

Curriculum Vitae

Hussein M. Elmehdi

*Dean of Academic Support Services
University of Sharjah*

*Associate Professor of Biomedical Physics
Department of Applied Physics*

*University of Sharjah
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Citizenship

Libyan / Canada

Languages

English and Arabic

Status

Married (3 Children)

Academic Rank

Associate Professor

Education background & Training

Radiation Safety Officer

2012 Radiation Safety Institute of Canada, Toronto, Ontario, Canada

Medical Physics Training

2004-2005 Medical Physics Division, CancerCare Manitoba, Winnipeg, Manitoba, Canada

Ph.D. (Bio-Medical Physics)

1995 - 2001 University of Manitoba Winnipeg, Manitoba

Ultrasonic Investigation of the Mechanical Properties of Cellular Biological Systems and the Mechanical Properties of Brittle Bio-Foams.

Certification in Higher Education Teaching (CHET)

1997 - 1999 University of Manitoba Winnipeg, Manitoba

M.Sc. (Condensed Matter Physics)

1988 -1991 University of Manitoba Winnipeg, Manitoba

Ultrasonic Investigation of the Static and Dynamic Critical Effects in the Mixed Jahn-Teller System $Dy(As)_x(V)_{1-x}O_4$.

B.Sc. (Physics and Applied Mathematics)

1984 -1988 University of Winnipeg, Winnipeg, Manitoba

Physics and Applied Mathematics.

Administrative Experience

1. Executive Positions:

- **Sept. 2014 - Current:** Acting **Dean** of Academic Support Services, University of Sharjah.
- **Sept. 2009 - Aug. 2014:** **Vice-Dean** - College of Sciences, University of Sharjah, Sharjah, UAE.
- **Sept. 2008 - Sept 2012:** **Department Chairman** - Department of Applied Physics, University of Sharjah, Sharjah, UAE.
- **March 2012 - current:** **Director/Coordinator** - Sharjah Radiation Center/Ionization Radiation Research Group, University of Sharjah.
- **Sept. 2009 - March 2013:** **Executive Director** - Energy and Environment Research Domain, College of Graduate Studies and Research, University of Sharjah, Sharjah, UAE.
- **Sept. 2005 - Aug. 2009:** **Coordinator** - Acoustics Research Group, College of Graduate Studies and Research, University of Sharjah, UAE.

2. National and International Committees:

- **Sept. 2014 - Current.** **Chairperson** - Physics Curriculum Committee (Updating Curriculum and Reviewing Textbooks) - Ministry of Education, United Arab Emirates.
- **Sept. 2009- August 2014:** **Chairperson** - Education Training Program - Physics. Program title; *Improving Teaching and Learning in High School Physics*. Sharjah Education Zone & Sharjah Education Council.
- **Sept. 2010 - Current:** **Head Judging Committee** at Emirates Foundation for Youth Development Think Sciences Program. Emirates Foundation for Youth Development.
- **October 2010 - current:** **Head Judging Committee** at Intel Competition- Arab World.
- **Jan 2010 - Aug. 2013:** **Coordinator**- University of Sharjah-McMaster University (Canada) exchange program.
- **Sept. 2010 - Aug. 2012:** **Coordinator** - University of Sharjah - Karlsruhe Institute of Technology (KIT Germany) exchange program on renewable energy

3. Local Committees:

Committee	Duration	Role
Student Affairs Committee	2014- current	Chair
University of Sharjah Strategic Planning Committee	2013-2014	Member
College of Sciences Strategic Planning Committee	2013-2014	Chair
Applied Physics Program Development Committee	2007-2010	Member

Schedule and Calendar Committee	2014 - current	Chair
Student Advising Committee	2012 - Current	Chair
Accreditation Committee (University Level)	2008 - 2012	Member
Accreditation Committee (Department Level)	2008 - 2011	Member
College of Sciences Budget Committee	2009 - current	Chair
Applied Physics Laboratories Committee	20117 - 2010	Chair
Hiring Committee	2010 - current	Chair & Member
Central Laboratories Committee	2010 - current	Member
Timetable and Examination committee	2011 - current	Member
Placement Examination Commit	2008 - 2010	Chair
MSc Program Committee	2007 - 2010	Member
International Exchange and Collaboration Committee (Canada, Germany & Libya)	2010 - 2012	Cahir
Applied Physics BSc Program Committee	2007 - 2009	Member
National Physics and Math Olympiad Committee	2008 - 2010	Chair
Community outreach Committee	2007 - 2009	Chair
Committee for revising the Physics laboratories lab manuals committees	2007 - 2009	Chair

Plus numerous ad hoc committees, which included cheating investigative committees, program and course review committee as well disciplinary committees.

Teaching Experience

June 2015 - Current: Associate Professor of Biomedical Physics

University of Sharjah, PO Box 27272, Sharjah, UAE.

Taught various physics courses undergraduate and graduate level.

Feb. 2005 - May 2015: Assistant Professor of Biomedical Physics

University of Sharjah, PO Box 27272, Sharjah, UAE.

Taught various physics courses undergraduate and graduate level.

2012- Current: Adjunct Professor

Department of Medical Education, Rashid Hospital, Dubai Health Authority, Dubai, UAE. Teaching Radiology Physics for Radiology Residents (Graduate Course).

Sept. 2002- May 2003. Physics Sessional Instructor

University of Manitoba, University of Winnipeg, Canada.

Taught various undergraduate physics courses.

Sept. 1991 - Jan 1995. Physics Lecturer

University of Algabil AL Gharbi, Libya

Taught various physics courses undergraduate and graduate level.

Community Services

I am leading a number of regional, national and local community services and outreach programs, all of which are focused on youth development, technical training and consultancy services in educational development projects with. Among the projects I am involved in are several educational development programs with the UAE Ministry of Education, Sharjah Education Zone and Sharjah Education Council. At the regional level, I am chairing several technical committees, the most important of which is chairing the Organizing Committee of the 1st (Held in March 2008) and the 2nd (Held in Dec 2014) International Conference on Muslims' and Arabs' history of Sciences (2008); chairing the Organizing Committee of the 11th Arab Conference on Astronomy and Spaces Sciences (Dec 2014); chairing the Judging Committee for the Intel Competition Arab World for the years 2011 (held in Sharjah), 2012 (held in Dubai), 2013 (held in Amman, Jordan). I have also served as the Chief Judge for the Emirates Foundation's National Think Sciences Competition (2013, 2014); Sharjah Sciences Festivals (2008, 2010, 2011 and 2014) and the UAE National Physics Olympiad (2008, 2009).

Research Interests

2005 - Current: Department of Applied Physics, University of Sharjah.

I am leading several research projects, including:

- Biomedical Applications of Ultrasound
- Noise Assessment (Environmental & Occupational)
- Radiation Monitoring and Assessment
- Physics Education

I am the director of the University of Sharjah Radiation Center and the Executive Director of the Energy and Environment Research Domain at the College of Graduate Studies and Scientific Research, University of Sharjah. In addition to my research in the above-mentioned areas, I am conducting regular training workshops on radiation safety and protection, which are offered at the University of Sharjah Center for Continuing Education.

I am the principle investigator and co-instigator for several local research grants as well as international collaborative research projects. Among these are collaborative research projects with colleagues at Ultrasonic Research Laboratory, University of Manitoba Canada and Physics Department at McMaster University, Hamilton, Ontario, Canada.

Feb 2004 – Feb 2005: Research Associate, Medical Physics, CancerCare Manitoba, Canada

Medical Physics, CancerCare Manitoba, Winnipeg, MB, Canada.

May 2002 – Jan 2004: Research Associate, University of Manitoba, Canada

Department of Physics and Astronomy, University of Manitoba, Winnipeg, MB, Canada.

Sept. 2001 – Dec 2002: Visiting postdoctoral fellow

Quality Section, Agriculture & Agri-Food Canada, Winnipeg, MB

1998 (October-November): Guest Researcher

University of Leeds Leeds, UK

**Published Papers,
Theses, Conference
Presentations and
Posters**

Refereed Journal Publications

- 1) Hussein M Elmehdi and Almehti Ibrahim. Online Summative Assessment and its Impact on Students' Academic Performance, Perception and Attitude towards Online Exams: University of Sharjah Study Case. Book Chapter, Published in Creative Business and Social Innovations for a Sustainable Future. Springer 2018.
- 2) Entesar Z Dallah, Hussein M **Elmehdi**, Al Humaidan, Khalid S, Semerjian, Lucy. Estimate of UAE commercial aircrew effective doses using CARI6, EPCARD and SIEVERT codes. Accepted for publication in: Radiation Protection Dosimetry, 2018.
- 3) Entesar Z Dalah1, Ousama Mahdi, Wiam Elshami1, Mohamed M Abuzaid1, Leena R David, Ola A Mira, Abdulmunhem Obaideen, Hussein M Elmehdi, D.A. Bradley. Occupational doses to cardiologists performing fluoroscopically-guided procedures. Radiation Physics and Chemistry. Accepted for publication in: Radiation Protection Dosimetry, 2018.
- 4) Hussein M Elmehdi. Using Acoustics waves to investigate hysteresis effect during thermal treatment in in gluten proteins. Book Chapter Accepted for publication in: Biophysical Chemistry" published by IntechOpen (2018).
- 5) Hussein M Elemhdi. Investigating thermal structural changes in soft tissue using longitudinal ultrasonic velocity and attenuation coefficient. Accepted for publication in: International Journal of Engineering & Technology. (2018).
- 6) Hussein M **Elmehdi**. The Absence of noise policies and regulation in developing countries and its contribution to exposure to high noise levels from roads, airports, etc. Submitted: Noise Mapping.
- 7) Husein M **Elmehdi** Road Traffic Noise in the City of Sharjah: Levels, Projected health Effect and Proposed Control Measures. Book Chapter in *Traffic Noise: Exposure, Health Effects and Mitigation*. 2017.
- 8) Husein M **Elmehdi**, Bassam Rashid and Almehdi Ibrahim. Enhanced Force Concept Inventory (FCI) Test to Probe Freshmen Engineering

- Students' Conceptual Understanding of Introductory Physics. Book Chapter in Quality Assurance in Engineering Education. ED by: A. Shanableh, K. Hamad, M. Omar and M. Bettayaeb, University of Sharjah, 2016.
- 9) H. M. **Elmehdi**, Advances on Ultrasonic Techniques Used for Characterizing Biofomic Materials. *International Journal of Recent Development in Engineering and Technology, Special Issue, Vol1, p.31-35* (2014).
 - 10) H.M. **Elmehdi**, Road Traffic Noise Exposure and Annoyance: A Cross-Sectional Study in the City of Sharjah, UAE. Book Chapter in: Noise Pollution: Sources, Effects on Workplace Productivity and Health Implications. Editors: Eugene Roberto Nicchi. Chapter: 9. pp: 321, ISBN 978-1-63321-111-7, (2014)
 - 11) H.M. **Elmehdi**, Assessing the Quality of Gluten Proteins using Acoustic Waves, *International Review of Physics. Vol. 7 No 4, pp. 313-317* (2013).
 - 12) H.M. **Elmehdi**, Noise Levels in UAE Dental Clinics: Health Impact on Dental Healthcare Professionals. *Public Health Frontier. V2, Issue 4, pp. 189-192* (2013).
 - 13) H.M. **Elmehdi**, M.G. Scanlon, J.H. Page, and M. I. P Kovacs. Probing the thermal transitions and structural properties of gluten proteins using Ultrasound. *Journal of Ultrasound, September 2013, Volume 16, Issue 3, pp 101-110.*
 - 14) **Elmehdi**, H. M, Pistorius, S. and Suleiman, B. M. Difficulties face by college in introductory physics: A Case Study. *Physics Education, Jan-Mar 2013 (article no. 7), 2013.*
 - 15) H.M. **Elmehdi**. The relationship between civil aircraft noise and community annoyance near Dubai International Airport (UAE). *Acoustic Sciences and Technology. Acoustics Sciences and Technology. Vol. 33 (2012) No. 1: pp 6-10.*
 - 16) H. M. **Elmehdi**, A. M. Ibrahim and U. A. M. Haba. An Evaluation of Web-Based Homework (WBH) Delivery System: University of Sharjah Experience. *International Journal of Engineering and Technology in E-Learning. Vol 8, No. 4, 57-62, (2013).*
 - 17) H.M. **Elmehdi**. The Effect of Physics Placement Tests and Remedial Physics Courses on the Performance of UoS Engineering and Sciences Students. Book Chapter in: Enhancing students' learning, Edited By: A. Shanableh and M. Bettayeb. Pages: 349-359. (2012).
 - 18) Martin G. Scanlon, John H. Page, Valentin Leroy, Yuanzhong Fan, Hussein **Elmehdi**, Anna Kieffe and Keyur L. Mehta. Using Low frequency Ultrasound to evaluate the elastic properties of wheat flour doughs. Book Chapter in: Wheat Sciences Dynamics. Chapter 33, pp. 271. ISBN (10): 81-904309-8-X. (2011).

- 19) Martin G. Scanlon, John H. Page, Valentin Leroy, Hussein M. **Elmehdi**, Yuanzhong Fan and Keyur L. Mehta. Examining the effect of Dough Matrix and Bubbles on the properties of Dough using Low intensity ultrasound. Book Chapter in: Wheat Sciences Dynamics. Chapter 33, pp. 320. ISBN (10): 81-904309-8-X. (2011).
- 20) Martin G. Scanlon, Hussein M. **Elmehdi**, Valentin Leroy and John H. Page. Using Ultrasound to Probe Nucleation and Growth of Bubbles in Bread Dough and to examine the Resulting Cellular Structure of Bread Crumb. Book Chapter in: Bubbles in Food 2: Novelty, Health and Luxury (2010). Chapter title: Chapter 22. ISBN: 9781891127595. Editors: Campbell, G. M.; Scanlon, M. G.; Pyle, D. L.
- 21) بشير سليمان و حسين المهدي. دور التفكير الناقد المرشد ونظم ادارة المساقات الرقمية المساندة في تطوير تعليم الفيزياء الجامعية في دولة الإمارات العربية المتحدة. منشورة في مجلة اتحاد الجامعات العربية: أنماط التعليم الجامعي الحديث تجارب ورؤى مستقبلية في ص: 447 ، (أبريل 2009) العدد المتخصص العدد (5) الدول العربية ."
- 22) فصل كتاب في الكتاب : ظاهرة الاحتباس الحراري وأثرها على أمن وسلامة الإنسان – إصدارات جامعة نايف العربية للعلوم الأمنية بالرياض – المملكة العربية السعودية . عنوان الفصل : الآثار الاقتصادية لظاهرة الاحتباس الحراري. مارس 2009 م.
- 23) H.M. **Elmehdi**, J.H. Page, M.G. Scanlon. Evaluating Dough density During Fermentation by Different Techniques. *Cereal Chem.* 84(3):250 (2007).
- 24) H.H. **Elmehdi**, S. Pistorius. Intro-Physics for Engineering Students: it's difficulty *versus* its relevance and impact on research: a statistical survey. Book Chapter in: Integrating Teaching and research with Community Service. Ed. A. Shanableh, M. Bettayeb and B. Boashash, pp. 368-375. (2008).
- 25) H.H. **Elmehdi**, S. Pistorius, J. Beck, K. Malkoske. Dosimetry of Stationary and Rotational Total Skin Electron Irradiation. *International Journal of Scientific Research, UAE.* Vol (16) pp 543-546. (2006).
- 26) H.H. **Elmehdi**, S. Pistorius, A simple α/β -independent method to derive a fully isoeffective schedules following a change in the dose per fraction. *International Journal Radiation Oncology Biology Physics*, 2005. Vol 63: No.1 Page: 543.
- 27) H.M. **Elmehdi**, J.H. Page, M.G. Scanlon. Ultrasonic Investigation of the effect on Mixing Under reduced Pressure on the Mechanical Properties of Bread Dough. *Cereal Chem.* 81(4):504-510 (2004).
- 28) H.M. **Elmehdi**, J.H. Page, M.G. Scanlon. Monitoring Dough Fermentation Using Acoustic Waves. *Trans IChemE*, Vol. 81 Part C. 217-223 (2003).

- 29) H.M. **Elmehdi**, J.H. Page, M.G. Scanlon. Using Ultrasound to investigate the cellular structure of bread-crumbs. *Journal of Cereal Science*, 38:33-42. (2003).
- 30) H.M. **Elmehdi**. Ultrasonic Investigation of the Mechanical Properties of Cellular Biological Systems and the Mechanical Properties of Brittle Foams. PhD thesis, August (2001).
- 31) M.G. Scanlon, H.M. **Elmehdi** and J.H. Page. Published in *Wheat Quality Elucidation: The Bushuk Legacy*. Ed. By Edited by Perry K. W. Ng and Colin W. AACC, October 2001.
- 32) H.M. **Elmehdi** and J.H. Page. *Journal of Magnetism and Magnetic Materials*, 104-107, (1992) 193-194.
- 33) H.M. **Elmehdi**. Ultrasonic Investigation of the Static and Dynamic Critical Effects in the Mixed Jahn-Teller System $Dy(As)_x(V)_{1-x}O_4$. MSc Thesis. May (1991).

Refereed Conference Publications:

- 1) H.M. **Elmehdi**. A Novel Nondestructive Ultrasonic Velocity and Attenuation Approach to Predict Quality of Wheat-based Products". Presented at the 2nd AUE International Research Conference in Dubai. "Sustainable Development and Social Responsibility" November 13-15, 2018 Dubai, UAE.
- 2) H.M. **Elmehdi**. 2018 Assessing Noise Levels in University of Sharjah Classrooms using Measurements and Predictive Models. Refereed Conference paper published in the proceedings of Inter-Noise 2018. Chicago, 2018.
- 3) H.M. **Elmehdi** Yousra Alrabati, Afra Altunaji and Ali Kamel. Improving students' academic standing of students under probation through targeted proactive academic advising, International Forum for Engineering Education (IFEE), University of Sharjah. April 18-21, 2017.
- 4) H.M. **Elmehdi** and Almehdi Ibrahim . Using Design of Experiment to Investigate Factors Influencing Students' Academic Performance in Postsecondary Institutions: Case Study - University of Sharjah. International Forum for Engineering Education (IFEE), University of Sharjah. April 18-21, 2017.
- 5) H.M. **Elmehdi**, Yousra Alrabati, Afra Altunaji and Ali Kamel. The role of online admission and social media on attracting top quality students in competitive markets. ARAB AC
- 6) H.M. **Elmehdi**, Anissa Bettayeb and Raghada A. Utilizing Online Assessment, Gamification, Collaboration & Course design tools to improve Students' Performance at the University of Sharjah. Blackboard TLC, Milan at Bocconi University, Italy, 21-24 March 2017.
- 7) H.M. **Elmehdi**, J.H. Page, M.G. Scanlon. An ultrasonic approach to investigate the effect of aeration on rheological properties of soft biological

materials with bubbles embedded. PROCEEDINGS of the 22nd International Congress on Acoustics, Acoustics for the 21st Century. Buenos Aires – 5 to 9 September, 2016.

- 8) LMS Model at UOS. Blackboard UAE Teaching & Learning Forum: Innovation in Education, Dubai, UAE. 16 Nov 2015
- 9) Blackboard Innovative Solutions: University of Sharjah(UAE) Case Studies, BbWorld 2016 , Las Vegas , USA.
- 10) Hussein M **Elmehdi**, Bassam Rashid and Almehdi M Ibrahim. Enhanced Force Concept Inventory (FCI) Test to Probe Freshmen Engineering Students' Conceptual Understanding of Introductory Physics. A paper presented at the International Engineering Education Forum, University of Sharjah, Sharjah, UAE, March **2015**.
- 11) Husein **Elmehdi**, Najeh Jisrawi, Bassam Rashid, Reem Al Hashimi, Rasheeda Ebraheem. Registration and Admission Going Beyond Traditional Statistical Reports. A paper presented at The Arab ACRAO 34th Annual Conference Innovation & Development in Admission & Registration Services United Arab Emirates University, Al Ain, UAE March 31st through April 2nd **2015**.
- 12) Husein **Elmehdi**, Bassam Rashid, Reem Al Hashimi, Rasheeda Ebraheem. Placement tests as a condition for accepting students in universities. A paper presented at the Arab Gulf Teachers Forum, March 29 – April 2, 2015, Sharjah, UAE.
- 13) Husein **Elmehdi**, Bassam Rashid, Reem Al Hashimi, Rasheeda Ebraheem. Misconceptions and their impact on students' performance in the secondary stage and university. A paper presented at the Arab Gulf Teachers Forum, March 29 – April 2, **2015**, Sharjah, UAE.
- 14) Almehdi M Ibrahim and Hussein M **Elmehdi**. A Qualitative Study of the Quality of health care at Benign Hematology clinic. Accepted for oral presentation at the International Engineering Education Forum, University of Sharjah, Sharjah, UAE, **2015**.
- 15) Hussein M **Elmehdi**. Using mathematical models to predict annoyance from combined noise in the city of Dubai. 43rd International Congress on Noise Control Engineering. Melbourne, Australia, November 16-19, **2014**. Page 957.
- 16) H.M. **Elmehdi**, J.H. Page, M.G. Scanlon, "Using longitudinal ultrasonic velocity to quantitatively assess quality of gluten proteins". *Presented at: The International Congress on Ultrasonics (ICU 2013)*, May 2-5, 2013 in Singapore.
- 17) H.M. **Elmehdi**. Exposure to Extremely Low Frequency Electromagnetic Fields and its Attributable Health Risks. Presented at the Second Advanced Electromagnetics Symposium. March 19-22, 2013. University of Sharjah, Sharjah, UAE.
- 18) H. M. **Elmehdi**, A constructivist approach to teaching introductory physics to non-physics majors. *Presented at: International Forum of Innovators in University Teaching*, Al Imam Muhammaed Ibin Saud Islamic University, KSA, Feb 3-5, 2013.

- 19) H.M. **Elmehdi**, J.H. Page, M.G. Scanlon, Investigating the effect of anisotropy of gas cells on the mechanical properties of brittle bio-foams using ultrasound. *4th International BIOFOAMS 2013 Conference*, Aug 27-29, 2013. Toronto, Canada.
- 20) H.M. **Elmehdi**, Advances on ultrasonic techniques used for characterizing biofomic materials", *International Conference on Modern Trends in Science, Engineering and Technology 2013 (ICMTSET 2013)*, 25-26, Sept., 2013.
- 21) H. M . **Elmehdi**, The impact of Web-based homework (WBH) delivery systems on the performance of University of Sharjah freshmen. *2nd International Conference on Information Technology, System and Management (ICITSM 2013)*, Dubai, United Arab Emirates, March 4 – 5, 2013.
- 22) H.M. **Elmehdi**. The status of nuclear energy in the UAE. *Presented at: the Canadian Nuclear Society's Workshop on Nuclear Education and Outreach (NEO-2012)*, Aug 26 - Aug 28, 2012, Hamilton, Canada.
- 23) H.M. **Elmehdi**. Noise levels and associated health impact at selected schools in United Arab Emirates. *Presented at: InterNoise 2012*. New York City, NW, USA, August 19-22, 2012.
- 24) H.M. **Elmehdi**, A. G. Attaelmanan and H.M. Alawadhi. Application of in-situ gamma-ray spectrometry to assess the concentrations of ^{40}K , ^{238}U and ^{232}Th and mean annual effective dose rate levels in the several United Arab Emirates cities. *Presented at: the First International Conference on Radiation and Dosimetry in Various Fields of Research (RAD 2012)*, Faculty of Electronic Engineering in Niš, Serbia, 25th to 27th, 2012.
- 25) H.M. **Elmehdi**. Assessing Noise Level in UAE Dental Clinics, its Health Impact and Annoyance on Dental Professionals. *Presented at: UAE International Dental Conference & Arab Dental Exhibition – AEEDC*, Dubai, 1st -3rd February, 2011.
- 26) H.M. **Elmehdi** and N. Jisrwai. An evaluation of web-based homework delivery systems: University of Sharjah Experiences". *Presented at: The 4th Annual Conference on e-Learning Excellence in the Middle East*, Jan 31- Feb 3, Dubai, UAE) (2011).
- 27) H.M. **Elmehdi**, N. Jisrwai and H.M. Alawadhi. Assessment of Freshman Students Learning Habits Through Active Incorporation of Web-based Homework Management Systems into the Physics Curriculum. *Presented at: Gulf Educational Forum*. Dubai, 3-5 May 2011.
- 28) N. Jisrwai, H.M. **Elmehdi**, and H.M. Alawadhi. Using Web Applications to Enhance Learning and Collaboration amongst UAE High School Science Teachers and Students: Google Apps as an example. *Presented at: Gulf Educational Forum*. Dubai, 3-5 May 2011.
- 29) H.M. **Elmehdi**. Noise Levels in UAE Dental Clinics: Health Impact on Dental Healthcare Professionals. *Presented at: INTER-NOISE 2011*, Osaka, JAPAN, Sept. 4-7, 2011.
- 30) H.M. **Elmehdi**. Radiation Protection Awareness among Dental Healthcare Professionals in the United Arab Emirates. *Presented at: International Conference on Radiation Protection in Medicine*. Varna, Bulgaria. 1-3 Sept, 2010.
- 31) H.M. **Elmehdi**. Noise levels in UAE dental clinics and its link to dental anxiety and fear among UAE population. *Presented at: the 20th*

- International Congress on Acoustics ICA 2010, Sydney, Australia. August 23-25, 2010.
- 32) H.M. **Elmehdi**. An in-depth study of the problems facing UAE teachers & students in teaching and learning high schools physics. *Presented at: Sharjah Education Symposium, Sharjah Sciences Festival. University of Sharjah, April 7-8, 2010.*
 - 33) H.M. **Elmehdi** and A. G. Attaelmanan. Public response and awareness of nuclear technology for peaceful application in the GCC countries: UAE as an example. *Presented at: 2nd International Conference on Nuclear Technologies in the Service of Regional Societies (ICNTSRS), Manama, Bahrain, 26 - 27 March 2010.*
 - 34) H.M. **Elmehdi** and A. G. Attaelmanan. The use of nuclear technology for power production: medical, industrial and agricultural applications. *Presented at: 2nd International Conference on Nuclear Technologies in the Service of Regional Societies (ICNTSRS), 26 - 27 March 2010.*
 - 35) M.G. Scanlon, H.M. **Elmehdi**, and J.H. Page. Evaluating the properties of dough using a range of ultrasonic frequencies. *Presented at: The Institute of Food Technologists (IFT) Annual Meeting & Food Expo, Chicago, IL, July 17-20, 2010.*
 - 36) H.M. **Elmehdi** and O.M. Adwan. Assess community annoyance to traffic noise in residential-industrial mixed areas in the City of Sharjah, UAE. *Presented at: Inter-Noise 2009, 23-26 August 2009, in Ottawa, Canada.*
 - 37) H.M. **Elmehdi** and B. Rashed. Indoor Radon Concentration in the City of Sharjah, United Arab Emirates. *Presented at: Medical Physics and Biomedical Engineering World Congress, Sept 7-12, 2009. Munich, Germany.*
 - 38) H.M. **Elmehdi**, A.J. Al-Douri and H.M.K. Al-Naimiy. VLF Remote Sensing System of Lightning-Induced Disturbances in the Ionosphere: *Presented at: The Sharjah Project. Advancing VLF Sciences through the Global AWESOME Network. May 30 - June 1, 2009. Tunis, Tunisia.*
 - 39) H.M. **Elmehdi**, J.H. Page, M.G. Scanlon. The effect of anisotropy of gas cells on the mechanical properties of brittle foams: an acoustic approach. Page 274. *Presented at: International Congress on Ultrasonics - ICU 2009. Santiago, Chile. January 11 - 17, 2009.*
 - 40) H.M. **Elmehdi** and N. Nayfeh. The relationship between civil aircraft noise and community annoyance near Dubai International Airport (UAE). *Presented at: Acoustics 2008: Acoustics and Sustainability: Australian Acoustics Society National Conference. Geelong, Victoria, Australia. 24 to 26 November 2008.*
 - 41) H.M. **Elmehdi**. Environmental Noise Assessment in the UAE. *Presented at: International Workshop on Acoustics and Vibration in Egypt (IWAVE 2008). X3-Noise Aircraft External Noise Network and Coordination. 11 - 12 October 2008, Cairo, Egypt. October 12, 2008.*
 - 42) H.M. **Elmehdi** and A. Alkalaf. The contribution of Arab and Muslim Scientists to Sciences and Technology in the last six decades. *Presented at: the First International Conference on Arabs' and Muslims' History of Sciences. University of Sharjah, Sharjah, 24-27 March 2008.*
 - 43) H.M. **Elmehdi** and S. Pistorius. Assessment of radiofrequency/radio wave radiation emitted by GSM base stations in the United Arab Emirates: Case study. *Presented at: the Sixteenth International Conference of*

Medical Physics: Current and Future Sciences in Radiation Medicine. Dubai, April 14-16, 2008.

- 44) H.M. **Elmehdi**. Application of Ultrasound as in-Line quality control tool in food technology. *Presented at: the Quality Conference*, Tripoli, Libya, 11-12 May 2008.
- 45) Scanlon, M.G., Page, J.H., Bassim, M.N., Sapirstein, H.D., Bellido, G.G., **Elmehdi**, H.M., Fan, Y., Leroy, V., Mehta, K.L. and Owolabi, G.M. 2007. Using ultrasound to evaluate dough properties. *New Food* 10(4): 18-24.
- 46) H.M. **Elmehdi**. EM Radiation Levels in Sharjah University. *Presented at: 3rd Environmental Physics Conference*. 19-23 Feb. 2008, Aswan, Egypt.
- 47) H.M. **Elmehdi** and N. Nayfeh. Noise Levels near Roads of Major Cities of the United Arab Emirates. *Presented at: The 19th International Congress on Acoustics - ICA07MADRID*, Spain, 2-5 September 2007.
- 48) H.M. **Elmehdi** and M.I.P. Kovacs. Using Ultrasonic velocity to investigate the quality of gluten proteins. *Presented at: International Congress on Ultrasonics*, Vienna, Austria, April 9-12, 2007.
- 49) H.M. **Elmehdi** and M.I.P. Kovacs. Investigating the functional properties of gluten proteins using ultrasound. *Presented at: The 2006 IEEE International Ultrasonics Symposium*. Vancouver, Canada, Oct 3-6, 2006.
- 50) H.M. **Elmehdi** and S. Pistorius. An exact α/β -Independent Mathematical Solution used to Derive Fully Isoeffective Schedules Following Changes in Dose per Fraction in Radiotherapy Treatment of Tumors. *Presented at: 4th UAE Math Day*, University of Sharjah. April 27th, 2006.
- 51) H.M. **Elmehdi** and L. Al-Zarouni. How safe are we? Answers to some important questions about the amount of ionizing radiation we receive in everyday life. *Presented at: 6th UAE Diagnostic Imaging Conference*, Sharjah, March 25-28, 2006.
- 52) H.M. **Elmehdi**. Placement testing and remedial physics in UAE post-secondary institutions: how effective are they? *Presented at: The Arab conference of Admission and Registration*, University of Sharjah, UAE, April 2006.
- 53) **Elmehdi**, H. M., Page, J. H. and Scanlon, M. G. 2005. Investigating the porosity of dough using ultrasound. pp. 188-192 in: *Using Cereal Science and Technology for the Benefit of Consumers: Proceedings of 12th ICC Cereal & Bread Congress*, S.P. Cauvain, S.S. Salmon and L.S. Young (eds.), Woodhead Publishing Limited, Cambridge.
- 54) Page, J.H., Scanlon, M.G., **Elmehdi**, H.M., Mehta, K. and Fan, Y. 2005 The squishy physics of dough and bread. *Physics in Canada* 61(3):112.
- 55) H.M. **Elmehdi**, Stephen Pistprius and J. Beck. Dosimetry of Partial Rotational TSEI. *Presented at: The 1st UAE International Conference in Biomedical and Biological Physics*. Alayn, UAE. March 27-30, 2005.
- 56) H.M. **Elmehdi**, Stephen Pistprius. Deriving and Isoeffective formula for determining the Compensating Dose. *Presented at: Annual meeting of the Canadian Organization of Medical Physicists*. Hamilton, Canada. July 7-11, 2005.
- 57) H.M. **Elmehdi**. LBY Medical Physicists, where we are? *Presented at: 1st Libyan Doctors Conference*. Tripoli, Libya. July, 29-Aug. 3, 2005.
- 58) H.M. **Elmehdi**, J.H. Page, M.G. Scanlon. Investigating the porosity of viscoelastic materials using ultrasound. *Presented at: the 12th UCST congress*, Harrogate, England. May 2004.

- 59) **Elmehdi**, H., Page, J.H. and Scanlon, M.G. 2004. Characterization of anisotropy in foams: an ultrasonic approach. *Physics in Canada* 60(3):136.
- 60) H.M. **Elmehdi**, J.H. Page, M.G. Scanlon. Using Acoustic waves to probe structural anisotropy in brittle foams. *Presented at: the American Physical Society annual meeting, Montreal, 2004.*
- 61) H.M. **Elmehdi**, J.H. Page, M.G. Scanlon. Ultrasonic investigation of air entrainment in dough mixing. *Presented at: The 88th Annual Meeting of the America Association of Cereal Chemists, Portland, October 2003.*
- 62) H.M. **Elmehdi**, J.H. Page, M.G. Scanlon. Ultrasonic investigation of voids in viscolastic systems. *Presented at: Ultrasonics Internationl, Spain, 2003.*
- 63) H.M. **Elmehdi**, J.H. Page, M.G. Scanlon. An ultrasonic approach to investigate the properties of cereal foods. Book Chapter based on the proceedings of the 3rd International Symposium on Food Rheology and Structure. (2003), pp. 393-397.
- 64) H.M. **Elmehdi** and M.I.P. Kovacs. Using ultrasound to investigate the structural and functional properties of wheat gluten. Book Chapter based on the proceedings of the 3rd International Symposium on Food Rheology and Structure. (2003), pp. 547-548.
- 65) H.M. **Elmehdi**, J.H. Page, M.G. Scanlon. A new ultrasonic approach to investigate thermal transitions in wheat proteins. *Presented at: The 87th Annual Meeting of the America Association of Cereal Chemists, Montreal. October 2002.*
- 66) H.M. **Elmehdi**, J.H. Page, M.G. Scanlon. An ultrasonic study of gas cells and their effect on the mechanical properties of brittle foams. *Presented at: The 87th Annual Meeting of the America Association of Cereal Chemists, Montreal. October 2002.*
- 67) H.M. **Elmehdi**, J.H. Page, M.G. Scanlon. Probing polymer interactions during dough fermentation with low intensity ultrasound. *Presented at: 74th Annual Meeting. Minneapolis, Oct 2002.*
- 68) H.M. **Elmehdi**, J.H. Page, M.G. Scanlon. The effect of boundary conditions on the density of fermenting dough. *Presented at: The 86th Annual Meeting of the America Association of Cereal Chemists. Charlotte, North Carolina, October 2001.*
- 69) H.M. **Elmehdi**, J.H. Page, M.G. Scanlon. Ultrasonic investigation of dough mixing and proofing. *Presented at: The 85th Annual Meeting of the America Association of Cereal Chemists, Kansas City, MO. 4-9 November 2000.*
- 70) H.M. **Elmehdi**, J.H. Page, M.G. Scanlon. Ultrasonic investigation of voids in viscoelastic systems. *Presented at: Physics in Canada, Canadian Association of Physicists Congress, York University, Toronto, June 2000.*
- 71) H.M. **Elmehdi** and J.H. Page. Ultrasonic investigation of the random field system $DyAs_xV_{1-x}O_4$. *Presented at: the Canadian Association of Physicists Congress, University of Manitoba, Winnipeg, June 1990.*

Patents:

1. USPTO Application No.: PCT/CA2003/001249. Low Intensity ultrasonic evaluation of the structural properties of cereal foods. US patent office. Registration Date: August 22, 2002.

Funded Research Projects

2. USPTO App. No.: US60/943,048; "Portable ultrasonic instrument used to distinguish among pork meat and meats of other origin", co-inventor(s): Awad Alkhalaf and Ibrahim Kamel.

Ionization Radiation Research Group	Coordinator
Influence of Particle Morphology on Strength Properties of UAE Carbonate Sands	Co-investigator
UAE Background radiation assessment	Co-Investigator 200 000 AED On going
Radon concentration measurements in air, soil and water in UAE	Principal Investigator 100 000 AED.
Using ultrasound to characterize fluids flow	Principal Investigator 300 000 AED, On going
Developing and ultrasonic tool to distinguish among meats of different origin	Principal Investigator 40 000 AED Completed in 2009
Environmental Noise Survey	Principal Investigator 70 000 AED On Going
Using ultrasound to characterize fluids flow	Principal Investigator 30 000 Completed in 2007

3. International, regional conferences & workshops organization:

Item	Role
لمنتدى التربوي للمعلمين بدولة الإمارات العربية المتحدة من 29 مارس إلى 2 إبريل / 2015	Organizing Committee (Member)
Think Science Competition Emirates Foundation for Youth Dubai, May, 2015	Chief Judge (Chair of Judging Committee)
2 nd International History of Muslims and Arabs History of Sciences, Dec 8- 11, 2014, University of Sharjah, Sharjah, UAE	Organizing Committee Chairman, Scientific Committee Coordinator
11 th Arab Conference on Astronomy and Space Sciences, Dec 8-11, 2014, University of Sharjah, Sharjah, UAE	Organizing Committee Chairman, Scientific Committee Coordinator
Think Science Competition Emirates Foundation for Youth Dubai, April 17-20, 2014	Chief Judge (Chair of Judging Committee)
Sharjah Sciences Festival, University of Sharjah, Sharjah, Feb 5 & 6 , 2014	General Chair and Organizing Committee Chair.
Think Science Competition Emirates Foundation for Youth Dubai, April 20-24, 2013	Chief Judge (Chair of Judging Committee)

The 4th International Conference on Metamaterials, Photonic Crystals and Plasmonics will cover the entire scope of Electromagnetic & Nanophotonic ... March 18-24, 2013	Chair of organizing Committee
The 2nd Advanced Electromagnetics Symposium, 19-22 March, 2013, Sharjah-Dubai, United Arab Emirates	Member of the technical Program committee
Intel Sciences Competition - Arab World, October 2013	Co-Chair of Organizing Committee
Sharjah-McMaster Energy Summit, April 9-10, 2012	Chairman of the organizing Committee
Intel Sciences Competition - Arab World, October 2011	Co-Chair of Organizing Committee
Sharjah International Conference on Renewable Energy and Peaceful Applications of Nuclear Energy, April 6-7, 2011	Chair of Local Organizing Committee Chair of Scientific Committee
The Second Sharjah Sciences Festival, May 9-10, 2011	Chairman of the Organizing Committee
The Sharjah Sciences Festival and Education Conference, University of Sharjah, April 7-8, 2010.	Coordinator of the Organizing Committee and Chair of the Scientific Committee
The Stanford-Sharjah VLF Workshop, University of Sharjah Feb 22-24, 2010	Coordinator of the Local Organizing Committee and member of the Scientific Committee
The First International Conference on Arabs' and Muslims' History of Sciences. University of Sharjah, Sharjah, 24-27 March 2008.	Coordinator of the organizing and Scientific committees
The University of Sharjah fourth annual scientific forum, May 7-8, 2008	Member of the Organizing Committee
Thermo-acoustics Tools Workshop: <i>Techniques for Thermo-acoustic characterization of materials</i> . University of Sharjah, May, 2008	Member of Organizing Committee
The 2 nd International Forum of Youth on Space Sciences and Astronomy. Organized by The Arab Union of Astronomy and Space sciences, Tripoli, Libya, August, 2008	Member of Scientific Committee
The first workshop on Ultrasonics: <i>tools and Applications</i> , University of Sharjah, March, 2007	Chairperson

Workshop on Linux and open source computing, University of Sharjah, May, 2007	Chairperson
Workshop on Environmental & Occupational Acoustics: <i>Raising Awareness</i> , University of Sharjah, Dec, 2007	Chairperson
Medical Physics Workshop: <i>Novel Techniques on Diagnostics and Therapy</i> . University of Sharjah, April, 2008	Chairperson
Thermo-acoustics Tools Workshop: <i>Techniques for Thermo-acoustic characterization of materials</i> . University of Sharjah, May, 2008	Member of Organizing Committee

Other Research and Academic Related Activities

Journal Referee:

1. International Journal of Radiation Oncology Biology Physics
2. Ultrasonics
3. International Forum on Engineering Education
4. Journal of Cereal Chemistry.
5. Food Research International.
6. Progress in Computational Fluid Dynamics
7. University of Sharjah Journal of Applied Sciences
8. Served as a reviewer for Several Local, National and International Conferences.

Science Fair Judge: Served as a Science Judge in many Science Fairs in Sharjah School District (UAE) and Dubai School District (UAE) Winnipeg School Division No. 1 (Canada).

Wrote the Exam Papers for the UAE National Physics Olympiad (for the years 2007 and 2008).

Awards & Scholarships

1. University of Sharjah Excellence Award in Teaching. University of Sharjah, May 2015.
2. University of Sharjah Excellence Award in Research. University of Sharjah, May 2014.
3. Dean's Academic Excellence Award -2013. College of Sciences, University of Sharjah.
4. University of Sharjah Incentive Award (Community Service Category), April 2012.

5. University of Sharjah Incentive Award (Teaching Category). April 2011.
6. The College of Sciences Academic Excellence Award, 2010. First Place.
7. The University of Sharjah Excellence Award in Community Services. April 2009.
8. The College of Sciences (University of Sharjah) Academic Excellence Award, First Place, academic years 2008-2009.
9. The Bank of Sharjah Award for the Best Published Research Paper. University of Sharjah, Sharjah, June 2008.
10. Teaching Excellence Award. **First Place**. University of Sharjah, April, 2008. Sharjah, UAE.
11. Academic Excellence Award. **First Place**. College of Arts and Sciences, University of Sharjah, May, 2008. Sharjah, UAE.
12. **Best** Research Project Award. University of Sharjah May 7, 2008.
13. Visiting Fellowship Award, Natural Sciences and Engineering Research Council of Canada (NSERC). June 2001.
14. Isydore Hlynka Best Student Paper Award, American Association of Cereal Chemists, Kansas City, November 2000.
15. University of Manitoba Student Association Travel Award. University of Manitoba, Winnipeg Manitoba. R3T 2N2. January 2001.
16. Graduate Student Associations Conference Award. University of Manitoba, Winnipeg Manitoba. R3T 2N2. November 2000.
17. Department of Graduate Studies Travel Award. University of Manitoba, Winnipeg Manitoba. R3T 2N2. October 2000.
18. Canadian Bureau for International Education (CBIE) Scholarship (Ph.D. Program) 220 Laurier W, Suite 1100, Ottawa, Ontario, K1P 5Z9. 1995-1997.
19. Canadian Bureau for International Education (CBIE) Scholarship (M.Sc. Program). 220 Laurier W, Suite 1100, Ottawa, Ontario, K1P 5Z9. 1988-1991.

Professional Memberships

Canadian Nuclear Society
 Canadian Association of Physicists.
 Canadian Organization of Medical Physicists

American Association of Cereal Chemists.
Arab Society of Physicists
Arab Union for Astronomical and Space Sciences

References

Available Upon Request