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## Mohamed Eltayeb M. Eisa

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### EDUCATION:

Ph.D (Physics), **Cape Town University, South Africa**, 2005.

M.Sc (Physics) **Khartoum University, Sudan**, 1993.

B.Sc (Physics) **Khartoum University, Sudan**, 1990.

### Awards

Prize of 9<sup>th</sup> International Symposium Radiation Physics (**ISRP-9**) for the presentation: -  
High-resolution Nuclear Microprobe Elemental Mapping of Teeth enamel-dentine  
interface exposed to acidic conditions, Cape Town, South Africa, October 2003

### Professional

2001-2005 The iThemba Laboratory for Accelerator-Based Sciences, South Africa  
2002-2004 Dept. of Physics, Faculty of Science, Cape Town University, South Africa  
1996-2007 Dept. of Physics, Sudan University of Science and Technology, Sudan  
1992-2000 Dept. of Physics, Faculty of Science, Khartoum University, Sudan

## **MEMBERSHIP OF COMMITTEES**

1. **Third World Academy of Science (TWAS)-UNESCO Associateship**
2. **International Radiation Physics Society (IRPS)**
3. **South African Institute of Physics (SAIP)**

## **PUBLICATIONS**

- 1 **M.E.M Eisa**, J.L. Conradie, P.J. Celliers, J.L.G. Delsink, D.T.Fourie, J.G. de Villiers, K. A. Springhorn, C.A. Pineda- Vargas  
Beam Optics Optimization of the 6 MV Van de Graaff Accelerator at the iThemba LABS  
American Institutes of Physics conference proceedings(AIP) 2008 (in press)
- 2 C.A. Pineda-Vargas, **M.E.M Eisa**, A.L. Rodgers  
Characterization of Human Hard Tissues using Mico-PIXE and RBS; a comparative study between two different populations  
Radiation Physics and Isotopes 2008 (in Press)
- 3 **M.E.M Eisa** C.A. Pineda-Vargas, U.M.E. Chikte , A.L. Rodgers, S. Naidoo, J.L. Conradie  
Application of Micro-PIXE and Dynamic Analysis for the Characterization of Human Hard Tissues  
Proceedings of XI International Conference on PIXE and its Analytical Applications, 25-29May 2007, **Puebla, Mexico**, PII-11-1 to PII-11-5
- 4 C.A. Pineda-Vargas, **M. E. Eisa**, U.M.E. Chikte, A.L. Rodger, M. Topic  
Application of Micro-PIXE and dynamic mapping for the characterization of human hard tissues.  
Avances en Análisis por Técnicas de Rayos X, vol 13, 310-317 (2007). ISSN 1515-1565.
- 5 C.A.Pineda-Varagas, S. Naidoo **M. E. M Eisa**  
Nuclear microanalysis of tooth enamel from a community in the Western Cape, South Africa  
Nuclear Instruments and Methods B260 (2007) pages 190-193

- 6 C.A.Pineda-Varagas and M.E M. Eisa.  
Nuclear Microprobe analysis of human hair cross sections from two different population groups  
Proceedings of EBASI2007 International Conference 23-26 January 2007, iThemba LABS, **Cape Town, South Africa**.
- 7 J.L. Conradie, M.E.M Eisa, P.Celliers, H.Delsink, D.Fourie, G.De Villiers, P. Maine, K. Springhorn and C. A. Pineda-Vargas  
Recent optimization of the beam-optical characteristics of the 6 MV Van de Graaff accelerator for high brilliance beams at the iThemba LABS NMP facility.  
Nuclear Instruments and Methods B231 (2005) pages 101-105.
- 8 C.A.Pineda-Varagas, S.Naidoo, M.E. Eisa  
Nuclear Microanalysis of tooth enamel from a low income community , **South Africa**.  
Proceedings of 50<sup>th</sup> South African Institute of Physics Conference 5-7 July2005,
- 9 C. A. Pineda-Vargas, M. E. Eisa, U. M. E. Chikte and J. L. Conradie  
High-resolution nuclear microprobe elemental mapping of teeth enamel–dentine interface exposed to acidic conditions.  
Radiation Physics and Chemistry Vol. 71 Issues 3-4(2004) Pages 937-942.
- 10 C. A. Pineda-Vargas, A. L. Rodgers and M. E. Eisa.  
Nuclear microscopy of human kidney stones, comparison between two population groups.  
Radiation Physics and Chemistry Vol. 71 Issues 3-4 (2004) Pages 947-950
- 11 M.E. Eisa, J.L. Conradie, D.T. Fourie, J.G. de Villiers, H. Delsink, K Springhorn.  
Simulation of beam optics in the Van de Graaff accelerator at iThemba LABS.  
Proceedings of 48<sup>th</sup> South African Institute of Physics Conference 25-27 June 2003, University, **Stellenbosch, South Africa**.
- 12 C.A. Pineda-Vargas, U.M.E. Chikte, M. E. Eisa  
Nuclear Microprobe Elemental Mapping of teeth Enamel Dentine Boundary Exposed to Acidic Conditions.

Proceedings of 48<sup>th</sup> South African Institute of Physics Conference 25-27  
June 2003, University, **Stellenbosch, South Africa.**  
University, **Pretoria, South Africa.**

- 13 Farouk I.Habbani K. T. Elnasr **M. .E. Eisa**  
Comparison of XRF and NAA Techniques at Khartoum University for  
analysing some Sudanese Geological Samples  
Sudan Journal of Basic Science vol. 5 (2002) 67-84

### **ACADEMIC ACTIVITIES: -**

- 1 CERN Accelerator School of Beam Diagnostics, Dourdan, from 28 May - 6  
June, 2008, **France.**
- 2 UAE-CERN Workshop on High Energy Physics and its Applications, 26-28  
November 2007, United Arab Emirates University, **Alain, United Arab  
Emirates.**
- 3 International Conference on Biomedical Applications of High Energy Ion  
Beams, 30th July-2nd August 2007, University of Surrey, **Guilford, England**
- 4 11<sup>th</sup> International Conference on Particle-Induced X-Ray Emission and its  
Analytical Applications 25-29 May 2007, Universidad Nacional Autónoma de  
México, **Puebla, Mexico.**
- 5 6<sup>th</sup> Edward Bouchet Abdus Salam Institute International Conference on Physics  
& Technology for Sustainable Development in Africa, iThemba LABS, 23-26  
January 2007, **Cape Town, South Africa**
- 6 Conference of Science at Synchrotrons, iThemba LABS, 5 -10 February 2007,  
**Cape Town, South Africa**
- 7 10<sup>th</sup> International Conference on Nuclear Microprobe Technology and  
Applications (ICNMTA2006), 9-14 July 2006, Centre for Ion Beam Analysis  
(CIBA), **Singapore and National University of Singapore, Singapore.**
- 8 School on Ion Beam Analysis and Accelerators Applications 13-24 March 2006,  
the Abdus Salam International Centre for Theoretical Physics (Joint **ICTP &  
IAEA**), **Trieste, Italy.**

- 9 50<sup>th</sup> annual South African Institute of Physics (SAIP) Conference, Pretoria University, 5-7 July 2005, **Pretoria, South Africa.**
- 10 Nuclear Structure and Decay Data: Theory and Evaluation 4 - 15 April 2005, the Abdus Salam International Centre for Theoretical Physics (**ICTP & IAEA**), **Trieste, Italy.**
- 11 Radiation Protection Workshop, 8<sup>th</sup> to 11<sup>th</sup> November 2004, Cape Town, iThemba LABS, **Cape Town, South Africa.**
- 12 9<sup>th</sup> International Conference on Nuclear Microprobe Technology and Applications (ICNMTA2004), 13-17 September 2004. Cavtat, **Dubrovnik, Croatia.**
- 13 9<sup>th</sup> International Symposium on Radiation Physics (ISRP-9) and Workshop on Radiation Based Analytical Techniques, iThemba LABS, 24-31 October 2003, **Cape Town, South Africa.**
- 14 Workshop on Technology and Applications of Accelerator Driven Systems (ADS), 13-17 October 2003, the Abdus Salam International Centre for Theoretical Physics (**ICTP & IAEA**), **Trieste, Italy.**
- 15 48<sup>th</sup> **South** African Institute of Physics (SAIP) Conference, Stellenbosch University, 25-27 June 2003, **Stellenbosch, South Africa.**
- 16 Eleventh International Workshop on Computational Physics and Material Science: Total Energy and Force Methods, 16-18 January 2003 The Abdus Salam International Centre for Theoretical Physics (ICTP), **Trieste, Italy.**
- 17 Workshop on Nuclear Data for Science and Technology: Materials Analysis, 19- 30 May 2003 the Abdus Salam International Centre for Theoretical Physics (ICTP), **Trieste, Italy.**
- 18 9<sup>th</sup> International Conference for Future Accelerators (ICFA) Instrumentation School March 2001, iThemba LABS, **Cape Town, South Africa.**
- 19 National Nuclear Technology Conference on Nuclear Microprobe and its applications. May 2001, iThemba LABS, **Cape Town, South Africa.**
- 20 International Computer Driving License (ICDL), iThemba LABS, May 2001, **Cape Town, South Africa.**

- 21 Post-CSI XRF influence coefficient workshop, University of Stellenbosch, July 2001, **Stellenbosch, South Africa.**
- 22 Regional Conference on Computer in Physics Education, Cairo University Feb. 2000, (Arabic net for Physics and ICTP), **Cairo, Egypt.**
- 23 Workshop On Combustion Diagnostic and Optical Techniques July 1999, Organized by ICS, UNIDO and University of Cape Coast, **Cape Coast, Ghana.**
- 24 Workshop of using computer in basic sciences Jan. 1997, **UNESCO** and Sudan University of Science & Technology, **Khartoum, Sudan.**
- 25 4<sup>th</sup> Nile Winter College on Modern Physics & Applications of Lasers, Dept. of Physics Khartoum University and African Collaboration Jan. 1996, **Khartoum, Sudan.**
- 26 4<sup>th</sup> Nile Winter College on Materials Science, Dept. of Physics Khartoum University and the Abdus Salam ICTP Jan. 1992, **Khartoum, Sudan.**
- 27 Low temperature Physics course, Leiden University June 1989, **Leiden, The Netherlands.**