



Objective

- My passion towards neuroimaging and magnetic resonance technology drives me to explore, expand my skills, knowledge and experience and to pursue research in the field of neurology and neuroimaging. I am keen to learn and open to tackling a range of tasks. I am a strong team player and always complete tasks to a high degree of quality and to deadline. I am polite, responsible and punctual and find myself easy to communicate and have a friendly and outgoing manner. My eager to learn comes from my inspiration, my children, they have developmental delay and Neuronal Migration Disorder. They made me very tolerant and problem solver. I believe that nothing is impossible!

Education

Doctor of Philosophy

2017

My PhD project “*The use of Diffusion Tensor Imaging (DTI) to measure the progression of upper motor neurons in amyotrophic sclerosis*” supervised by prof. Pamela McCombe

Master coursework degree in Magnetic Resonance Technology

2011

Completed my postgraduate degree in Magnetic resonance technology (MRT) from the University of Queensland

Bachelor degree in Radiological science

2001

Awarded a bachelor degree of applied medical science in the field of Radiological science from King Saud University.

Experience

University Assistant professor

2017- up to date

- Taught two university courses (The physics of MRI) and (MRI application and procedure) as full time academic instructor.

Member of the OHBM

June 2019 - up to date

- A member of The Organization for Human Brain Mapping (OHBM) which is an international organization dedicated to using neuroimaging to discover the organization of the human brain.

Member of the ISMRM

January 2015 - up to date

- A member of The International Society for Magnetic Resonance in Medicine (ISMRM).

Head of Training and development

September 2019 - up to date

- Assigned the leader of the training and development unit at The Department of radiological sciences, CAMS, KSU.

Promising Academic Program (PAP)

January - May 2019

- Graduated from The promising academic program, offered by the Center for Excellence in Learning and Teaching, King Saud University aims to support and encourage faculty toward excellence in higher education; and to indigenize a group of them to be role models in higher education in order to achieve better ongoing education outcomes that have a direct impact on students' achievement and make them academically distinguished.

Saudi Commission for Health Specialties**May 2018**

- A member of the consultation team to assess and evaluate post-graduate programs for new Saudi graduates from overseas

Head of research Unit**2017**

- Appointed the head of the research unit at the collage of applied medical sciences (CAMS) at King Saud University (KSU)

University demonstrator**2005 - 2006**

- Fulfilled assistance for lecturer at King Saud University as a tutor and hands-on trainer for students in ultrasonography

Ultrasound technologist**2003-2005**

- Worked in Al-Jouf women and children hospital as a sonographer.

BLS instructor**April 2005**

- Worked and trained new hospital staff for basic life support.

Quality Assurance Inspector**2003-2005**

- Assigned the head of the quality assurance team at the Women's and children hospitals in Al Jouf, MOH.

Short Courses**Functional MRI (fMRI) Visiting Fellowship****March 2019**

- This fellowship program designed and introduced by Harvard/MGH and took place at the Martinos research centre in Boston, USA.

FreeSurfer Course & Workshop**April 2019**

- A rigorous four day course that covered structural, functional and diffusion MRI processing and analysis with hands-on tutorials. This was offered at the Massachusetts General Hospital (MGH) Martinos Center for Biomedical Imaging in Charlestown, Massachusetts, USA.

FSL course**June 2019**

- This course consisted of a combination of lectures and practicals in functional, structural and connectivity processing and analysis. This was organized through The University of Oxford and took place in Split, Croatia.

Strategic Planning**October 2018**

- Attended this course presented by IACET and delivered by the development and skills deanship at King Saud university.

Global trending in academic education and learning**October 2018**

- Attended this course presented by IACET and delivered by the development and skills deanship at King Saud university.

**Alternative assessment****October 2018**

- Attended this course delivered by the development and skills deanship at King Saud university.

Critical thinking**September 2018**

- Attended this course delivered by the development and skills deanship at King Saud university.

Cloud storage**October 2018**

- Attended this course delivered by the development and skills deanship at King Saud university.

Constructing Problem-Based Learning Cases**September 2018**

- Attended this 2-day course delivered by the development and skills deanship at King Saud university medical city (KSUMC).

Becoming a Problem-Based Learning Facilitator**September 2018**

- Attended this course delivered by the development and skills deanship at King Saud university medical city (KSUMC).

Feedback as a tool for better learning**October 2017**

- Attended the program delivered by King Saud university.

Course development**October 2017**

- Attended the program delivered by King Saud university.

Teaching assessment methods**October 2017**

- Attended the program delivered by King Saud university.

Flipped classrooms**October 2017**

- Attended the program delivered by King Saud university.

Planning for understanding in collage teaching**April 2017**

- Attended the program delivered by King Saud university.

Informatics graphics (infographics)**April 2017**

- Attended the program delivered by King Saud university.

Fundamentals of learning management system**April 2017**

- Attended the program delivered by King Saud university.

Partnership and alliances**April 2017**

- Attended the program delivered by King Saud university.

Knowledge acquisition, use and management for development**April 2017**

- Attended the program delivered by King Saud university.

Open Innovation and the creative work environment

April 2017

- Attended the program delivered by King Saud university.

Assessment of learning outcomes

March 2017

- Attended the program delivered by King Saud university.

Negotiating for Positive Outcome

April 2011

- Attended the training workshop delivered by the university of Queensland.

Leadership Development and Team Building

March 2011

- Attended the training workshop delivered by the university of Queensland.

Strategic Human Resource Management

March 2011

- Attended the training workshop delivered by the university of Queensland.

Spectroscopy

September 2009

- Attended the course and hands-on training in spectroscopy and its uses on MR medical imaging.

Speed reading

December 2005

- Attended the course study in speed reading for Tony Buzan the creator of Mind Mapping.

Neurolinguistic programming

June 2005

- This was a one week course in self-development and Neuro-linguistic programming (NLP) which was 25 hours of training at Al-Rashed center

More

- Attended and participated in “24th annual Meeting & Exhibition, ISMRM, 2016
- Selected for a poster prize in the “26th International Symposium on ALS/MND”, in Orlando, USA, 2015
- Attended and participated in “*Disability and rehabilitation*” conference held in Bahrain in May 2005.
- Attended the “*Seventh International MRI course*” held at King Fahad Military Medical complex in Dhahran, Saudi Arabia from 2-4 April 2001.
- Volunteered in the Radiology department at Gurayat General Hospital in August 1999

Activities and Skills**Imaging Skills:**

A) Expert user for Freesurfer.

B) Expert user for FSL

C) Expert user for MRICloud



- D) Expert user for MRtrix
- E) Expert user for DTItool box
- F) Expert user for ImageJ and FIJI
- G) Expert user for Weasis
- H) Expert user for TrackVis
- I) Moderate expertise in MATLAB
- J) Moderate expertise in OCTAVE
- K) Moderate expertise in bash scripting

Academic activities:

- L) Mentored four gifted students from the Radiological sciences department.
- M) Won two research grant for undergrad students projects fund titled:
 - “The Effect of Stress and Depression on Medical and Non-Medical Students and the Role of MRI in Detecting and Analyzing Structural Changes” which is ready for publication
 - “Quality assessment of brain MR imaging medical reports in major hospitals” which is ready for publication.
- C) Supervised four research projects including the two above and:
 - “Using Virtual reality Technology to Reduce Anxiety Before MRI Examinations” which is ready for publication.
 - “Texture analysis in liver cirrhosis using diffusion images, T2-WI and elastography data: a methodological validity study”.

Community programs

- A) A member of the medical team in the Commission for Social Development which is a social services organization in Riyadh under Amarah Al Riyadh district (<http://cdewr.ksuit.org>). We reach remote areas to raise awareness of health and safety consideration and how to deal with urgent situations in domestic accidents.
- B) Weekly Journal Club Initiative at the Radiological Science department (every Wednesday 12-1 pm).

Organizer:

Educational and awareness events related to my field as part of community programs:

1-MRI Review Course: Applications and technical considerations

Aug 2018



Organized this 3-days national course targeting experienced MR technologists with more than 3 years of experience. Series of theoretical lectures and hands-on training on challenging procedures and advanced MR techniques. I presented 6 lectures about the advanced MR techniques including fMRI, DTI and modified sequences for ACL imaging.

2-K-space

Apr 2018

This event targeted Collage of applied medical sciences (CAMS) community. Introduction about MRI and brief history were introduced to visitors. Safety and hazards were the main focus as MRI lab is situated in this building and everyone has to be aware of the risks of MRI. Students also covered the advanced techniques for DTI and elastography.

3-MRI cinema “The beauty and the Beast”

Nov 2017

This event targeted KSU community, educators, admin staff and students, to raise their awareness of the safety and importance of MRI. We took visitors into a real MR scan through VR video that was filmed by my students. Advanced RM techniques was introduced in the form of “Art Museum” where images of brain tractography, liver elasography and human connectome project were displayed and explained to visitors to encourage researchers consider MR in their research projects. A series of short MR related movies were shown in the outdoor cinema section

Link to news article about the event in Arabic: <https://sabq.org/VHnMhp>

4-Lectures for Cross sectional imaging staff at King Faisal Specialist Hospital and Research Centre (KFSH-RC)

This was an extra curricula activity that I have organized for honor students on their final academic semester who volunteered to present their theoretical knowledge in a series of MRI physics lectures on 11 April 2018.

Participation:

Events related to health education such as:

- A) Guest speaker at the biennial International Conference on Radiation Medicine (ICRM) that is organized by the King Faisal Hospital and Research Centre (KFSH&RC), in collaboration with the International Atomic Energy Agency (IAEA) and leading international & national institutions and societies 07 - 13 February 2019
- B) Organized a fMRI course and workshop in the 2019 Radiation in Medicine Courses & Workshops 07 - 13 February 2019
- C) Presented and organized a 3-day intensive fMRI course for KSU faculty April 2019
- D) Awwal Marra “أول مرة” an event that was organized through KSU over 3 days (10-12 March 2018) to educated women about driving and health risks involved in car accidents in the form injuries and psychological impact of accidents. I presented a lecture in head injuries and supervised students in Radiology booth where we explained about human skeleton, fracture types, causes, symptoms, and how to handle injured person

More information about the event: <https://news.ksu.edu.sa/ar/node/120428>

- E) Invited to lecture on “The 4th Research Week” organized by the school of medicine at KSU. I presented three lectures titled “How to build a research profile”, “Writing a literature review” and “Referencing using Endnote”

- F) Volunteered in “Planting Riyadh” campaign on 12 October 2017 (their Twitter account: [@Tashger_Riyadh](https://twitter.com/Tashger_Riyadh))
- G) Invited to present a series of lectures in “e-Publishing” held in the Central Library (6 November 2017) and the Research Centre (6 September 2017) at KSU.
- H) Presented a lecture in “writing a research proposal” at the central library for KSU academic staff and postgraduate students on the 19th Apr 2017
- I) Presented a lecture in “Image artifacts in MRI” for Hospital staff at King Saud Medical City 22 August 2017.
- J) Participated in students interviews for the placement in the group of Health Schools for the period between 16-18 July 2017
- K) Invited by the Saudi commission for health specialities to write exam questions for the radiology fellowship program.

Research Publications

- I. A combined tract-based spatial statistics and voxel-based morphometry study of the first MRI scan after diagnosis of amyotrophic lateral sclerosis with subgroup analysis

Authors

AR Alruwaili, K Pannek, A Coulthard, R Henderson, ND Kurniawan, P McCombe

Publication date

2017/8/10

Journal

Journal of Neuroradiology

Publisher

Elsevier Masson

- II. Screening for cognitive and behavioural impairment in amyotrophic lateral sclerosis: Frequency of abnormality and effect on survival

Authors

Zhouwei Xu, Ashwag Rafea S Alruwaili, Robert David Henderson, Pamela Ann McCombe

Publication date

2017/5/15

Journal

Journal of the Neurological Sciences

Volume

376

Pages

16-23

Publisher

Elsevier

- III. Tract integrity in amyotrophic lateral sclerosis: 6-month evaluation using MR diffusion tensor imaging

Authors

Ashwag R Alruwaili, Kerstin Pannek, Robert D Henderson, Marcus Gray, Nyoman D Kurniawan, Pamela A McCombe



Publication date

2019/12

Journal

BMC medical imaging

Volume

19

Issue

1

Pages

19

Publisher

BioMed Central.

1. Poster presentation titled “*the relationship between septal nuclear and hippocampal volume in the mesial temporal lobe epilepsy*”.
2. Submitted a paper titled “*Tract integrity in Amyotrophic lateral sclerosis: a 6-month evaluation using MR diffusion tensor imaging*” to Scientific reports, Nature
3. Submitted a Systematic Review titled “*The overlap in the fibre tracts involved between ALS, ALS/FTD, and FTD using DTI: a systematic review*”
4. Submitted a paper for my longitudinal study titled “*12-month follow-up DTI evaluating whole brain and corticospinal tract using TBSS and ROI approaches*”
5. Two poster presentations at the Research Day of the Collage of Applied Medical Science (CAMS) titled:
 - “*A combined tract-based spatial statistics and voxel-based morphometry study of the first MRI scan after diagnosis of amyotrophic lateral sclerosis with subgroup analysis*”
 - “*the relationship between septal nuclear and hippocampal volume in the mesial temporal lobe epilepsy mTLE*”