co-supervised MSc Dissertations

1. **O. Almutwaa**, Optimization and Comparison of 3D-OSEM and FBP algorithms in SPECT Imaging, University of Surrey, 2006. Co-supervised with Dr. Salem Sassi.
2. **M. Demou**, Validation of the GATE Monte Carlo simulation code for modelling a SPECT system, University of Surrey, 2007. Co-supervised with Professor Nicholas Spyrou.
3. **A. Ioannou**, Experimental characterisation and evaluation of LaCl₃:Ce, LaBr₃:Ce, NaI:Tl, CdZnTe and HpGe detectors for SPECT imaging, University of Surrey, 2007. Co-supervised with Professor Nicholas Spyrou.
4. **A. Georgantzoglou**, Monte Carlo simulation of a dual-headed gamma camera system using GATE, University of Surrey, 2008. Co-supervised with Professor Nicholas Spyrou.

Prizes & Awards

- ❖ 2001: The ideal student in the College of Science, King Saud University, Riyadh, Saudi Arabia, based on academic performance.
- ❖ 2008: The best paper at the 2008 International Conference of Signal and Image Engineering; 2-4 July 2008, London, UK.
- ❖ 2009: Distinguished Achievement Prize, the 3rd Saudi International Conference, 4-6 June 2009, Guildford, UK.

Technical Skills

- ❖ Practical
 - Knowledge of radiation detection and measurement techniques such as gamma-ray spectroscopy through MSc and PhD work.
 - Nuclear Medicine equipments Quality Control and Quality Assurance.
 - Computed Radiography.
 - Radiation Protection Procedures.
- ❖ Computing
 - Experienced with Monte Carlo Simulation and Modelling using Geant4 Application Tomography Emission (GATE) code.
 - Experienced with Windows and Linux based systems.
 - Familiar with ROOT data analysis.

Outreach

- ❖ Executive secretary of the 3rd Saudi International Conference, Guildford, UK, 4-6 June 2009.
- ❖ Academic consultant for the Saudi Clubs and Schools in the UK and Republic of Ireland, courses 26 and 27 (2006-2008).
- ❖ Member of the executive committee of Saudi Clubs and Schools in the UK and Republic of Ireland, course 28 (2008-2009).
- ❖ Vice President of Surrey Saudi Club, courses 24 & 28 (2005, 2009).
- ❖ Islamic Society Representative, Student Union, University of Surrey, 2005.

Languages

- ❖ Arabic - native
- ❖ English - fluent

Professional Memberships

- ❖ British Institute of Radiology
- ❖ IEEE

References

References available on request.