

Name: **Attaelmanan Gaffar Attaelmanan**
Current Academic Rank: **Professor**
Current University: **University of Sharjah**
Current Faculty: **Sciences**



Academic qualifications

Doctor of Philosophy, X-ray Physics, Göteborg University, Nov. 1995, Sweden.

Title of Thesis: On resolution enhancement of capillary-based scanning X-ray micro-fluorescence spectroscopy

Master of Science, Applied Nuclear Physics, University of Khartoum, June 1990, Sudan.

Title of Thesis: Measurement of $Al^{27}(n, p)$ and $Al^{27}(n, \alpha)$ reactions cross-section ratios, using 14 MeV neutrons.

Bachelor of Science (Hon), Brighton Polytechnic, England, July 1985

Combined Sciences (Physics and Physical Electronics),

Other Certificates obtained or advanced courses attended

- International school on solar energy and other renewable energy sources, 1-30 Oct. 1987, Catania, Italy
- Nordic research school on synchrotron radiation, Max lab, 1- 9 June 1993, Lund, Sweden
- Regional training course on nuclear techniques in art and archaeology, 20 - 24 April 2009, IAEA Vienna, Austria

Honours and Awards

Best Research Group, University of Sharjah, May 2009

University of Sharjah Incentive Award (Community Service Category) 2010

Sharjah Islamic Bank's prize for best research article in College of Sciences, University of Sharjah, 2012.

University of Sharjah Incentive Award (Research Category) 2014.

Languages

proficiency	Reading	Writing	Conversation
Arabic	Excellent	Excellent	Excellent
English	Excellent	Excellent	Excellent
Swedish	Fair	Fair	Fair

Administrative Positions

My administrative experience stretches back to 1988 when I was employed by Omdurman Ahlia College (later University) as coordinator for the Physics and Mathematics program. Thereafter I served as chairman of the department of Physics, Mathematics and Statistics at Qatar University, and two terms as chairman of the department of Applied Physics, University of Sharjah. Currently I am the dean of CoASIT in the newly established University of Khorfakkan. As department chairman and dean I was responsible for the accreditation and management of a number of graduate and undergraduate programs, and currently I manage four undergraduate programs and one Masters program.

- Dean, College of Arts, Science & IT, University of Khorfakkan, UAE 2022- 2024
- Chairman, Applied physics and Astronomy, University of Sharjah, UAE 2018- 2022
- Chairman, Applied physics and Astronomy, University of Sharjah, UAE 2014- 2016
- Chairman, Applied physics and Astronomy, University of Sharjah, UAE 2012-2013
- Chairman, Department of Physics, Mathematics and Statistics, Qatar University 2004-2005
- Coordinator, Physics and Mathematics Program, Omdurman Ahlia University 1988-1991

Employment history

Professor, University of Sharjah, UAE, 13 Jan 2025 – Now

Dean, Professor, University of Khorfakkan, UAE, September 2022 – 31 Dec 2024

University of Khorfakkan is the newest addition to the UAE's higher education institutions. I have been honoured to be appointed as dean of the College of Arts, Science and Information technology, tasked with laying the foundations and establishing plans for its future growth.

Professor, University of Sharjah, UAE, June 2015 – 2022

Associate professor, University of Sharjah, UAE, Sept 2006 – June 2015

Since joining the University I have been active in teaching. Building on my past experiences I am continuously improving my teaching methods, and searching for techniques that enable me to provide better education to my students. Moreover, I have been involved in developing the Applied physics program, and overseeing its modification and improvement, through the initial and full accreditation processes. My other duties include performing scientific research and

partake in community service. Both duties occupy a large part of my time, and I dedicate most of my research towards community project such as archaeological and environmental studies. Promoting physics is one of my passions, and I am constantly in search for new avenues to interact with young students and the general public in order to disseminate information about physics and its applications.

Associate professor, University of Qatar, Qatar, Oct 2001 – Aug 2006

I was recruited by University of Qatar to start a medical physics program, which was supposed to be launched in the academic year 2003/2004, but was cancelled for unknown reasons. In addition, my duties there included teaching basic and advanced courses, while contributing to research and university service. Community outreach programs were many, and I contributed in my capacity as a radiation specialist in drafting the laws for environmental radiation protection, and trained medical doctors and the general public in the fundamentals of radiation protection.

Associate Professor, Göteborg University, Sweden, Dec 2000 – Sept 2001

Assistant professor, Göteborg University, Sweden, Nov 1996 – Nov 2000

One of the most joyous periods of my life was spent at the Department of Radiology, College of Odontology, Goteborg University, where I was the only physicist in a sea of dentists, doing research on new digital radiography systems, and teaching undergraduate and graduate dental students about x-rays. During the five years I was there we tested and studied the latest digital sensors and image plate systems before they were introduced to the general public. I was also involved in designing and developing special educational software that assist in explaining x-ray physics and the fundamentals of dental radiography.

Researcher, National Forensic Science Laboratory, Sweden, Oct 1995 – Oct 1996

After completing my PhD studies I was contracted by the Swedish national forensics laboratory to design and build an analytical X-ray fluorescence spectrometer for the sole purpose of studying glass fragments discovered in crime scenes. The instrument automatically analyses the samples, calculate their elemental composition and performs a statistical analysis to determine correlation patterns and source.

Memberships

Member American Association for the Advancement of Science (AAAS No: 41767594)

Member, Microscopy Society of America, 2006

Chartered physicist, Institute of Physics, UK, 2000

Editorial board member, International Journal of Pure and Applied Physics (IJPAP), 2004

Reviewer

Journal of Archaeological Science

X-Ray Spectrometry.

International Journal of Biophysics

Journal of Nuclear and Particle Physics

Journal of Hazardous Materials

Community Service

During my tenure at UoS I participated and served the community on many levels for which I won The University of Sharjah's prize for Excellence in Community Service 2010. I participated in public lectures and seminars, organizing workshops, media articles, consultancy or expert services and member of national committees. The following are examples of my contribution during the last few years:

- Historic Arabic dictionary committee member, Arabic Language institute, Feb 2019
- Organizing committee member, FISICPAC 2018 conference, Nov 2018
- UAE representative at The First Coordination Meeting-cum-Workshop on the Application of Nuclear Techniques for Cultural Heritage Characterization, Conservation and Preservation, Bangkok, Thailand, 3-7 September 2018
- Evaluation committee member, Think Science 2018 competition, 2018
- Seminar, Physics in the real world, Students of Dubai French School, 7 March 2018
- Participant, Open day, UoS, 20-21 Nov 2017
- Judge, Minister of interior research prize Ministry of Interior, 2017.
- Member, Work group on the national strategy for education & training in radiation protection, FANR, April 2017 till now
- Judge, Annual science fair, Wesgreen International School, Jan 2017
- Trainer, Radiation safety and protection, 24-27 Oct 2016
- Judge, Think Science 2015 competition, May 2016
- Member, Emirates Mars mission science team, UAE space Agency, 2015 – 2018.

Research Activities

ORCID ID is 0000-0003-1828-8682

[Attaelmanan, Atta G. - Author details - Scopus Preview](#)

[Atta Gaffar Attaelmanan - Google Scholar](#)

My research activities started immediately after graduation when I joined the Energy Research Council in Sudan, as a research into solar energy. Since then I was involved in research during my graduate studies and beyond. After joining UoS, I lead a multidisciplinary research group (Radiation Science and Technology), which won University prize for best research group in 2009, and initiated a number of research projects, with local and international funding from UoS, Emirates Foundation and IAEA. Moreover, I supervised and co-supervised many graduation projects at undergraduate and graduate levels.

Research interests

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|-------------------------------------|----------------------------------|
| (1) XRF applications. | (2) Microscopy. |
| (3) Digital radiography techniques. | (4) Neutron Activation Analysis. |
| (5) Solar energy devices. | (6) Archaeometry. |

Research Projects

1. Establishment of National XRF laboratory for the analysis of archeological and environmental samples, Funded by the [International Atomic Energy Agency \(IAEA\)](#) for **2.2 Million Dhs**, 2009-2011.

Project team:, Dr Hussain Alawadhi (co-ordinator), Dr. Attaelmanan Gaffar, Dr nasser Hamdan and Dr Najeh Jisrawi.

2. Measurement of Background Radiation in the UAE, Funded by [Emirates Foundation](#) for **225 000 Dhs**, 2009-2012.

Project team: Dr. Attaelmanan Gaffar (PI), Dr Hussain Alawadhi and Dr. Hussein Elmehdi.

3. Assessment of Efficacy of Er:YAG and Er,Cr:YSGG in Conservative Carious Dentin Removal: A Comparative study. Funded by UoS for **93 000 Dhs**, 2011-2012.

Project team: Dr Hatem Mostafa El-Damanhoury (PI), Dr Natheer Hashim and Dr A. G. Attaelmanan (UoS)

4. Establishment of National XRF laboratory for the analysis of archeological and environmental samples II, Funded by the International Atomic Energy Agency (IAEA) for 21.6 Million Dhs, 2011-2013.

Project team:, Dr Hussain Alawadhi (co-ordinator), Dr. Attaelmanan Gaffar, Dr nasser Hamdan and Dr Najeh Jisrawi.

5. Determination of Heavy Metals in Children's Plastic Toys in UAE By X Ray Florescence (XRF) and Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES) – Environmental Health Aspect. Project No. 1601050602-P

Project team: Dr Hafiz Omar (PI) and Prof A. G. Attaelmanan, 2017-2019

6. Fabrication and characterization of magneto-plasmonic hybrid nanoclusters for photo and magnetothermal therapy of cancer cells. UoS URB Competitive research project No 2102143095.

Dr Hafsa Khurshed (PI), Prof Atta Attaelmanan, Dr Amir Ali Khan and Prof Bashar Issa. 2020-2022.

7. Unveiling the Silent Threat to Marine Ecosystem: A Comprehensive Analysis of Microplastics & Heavy Metal Pollution Across UAE Coastal Waters. UKF-URB DHs 40,000 - 75,000, for 24 months, starting from January 2nd, 2024,

Dr. Roqaya Alamiri, Dr Henrik Stahl, Prof. Attaelmanan and Prof. Tareq Ali

Published research

1. A. Attaelmanan, Measurement of $Al^{27}(n,p)$ and $Al^{27}(n,\alpha)$ reactions cross-section ratios, using 14 MeV neutrons, M.Sc thesis, University of Khartoum, June 1990.

2. P. Voglis, A. Attaelmanan, P. Engström, S. Larsson, A. Rindby K. Boström and C. G. Helander, Elemental mapping of bone tissues by the use of capillary focused XRF, *X-ray Spectrometry* (1993), 22: 229-233.

3. A. Attaelmanan, A. Rindby, P. Voglis and A. Shermeat. X-ray beam profile measurements with CCD detectors. *Nuclear Instruments and Methods in Physics Research* 1993; B82:481-488.

4. A. Attaelmanan. Single particle analysis using microbeam X-rays. *Proceedings of 6th Chalmers Postgraduate Conference on Materials Sciences*, 18 MAY 1993.

5. A. Attaelmanan, S. Larsson, A. Rindby, P. Voglis and A. Kuczumow. A table-top microbeam scanning facility. *Review of Scientific Instruments* (1994), 65(1): 7-12. <http://dx.doi.org/10.1063/1.1144750>

6. **A. Attaelmanan**, S. Larsson and A. Rindby. Analysis of fly-ash particles using a table-top Scanning X-ray Microprobe. *Proceedings of European Conference on Energy Dispersive X-Ray spectrometry*, June 1994, Budapest, Hungary.
7. **A. Attaelmanan**, P. Voglis, A. Rindby, S. Larsson and P. Engström. Improved capillary optics applied to microbeam XRF; Accuracy and sensitivity. *Review of Scientific Instruments* (1995) 66(1):24-27. <http://dx.doi.org/10.1063/1.1145260>
8. A. Rindby, P. Voglis and **A. Attaelmanan**. The analysis of inhomogeneous and irregularly shaped samples by the use of XRF μ -beam correlation analysis, *X-ray Spectrometry* (1995) 25:39.
9. **A. Attaelmanan**. On resolution enhancement of capillary based scanning X-ray microfluorescence spectroscopy. Ph.D. thesis, Göteborg University (1995), ISBN 91-7197-181-5.
10. **A. Attaelmanan**, E. Borg, and H-G. Gröndahl. Assessing the Physical Performance of Two Generations of Two Direct Digital Systems. *Oral Surge Oral Med Oral Pathol Oral Radiol Endod* (1999) 88:517-23.
11. E. Borg, **A. Attaelmanan**, and H-G. Gröndahl. Image plate systems differ in physical performance. *Oral Surge Oral Med Oral Pathol Oral Radiol Endod* (2000) 89:118-124.
12. E. Borg, **A. Attaelmanan**, and H-G. Gröndahl. Subjective image quality of solid-state and photostimulable phosphor digital systems for intraoral radiography. *Dentomaxillofacial Radiology* (2000) 29:70-75. doi:10.1038/sj/dmfr/4600501
13. E. Liljensten, **A. G. Attaelmanan**, C. Larsson, H. Ljusberg-Wahren, N. Danielsen, J-M Hirsch, and P. Thomsen. Hydroxyapatite granule / carrier composites promote new bone formation in cortical defects. *Clinical Dental Implant, Dentistry and Related Research* (2000) 2:50-59.
14. **A. Attaelmanan**, E. Borg, and H-G. Gröndahl. Investigating Inhomogenieties in the Spatial Response of Six Digital Sensors. In H. Fuchihata et al editors. *Oral and Maxillofacial Radiology Today. Excerpta Medica International Congress Series 1199*. Elsevier Science B.V. 2000.
15. **A. Attaelmanan**, E. Borg and H-G. Gröndahl. On optimising the digitisation and display processes of intraoral film. *Dentomaxillofacial Radiology* (2000) 29:97-102.

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16. **A. Attaelmanan**, E. Borg and H-G Gröndahl. Signal to noise ratios of six intra-oral digital sensors. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* (2001) 91:611-5.
 17. H. M. Alnaomi and **A. Attaelmanan**, Measurement of absorbed doses in human anatomical phantoms, *Proceedings of Arab Conference of Biophysics*, 23-25 August 2003, Cairo, Egypt.
 18. **A. Attaelmanan**, Comparing Three Methods for the Calculation of Fractal Dimensions from simulated Digital Radiographs, *Proceedings International Conference on Medical Physics (ICMP)*, 14 – 16 April 2008, Dubai, UAE.
 19. **A. Attelmanan**, Single particle analysis using microbeam X-rays, *Microscopy and Microanalysis* (2008) 14:2, 1268-1269.
 20. **A. Attaelmanan**,. Performance of Three Fractal Analysis Methods for the Detection of Osteoporosis, *International Review of Modelling and Simulations*, (2009) 2(1): 109 - 112.
 21. **A. G. Attaelmanan**, Measurement of absorbed doses in anatomical phantoms, *International Journal of Pure and Applied Physics*, (2012) 8(1), 53-58.
 22. **Atta Gaffar Attaelmanan** and Mohamad Al-Farouq Kawam, Determining the elemental composition of Calotropis Procera using X-ray analytical microscopy, *Journal of X-ray Spectrometry*, (2012), 41: 284–287.
 23. **Atta G. Attaelmanan** and Eisa A. Yousif. EDXRF analysis of pigment used for the decoration of Mleiha pottery. *Journal of Archaeological Science* (2012) 39: 2231-2237.
 24. **Atta G. Attaelmanan**. Reliability of a New X-ray Analytical Microscope in Archaeological Research, *Journal of Archaeological Science*, (2012), 39: 2552-2558.
 25. A Reddy, **AG Attaelmanan** and M Mouton. Pots, plates and provenance: sourcing Indian coarse wares from Mleiha using X-ray fluorescence (XRF) spectrometry analysis. *Materials Science and Engineering* (2012) 37: 012010 doi:10.1088/1757-899X/37/1/012010.
 26. Eisa Yousif, and **Atta Attaelmanan**. Role of XRF in the restoration of a prominent architectural monument at the site of Mleiha. *Materials Science and Engineering* (2012) 37: 012005 doi:10.1088/1757-899X/37/1/012005
 27. **Atta G. Attaelmanan** and Hamid Idris Omar, Determining the elemental composition of Terminalia Brownii's bark using X-ray fluorescence spectrometry, *International review of Biophysical Chemistry*, (2012) 3(5): 144-146.
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28. J. Goy, C. Le Carlier, M. Desgli Esposti and **G. Attaelmanan**. Archaeometallurgical survey in the Emirate of Fujairah (U.A.E.) and a preliminary chemical analyses of copper –base items from the Iron Age site of Masafi. *Proceedings of the Seminar for Arabian Studies* (2013) 43. 127 – 144.
29. **Atta G. Attaelmanan**, Eisa Yousif and Sabbah Jasim. Investigation of tin, arsenic and lead concentrations in prehistoric arrowheads. *Journal of Analytical Atomic Spectroscopy*. (2013), 28, 1436-1440.
30. **Atta G. Attaelmanan**, Hamid I. Omar, Elemental and molecular composition of Terminalia Brownii's bark . *International review of Biophysical Chemistry*, (2013) 4:5. 157 – 160.
31. **Atta G. Attaelmanan**, Michel Mouton, Identification of Archaeological Potsherds Excavated at Mleiha Using XRF. *Journal of Archaeological Science*. (2014), 42, 519 – 524.
32. **Atta G. Attaelmanan**, Identification of mineral inclusions in Archaeological ceramics using microbeam X-ray spectrometry, *X-ray spectrometry*, (2014), 43 (6): 325–331.
33. Anne Benoist, Cécile Le Carlier, Julie Goy, Michele Degli Esposti, Barbara Armbruster, and **Gaffar Attaelmanan**. Snake, Copper and Water In South-Eastern Arabian Religion During The Iron Age: The Bithnah And Masāfi Evidence. *Pre-Islamic South Arabia and its Neighbours: New Developments of Research, Edited by Mounir Arbach and Jérémie Schiettecatte, British Foundation for the Study of Arabia Monographs* No. 16, 2015.
34. **Atta G. Attaelmanan**, Nawal M. Suleman, Ibrahim A. El Agib and Hamed A Al-Sewaidan. Assessing Silicon deposits in Zilfi province, Saudi Arabia, using XRF and XRD techniques. *X-Ray Spectrometry* (2016), 45: 325–329.
35. Abdu Y.A., Gismelseed A.M., Shaddad M. and **Attaelmanan A.G.** Mössbauer spectroscopic investigation of the metal phases in the Almahata Sitta meteorite (Fragment#051). 79th Annual Meeting of the Meteoritical Society. Meteoritics and Planetary Science (2016) 51, S1. pp A144. <https://doi.org/10.1111/maps.12704>
36. Al-Kazwini AT, Said AJ and **Attaelmanan A**, The Enhancement of Background Radiation as A Result of Using Natural Building Materials J Community Med Health Educ, 2016, 6:5, <https://DOI.org/10.4172/2161-0711.1000482>
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37. Anas M. Atieh, Abdulaziz Al-Hazaa, **Atta G. Attaelmanan**. The Effect of Quenching Medium On The Microstructure And Mechanical Behaviour of Inconel 625 Welded Alloy. Proceedings of 26th Canadian Congress of Applied Mechanics (CANCAM 2017), Progress in Canadian Mechanics Series, Editors Y. Shi and B. Nadler (2018) 2:161 – 163. ISBN: 978-1-5108-5678-3
38. Huda Aslam, Tarig Ali, Md Maruf Mortula, **Atta G. Attaelmanan**. Evaluation of microplastics in beach sediments along the coast of Dubai, UAE, Marine Pollution Bulletin (2020) 150:110739. <https://doi.org/10.1016/j.marpolbul.2019.110739>
39. **Atta G. Attaelmanan**, Eissa Yousif, Sabah Jasim. Glass-working evidence at Dibba, United Arab Emirates: An archaeometric study. Journal of Archaeological Science: Reports, 30 (2020) 102267. <https://doi.org/10.1016/j.jasrep.2020.102267>
40. B.M. Suleiman, K. Daoudi, **A.G. Attaelmanan**, M. Al Zaylaie, M. Gustavsson, Modified Clay as Thermal Backfill Material for Buried Electrical Cables, Thermal Science and Engineering Progress, 19 (2020), <https://doi.org/10.1016/j.tsep.2020.100589>
41. Hafiz Omer Ahmed, **Attaelmanan Gaffar Attaelmanan**, Fatima Ibrahim AlShaer and Eman Mohamed Abdallah. Determination of metals in children's plastic toys using X-ray fluorescence spectroscopy. Environmental Science and Pollution Research (2021), <https://doi.org/10.1007/s11356-021-13838-1>
42. Khurshid, H.; Yoosuf, R.; Issa, B.A.; **Attaelmanan, A.G.**, Hadjipanayis, G. Tuning Easy Magnetization Direction and Magnetostatic Interactions in High Aspect Ratio Nanowires. Nanomaterials (2021), 11, 3042. <https://doi.org/10.3390/nano11113042>.
43. Yassir A. Abdu, Abbasher M. Gismelseed, **Atta G. Attaelmanan**, Muawia H. Shaddad, Frank C. Hawthorne. Thermal and shock history of Almahata Sitta meteorite inferred from structure refinement of pyroxene and Mössbauer spectroscopy of Fe-Ni metal. Meteoritic and Planetary Sciences, (2023). 58, 5:737-746. <https://doi.org/10.1111/maps.13988>
44. **Atta G. Attaelmanan**, Huda Aslam, Tarig Ali, Lara Dronjak. Mapping of heavy metal contamination associated with microplastics marine debris - A case study: Dubai, UAE, Science of The Total Environment, (2023) 891, 15. <https://doi.org/10.1016/j.scitotenv.2023.164370>
45. Bashir M. Suleiman, Daniil Moraitis, Mohamed I. Abdel-Fattah, **Atta G. Attaelmanan**, Hamdan Hamdan and Marwan Alzaylaie. Thermal Properties of Backfill Material for

Underground Heat Exchange Applications, Journal of Physics: Conference Series 2751 (2024), IOP Publishing, <https://doi.org/10.1088/1742-6596/2751/1/012010>

46. Fernini, I., Subhi, S., **Attaelmanan, G.**, Abdub, Y.A., Al-Naimiy, H. Analyzing Meteorites at the Sharjah Academy for Astronomy, Space Sciences, and Technology Advances in Science, Technology and Innovation, 2024, pp. 79–81.

<https://DOI.org/10.14233/ajchem.2024.31097>

47. Ahmed, H.O., **Attaelmanan, A.G.**, Mousa, M.K. Asian Journal of Chemistry. Determination of Metals in Children's Plastic Toys using Inductively Coupled Plasma Optical Emission Spectrometry, 2024, 36(6), pp. 1383–1392. <https://orcid.org/0000-0002-2638-6971>

Conferences and seminars

1. IAEA RAS1025 Coordination Meeting/Workshop on Pre-Treatment Methods Applied to Sample Preparations, Beirut-Lebanon, 30 May-02 June 2022.
2. IAEA TC (RAS1021) Regional Workshop on Radiation Technologies for Cultural Heritage Preservation., Grenoble, France, from 22 to 26 November 2021
3. The **First Sharjah International Conference on Particle Physics, Astrophysics and Cosmology (FISICPAC-2018)**, University of Sharjah, UAE, November 11 - 13, 2018,
4. The First Coordination Meeting-cum-Workshop on the Application of Nuclear Techniques for Cultural Heritage Characterization, Conservation and Preservation ,Bangkok, Thailand, 3-7 September 2018
5. *Oral presentation* Gaffar Attaelmanan, Nasser Hamdan, Hussain Alawadhi, Najeh Jisrawi. The national X-ray laboratory for archaeological and environmental applications. International Conference on the IAEA Technical Cooperation Programme: Sixty Years and Beyond — Contributing to Development, Vienna, Austria 30 May – 1 June 2017
6. *Oral presentation* Anas M. Atieh, Abdulaziz AlHazaa, **Atta G. Attaelmanan**. The Effect Of Quenching Medium On The Microstructure And Mechanical Behaviour Of Incel 625 Welded Alloy. 26th Canadian Congress of Applied Mechanics Victoria, BC, Canada May 29 - June 1, 2017.
7. *Oral presentation* First UAE Synchrotron User Meeting, Dubai 6 Dec 2016.
8. *Seminar* XRF Techniques, King Saud University, Riyadh, KSA, 30 December 2014.

9. *Seminar* Archaeometry: the use of modern technology to probe the UAE past, Emirates Natural History Group in Al Ain, at the Islamic Institute in Al Ain, 11 November 2014.
10. *Oral presentation* A. G. Attaelmanan, H. Alawadhi. Composition and Structure of Mleiha Pottery. Australian X-ray Analytical Association conference (AXAA 2014), Pan Pacific, Perth, WA from 9-13 February 2014.
11. *Oral presentation* J. Goy, C. Le Carlier, M. Desgli Esposti G. Attaelmanan. "Archaeometallurgical survey in the Emirate of Fujairah (U.A.E.) and a preliminary chemical analyses of copper –base items from the Iron Age site of Masafi". Seminar for Arabian Studies, British museum, London, 13 – 15 July 2012.
12. *Oral presentation* Eisa Yousif and A G Attaelmanan. Role of XRF in the restoration of a prominent architectural monument at the site of Mleiha. International Conference on the Use of X-rays (and related) Techniques in Arts and Cultural Heritage (XTACH11), The American University of Sharjah, United Arab Emirates December 7 - 8, 2011.
13. *Oral presentation* A G Attaelmanan and M Mouton. Elemental Composition and Correlation of Meliha potsherds. International Conference on the Use of X-rays (and related) Techniques in Arts and Cultural Heritage (XTACH11), The American University of Sharjah, United Arab Emirates December 7 - 8, 2011.
14. *Oral presentation* Sensitivity of a Scanning X-ray Fluorescence Analysis System for Archaeological Applications. International Conference on the Use of X-rays (and related) Techniques in Arts and Cultural Heritage (XTACH11), The American University of Sharjah, United Arab Emirates December 7 - 8, 2011.
15. *Oral presentation* A Reddy, A G Attaelmanan and M Mouton. Pots, Plates and Provenance: Sourcing Indian Coarse Wares from Mleiha using X-ray Fluorescence (XRF) Spectrometry Analysis. International Conference on the Use of X-rays (and related) Techniques in Arts and Cultural Heritage (XTACH11), The American University of Sharjah, United Arab Emirates December 7 - 8, 2011.
16. *Invited Speaker*, The national X-ray fluorescence laboratory, Archaeology of the United Arab Emirates Conference, Hilton Hotel, Al Ain - 30-31 March 2011
17. *Invited Speaker*, "Beyond the use of nuclear technology for power production: medical, industrial and agricultural applications", 2nd International Conference on Nuclear Technologies

in the Service of Regional Societies (ICNTSRS), 26 – 27 March 2010, Crown Plaza Hotel, Kingdom of Bahrain

18. *Oral presentation*, “Utilizing X-ray Fluorescence Analysis for the Study of Archaeological Artefacts”, the 16th International Conference of the Lebanese Association for the Advancement of Science (LAAS16), 13-15 November 2009, Beirut, Lebanon.

19. *Oral presentation*, “Single particle analysis using microbeam X-rays” Microscopy and Microanalysis International Conference, 3 – 7 August 2008, Albuquerque, USA

20. *Oral presentation*, “Comparing Three Methods for the Calculation of Fractal Dimensions from simulated Digital Radiographs”, International Conference on Medical Physics (ICMP), 14 – 16 April 2008, Dubai, UAE,

21. *Oral presentation*, “Novel techniques in X-ray fluorescence spectroscopy”, workshop on the use of X-ray techniques in arts, archaeology and environmental sciences, American University of Sharjah, 02 April 2008, Sharjah, UAE

22. *Attendance*, International Conference on Nanotechnology and Its Applications, AUS and UoS, Sharjah 10-12 April 2007, Sharjah, UAE

23. *Attendance*, International Conference on Materials Research and Education Future Trends and Opportunities, 4-6 April 2005, Doha, Qatar

24. *Oral presentation*, “Measurement of absorbed doses in human anatomical phantoms”, Arab Conference of Biophysics, 23-25 August 2003, Cairo, Egypt

25. *Oral presentation*, “Investigating inhomogeneities in the spatial response of six digital sensors”, 12th International Congress of Dento-maxillo-Facial Radiology, 26 June -1 July 1999, Osaka, Japan

26. *Oral presentation*, “On Optimising the Digitisation and Display Processes of Intraoral Films”, 6th European Congress on Dental and Maxillofacial Radiology, 5-6 June 1998, Oslo, Norway

27. *Oral presentation*, “Beam Quality in Oral Radiology Systems”, 6th European Congress on Dental and Maxillofacial Radiology, 5-6 June 1998, Oslo, Norway

28. *Oral presentation*, “Normal Anatomy a CAL program”, 15th Nordic symposium on Dental and Maxillofacial Radiology, 4 June 98, Oslo, Norway

- 29. *Oral presentation***, “Quality control of the Digora® image plate system”, Swedish Dental Association Conference, 15-18 November 1997, Stockholm, Sweden
- 30. *Poster presentation***, “Computer Aided Learning in Oral Radiology”, Swedish Dental Association Conference, 15-18 November 1997, Stockholm, Sweden
- 31. *Oral presentation***, “Dual Energy Techniques in Oral Radiology”, Swedish Dental Association Conference, 15-18 November 1997, Stockholm, Sweden
- 32. *Oral presentation***, “Analysis of fly-ash particles using a table-top Scanning X-ray Microprobe”, European Conference on Energy Dispersive X-Ray spectrometry, 30 May -3 June 1994, Budapest, Hungary

Educational Software for Computer Assisted Learning

1. **Attaelmanan** and H-G. Gröndahl, InterX: An Interactive Software for Teaching Basic X-ray Physics. Göteborg University (1997).
2. K. Gröndahl, **A. Attaelmanan** and G. Iversson, Normal Anatomy, Göteborg University (1998).
3. K. Bamshadfard, **A. Attaelmanan** and H-G. Gröndahl. Diagnostic Testing, Göteborg University and Chalmers University of Technology (1998).
4. K. Gröndahl, **A. Attaelmanan** and L. Vannas-Löfqvist, Occlusal Radiography, Göteborg University (1998).
5. **Attaelmanan**, B. Molander and H-G. Gröndahl, Quality Assurance in Oral Radiology. A digital book, Göteborg University (1999).