FUZI MOHAMED ELKUT

FACULTY OF HEALTH SCIENCES, ALMARGEB UNIVERSITY
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WORK

- **(2018-Now) The Dean of Faculty of Health sciences, (Previously, Faculty of Nursing) Almergeb University.**
- **(2016 -2017) The Head of the examination Department, Faculty of Health Sciences (Previously, Nursing Faculty), Almergeb University**
- **(2013-2016) The Dean of the Medical Technology Faculty, Almergeb University.**
- **(2012-2013) The head of General Department, Medical Technology Faculty, Almergeb University.**
- **(1999-2005) Radiology Technologist in Tripoli Medical Centre, Tripoli Libya.**

EDUCATION

- **Bachelor of Science (BSc.) in diagnostic radiology and radiotherapy. Faculty of medical Technology, Nasser University, Musrata, Libya (1997)**
- **Master of Science (MSc) in Medical Engineering University of Liverpool, Liverpool, UK (2006)**
- **Master of philosophy (MPhil) in Medical Engineering University of Liverpool, Liverpool, UK (2009)**
- **Doctorate of philosophy (PhD) in Medical Engineering, Liverpool John Moore's University, Liverpool. UK (2012)**

RELEVANT EXPERIENCE

HARDWARE

- **Hands on experience using X-ray Imaging facilities. (Medical imaging, CT, MRI) Tripoli medical centre (TMC) (1999-2005)**
- **Hands on experience using Radiotherapy facility. (TMC) (1999-2003)**

ANALYSIS TECHNIQUES / SOFTWARE

- **Developed innovative methodology to create 3D structures from 2D Dicom images using CAD.**
- **Transference of 3D profiles over to Finite Element Models for structural analysis using ABAQUS.**
- **Performed hard and soft solids data analysis in National Health Service in UK (NHS) environment Pinnacle software.**
- **Extensive use of pixel transformations using ImageJ software.**
- **Researched at Clatterbridge Centre of Oncology, Liverpool (2008- 2012) using Pinnacle software involving refining raw image data sourced from Phillips CT/MR imager.**

- **Data filtering using Microsoft Office Suite.**

SUPERVISORY

- **Guiding undergraduates with final year's projects.**
- **Co-supervision of four master projects, (biomechanical and Finite Element modules). Liverpool John Moore's University.**
- **supervision of Ten master projects, (Medical imaging and medical physics and medical Engineering). Academy of Higher Education, Tripoli, Libya**

PUBLISHED PAPERS

- **Elkut, F. & Shalbi, S.M., 2025. A review of mAs optimization strategies in CT imaging: Maximizing quality and minimizing dose simultaneously. Majallat al-Tarbawi [The Educational Journal], 26, Article 109.**

- **Abujnah, A., Elkut, F., Hafez, S., Elnuri, F. & Almarkz, J., 2025. *Evaluating chest X-ray image quality from multiple X-ray machines using ImageJ: A comparative study*. Presented at: The 8th Conference on Theories and Applications of Basic and Biosciences, 16 December 2024.**

- **Shalbi, S.M. & Elkut, F. (2024) *Analyzing elemental composition of fly ash-based geopolymer as shielding material using Energy Dispersive X-ray (EDX) spectroscopy, Alhadra Journal.***

- **Sabri M Shalbi1, Ammar A Oglat, Balid Albarbar, Fuzi Elkut, MA Qaeed, Ali Abu Arra., 2020, "A brief review for common doppler ultrasound flow phantoms" *J Med Ultrasound*. Vol.28, PP. 138-42**

- **Elhadi Araibi., Rajab M. Ben Yousef., Maryem M. Hemair., Fuzi M. Elkut., 2019, "Evaluation of Acute Abdominal Pain Diagnosis using CT & MRI". *International Journal of New Technology and Research (IJNTR),* Vol. 5, Issue-8, PP. 43-47**

- **Fuzi M Elkut., Rajab M Ben Yousef., Wajdi M Zawia., 2016 , "Numerical and experimental study of the mechanics of Bladder filling process". *Lebda Medical Journal,* vol. 2, PP.83-85**

- **Elkut F., Bradley G.R., Krywonos J., Fenwick J., Ren X.J., 2012, 'Numerical study of the mechanics of indentation bending tests of thin membranes and inverse materials parameters prediction'. *Computational Materials Science*. Vol. 52, No. 1, pp. 123-127.**

- **Krywonos J., Fenwick J., Elkut F., Jenkinson I., Liu Y. H., Brunt J. N. H., Scott A., Malik Z., Eswar C., Ren X. J., 2010, 'MRI image-based FE modelling of the pelvis system and bladder filling'. *Computer Methods in Biomechanics and Biomedical Engineering*. Vol. 13, No. 6, pp 669 – 676.**

- **Elkut F., Krywonos J., Fenwick J., Ren X.J., 2010, 'Numerical and experimental study of the mechanics of Bladder filling process'. *17th Congress of the European Society of Biomechanics* in Scotland.**

- **Elkut F., Krywonos J., Fenwick J., Jenkinson I., Ren X. J., 2009, 'An experimental and numerical program to study the properties of thin biological membranes and Water filling process'. *IFMBE Proceedings*. Vol. 25, No. 4, pp. 2178–2180.**

- **Elkut F., Krywonos J., Fenwick J., Jenkinson I., Ren X. J., 2009, 'An inverse technique for characterising elastic properties of thin membrane and modelling of water filling process'. *LJMU GERI ANNUAL RESEARCH SYMPOSIUM*.**

- **Brunt J.N., Krywonos J., Elkut F., Malik Z., Eswar C., Fenwick J., Ren X.J, 2009, MRI-derived computational modelling of bladder filling mechanics to investigate prostate displacement effects relevant to radiotherapy. *The British Institute of Radiology*. UK Radiological Congress. pp 25.**

- **Krywonos J, Elkut F, Brunt J, Malik Z, Eswar C, Fenwick J. and Ren XJ, 2009, "Exploring Radiotherapy-relevant Prostate Movements using MRI-derived Computational Modelling of Bladder Filling Mechanics", Institute of Physics and Engineering in Medicine. Manchester. UK.**

- **Krywonos J, Elkut F, Brunt J, Malik Z, Eswar C, Fenwick J. and Ren XJ, 2008, "Numerical Study of Effects of Bladder Filling on Prostate Positioning In Radiotherapy", 4th. European Conference of the International Federation for Medical and Biological Engineering, Antwerp, Belgium.**

SEMINARS UNDERTAKEN

- **"Bladder filling", presented work at the School of Engineering seminar LJMU 2008.**
- **"Prostate Displacement Analysis" presented at School of Engineering seminar LJMU 2009.**
- **"Uncertainty in radiotherapy" presented at School of Engineering seminar LJMU 2010.**

Language

Flaunt in both English and Arabic
Mother tongue is Arabic
Professional language is English.

References available upon request