

RECORD OF EMPLOYMENT

- **October 2015 – present: Western Cape Government Department of Health**

Position: Director: Health Technology
Responsibilities: Strategic healthcare technology planning and assessment. Management of health technology-related strategies, policies, finances and human resources, medical equipment acquisition and deployment, maintenance services, risks and related quality improvement processes.
- **June 2011 – December 2015: Graduate School of Technology Management, University of Pretoria**

Position: Senior Lecturer (part-time)
Responsibilities: Co-convenor of special focus on Healthcare Infrastructure and Technology (HIT). Collaboration with HTM Programme at UCT (see below), CSIR (healthcare infrastructure planning, design and assessment), CDC and Brigham Women's and Children's Hospital, Boston (airborne infection control) and national, regional and international stakeholders in engineering asset management, healthcare infrastructure and eHealth. Continuing professional development/education interventions.
- **Jan 2008 – December 2015: Dept. of Human Biology (Biomedical Engineering Division), University of Cape Town**

Position: Senior Lecturer (part-time)
Responsibilities: Convenor/director of Postgraduate Diploma in Healthcare Technology Management (commenced in 1999). Co-director of Northwestern University (Chicago, USA) Global Healthcare Technologies study abroad programme, now in its 10th year. Collaboration with national, regional and international stakeholders (notably WHO) in areas of healthcare technology management; biomedical-, clinical- and hospital engineering; health technology assessment; medical device innovation and airborne infection control.
- **Sep 1987 – Dec 2007: Dept of Biomedical Engineering, Groote Schuur Hospital/University of Cape Town**

Positions: Principal Biomedical Engineer / Senior Lecturer (*joint appointment with Western Cape Dept. of Health*); Convenor: HTM Programme; Head: UCT Participating Centre in MRC/WHO Collaborating Centre for Essential Technologies in Health
Responsibilities: Convenor: Postgraduate Diploma in Healthcare Technology Management (from 1998); Head of Bio-Electric Signal Processing Group (previously known as Medical Electronics Group) - prior to 1998; Research, Teaching to undergraduate and postgraduate students, Co-ordination of BME stream in Electrical Engineering at the University of Cape Town; Liaison with national, regional and international stakeholders in healthcare technology management, clinical engineering and healthcare engineering.
- **Jan 1983 - Aug 1987: Dept. of Medical Physics, Johannesburg Hospital, Johannesburg**

Position: Biomedical Engineer
Responsibilities: Engineering support to Cardiology Department (design of system for measurement of late ventricular potentials and measurements on patients; technical support for His-bundle ablation and intra-aortic balloon pumping); lecturing on medical instrumentation to clinical technologists (cardiac and respiratory); lecturing on radiation physics and medical imaging equipment to radiology registrars; formulation of a plan for the hospital clinical engineering department; management of radiation dosimeter service; member of equipment advisory committee.

CONFERENCE PRESENTATIONS (*selection*)

1. MA Poluta, GG Jaros. **The Engineering Paramedics: Identification of Roles.** BESSA Congress, Cape Town, 1988.
2. MA Poluta, IWP Obel. **Non-Invasive Detection of Late Ventricular Potentials** (Poster). XVI Biennial Cardiac Congress of Southern African Cardiac Society, Cape Town, 1988.
3. **100 Years of Electrocardiographic Measurement - A Biomedical Engineering Perspective.** XVI Biennial Cardiac Congress of SACS, Cape Town, 1988.
4. **Impact of Technology on Clinical Staff and Ongoing Education - The Biomedical Engineer's View** (Invited Paper). SAAAMI Congress on Technology in Health Care, Cape Town, 1988.
5. **A Systematic Approach to Quality-Control in Clinical Diagnostic Measurements.** 11th Annual Critical Care Congress, Cape Town, 1989.
6. A Cohen, MA Poluta, R Scott Millar. **Automatic Analysis and Compression of ECG Signals** (Invited Paper). SAAAMI Congress "Healthcare Technology 2000", Cape Town, 1990.
7. MA Poluta, PA Heimann, GP Locke. **The Role of Clinical Engineering in the Management of Medical Equipment.** Congress on Planning for More Affordable Health Care, Sun City, 8-10 October, 1997.
8. **Medical Device Procurement - an overview.** AFTH/NZSMHE Workshop on Medical Equipment Procurement, Harare, 7 April 1998.
9. **Human Resource Development in South Africa for Healthcare Technology Management and Maintenance.** AFTH/GTZ/WHO Workshop on Healthcare Equipment Management. Harare, 1998.
10. PA Heimann, MA Poluta. **The Essential Technology Package – A sine qua non for affordable and sustainable healthcare delivery ?** 15th ISTAHC Annual Meeting, Edinburgh, 1999.
11. **Healthcare technology management in developing countries: The Web as an effective tool for capacity development.** 2nd Annual Conference on World-Wide Web Applications, Rand Afrikaans University, Johannesburg, 1999.
12. MA Poluta and R Morris. **Healthcare Equipment Acquisition.** Advanced Health Care Technology Management Workshop on Planning, Funding and Managing Health Care Technology and Required Infrastructure to Achieve Optimal Outcomes, Cape Town, 1999.
13. **Appropriate Technology.** WHO/ACCE Advanced Clinical Engineering Workshop, Chicago, July 2000.
14. **SIZANANI: Developing capability for improved healthcare technology management.** ISQUA (International Society for Quality in Health Care) Conference, Dallas, 2003.

15. **What difference does the HCTS make to health service delivery and to health outcomes?** FAKT International Conference: Strategies towards Sustainability of Health Technology Systems, Nairobi, 2004.
16. **Healthcare Technology Management (HTM) - Planning and Policy Perspectives.** Appropriate Medical Technologies in Africa Conference, Sandton, 2004.
17. **The Role of Clinical Engineering in support of Health Technology Assessment – international experience/developing country perspectives.** HTAi Conference, Rome, 2005.
18. *E Nunziata, M Poluta. Role of Healthcare Technology Management in support of Quality Healthcare.* Biomedea Symposium: Patient Safety - Biomedical/Clinical Engineering Providing a Safe Health Care Environment, Stuttgart, 2005.
19. **Quality Healthcare - Integration of Health Technology Assessment, Regulation, Acquisition and Management Processes.** WHO Special Session on "Making health systems work: The critical role of healthcare infrastructure and technology". 19th Congress of International Federation of Hospital Engineering, Cape Town, 2006.
20. **Getting devices into the clinic: Social Entrepreneurship.** BME-IDEA Meeting on Fostering Innovation in meeting clinical needs of the underserved, Chicago, 2006.
21. **The Future of Global HTM Training (keynote address).** 5th IET International Seminar on Appropriate Healthcare Technologies for Developing Countries, London, 2008.
22. *M Poluta, MR Glucksberg, D Kelso, K Palamountain (keynote address). A Systemic Approach to Healthcare Technology Innovation for Resource-Poor Environments. (ibid)*
23. **Stewardship and the Curse of Neglect: The critical role of responsible asset management.** Africa Health Facilities Innovation Conference "Pursuit of Excellence: Improving Patient Care and Hospital Performance through Innovation". Durban, 2010.
24. **Health technology innovation – an African perspective.** Multidisciplinary Assessment of Technology Centre for Healthcare (MATCH) Workshop, London, 2011.
25. **Healthcare Infrastructure/Technology Management - The crucial role of Capacity Building.** Workshop on Capacity Building for Health Technology Innovation and Support in Africa, ICT, Science and Technology Division of United Nations Economic Commission for Africa (UNECA), Gauteng 2011.
26. **Unpacking multi-disciplinarity and building linkages.** SAFHE/CEASA Conference, Cape Town, 2013.
27. **Right equipment in working order.... it takes a village.** Workshop on Methods in Health Technology Assessment and Essential Medical Devices for Low- and Middle-income Countries. Birmingham 2013.
28. *M Poluta, A Sarvestani, P Si, J Abbas. Local Production of medical devices in Africa: characterizing the landscape and assessing feasibility.* WHO Workshop. 2nd WHO Global Forum on Medical Devices, Geneva, 2014.
29. *P Si, J Abbas, M Poluta, A Sarvastani, A Velazquez-Berumen. Improving access to medical devices in low-resource settings through local production and technology transfer: WHO 2013 survey results (Poster) (ibid)*

FUNDING/GRANTS

- 1997 (with Heimann PA): R222,000 from WHO/WB/UNDP: Technology assessment tools for health system reform in South Africa.
- 1998-1999 (with M Nyssen, VUB Belgium): BEF 2,500,000 from Flanders Government: Distance learning facilities for Healthcare Technology Management Programme.
- 1998-1999: \$12,000 from AFTH (African Federation for Technology in Healthcare): Generic modules for Postgraduate Diploma in Healthcare Technology Management.
- 2001-2002 (with M Nyssen, VUB Belgium): BEF 3,970,000 from Flanders Government: Expansion of distance-learning content for Healthcare Technology Management Programme.
- 2001-2002: £ 30,000 from UK Department for International Development (DFID): Establishment (pilot phase) of the International Centre for Healthcare Technology Management.
- 2008: US\$ 45,000 Rotary International, Northwestern University and World Health Imaging Alliance: A digital imaging system for a primary level health facility in the Western Cape.
- 2009: R50,500 NRF-Royal Society SA-UK Science Networks: Cooperation Joint project with Brunel University: Modelling and Simulation Techniques in support of cost-effective and quality healthcare delivery in under-resourced environments.
- 2010-2012: \$ 75,000 CSIR/CDC: Engineering approaches to airborne infection control, with a special focus on ultraviolet germicidal irradiation (UVGI)

HONORARY APPOINTMENTS

International (selection):

- Member of IFMBE (International Federation for Medical & Biological Engineering) Administrative Council, 1994-1997.
- Chairman, IFMBE Working Group on Developing Countries, 1997 - 2003.
- IFMBE Regional Liaison to the African Region, 1994-2000.
- Member, African Federation for Technology in Healthcare (AFTH) Executive Council, 1994 - 2000.
- Secretary, Organising Committee and Meeting Editor for MRC Regional Workshop on Healthcare Technology in the Sub-Saharan Region: Challenges and Collaboration Possibilities and MRC/PATH International Conference on Medical Engineering & Computing in Sub-Saharan Africa, Somerset West, South Africa, 10-15 April, 1994.
- Facilitator, Clinical Engineering Theme at MRC Regional Workshop on Healthcare Technology in the Sub-Saharan Region: Challenges and Collaboration Possibilities, Somerset West, 10-13 April 1994.
- Facilitator, AFTH/WHO/MRC Workshop on Health Care Technical Services, Medic Africa '95, Midrand, 5-6 April 1995.
- Member, International Advisory and International Liaison Committees, IOMP/IFMBE World Congress on Medical Physics and Biomedical Engineering, 14-19 September 1997, Nice.
- Co-chair of Organising Committee, Chair of Scientific Programme Committee and Meeting Editor for AFTH International Healthcare Technology Summit, 5-8 April 1998, Harare.
- Member, International Scientific Advisory Committee and *Track Co-Chair*: Healthcare Technology Management, IOMP/IFMBE World Congress on Medical Physics & Biomed. Eng., Sydney, 2003.
- *Visiting Eshbach Scholar*, Northwestern University, Evanston/Chicago, Sept-Nov. 2006.
- Member, Consultative Panel, WHO Priority Medical Devices, 2007.
- Chair, Meeting of WHO Advisory Group on Innovative Health Technologies for Resource-Scarce Settings, Singapore, 2009.
- *Project Team Member and South Africa Country Focus*, Local Production and Technology Transfer of Medical Devices Project (Phase II), WHO, 2013-2014.

- *Member of Board*, Clinical Engineering Division (CED), International Federation for Medical and Biological Engineering (IFMBE), 2015 - present.
- *Founding Member*, Special Interest Group on Health-related Infrastructure and Technology, International Society for Engineering Asset Management (ISEAM), 2015.

Local (selection):

- Conference Chair, BESSA and SAACE Conferences, Medic Africa '95, Midrand, South Africa, 4 April 1995.
- Member / Acting Chairman, SA Board of Examiners for Clinical Engineering, 1993 - 1996.
- Manager, UCT Participating Centre in MRC/WHO Collaborating Centre for Essential Technologies in Health.
- Organiser and Chair, Symposium on Safety of Medical Equipment and Devices, Medic Africa '96, Midrand, 26 April 1996.
- Member, Executive Council, South African Association for Clinical Engineering (SAACE), 1994 - 2002.
- Member / Acting Chairman, SA Board of Examiners for Clinical Engineering, 1993 - 1996.
- Chairman, National Steering Committee on Training and Education for Medical Equipment Management and Maintenance (under auspices of Department of Health), 1996-1999.
- *Member*, SABS Technical Committee 62 on Safety of Medical Equipment, 1988 - 2010.
- *Member*, Dept. of Health Technology Advisory Committee (HTAC), 2003-5.
- *Member*, ECSA Steering Committee for Clinical Engineering Registration, 2003 – 2005.
- *Member*, Dept. of Health Interim Steering Committee for Health Technology Assessment, 2004–5.
- *Member*, Western Cape Dept. of Health Digital Imaging Advisory Committee, 2006-2008.
- *Member*, Steering Committee, Medical Device Innovation Special Interest Group, 2007-2009.
- *Member*, Steering Committee, Medical Devices to Market (DST/TIA Centre of Excellence), 2009-2011.
- *Member*, Ministerial Advisory Committee on Health Technology (Dept. of Health), 2011-2014.
- *Lead Organiser*: Architectural & Engineering Approaches to Airborne Infection Control - Winter Course. Pretoria, 2012/3.
- *Member*, Medical Devices Advisory Committee, South African Health Products Regulatory Authority (SAHPRA), 2016-2020.

CONSULTING

Have served as Short Term Consultant for:

- WHO (World Health Organization) – HQ, AFRO, EMRO and EURO Regional Offices –on many occasions.
- SA Medical Research Council – Essential Health Technology Package, 1997-2000 and other.
- COHSASA - Council for Health Service Accreditation of Southern Africa – various.
- KPMG/AFTH Consortium (Health Technology Scoping Study, SA Dept. of Health), 2003-2004.
- Pholela Health Logistics (PHL) – analysis of audited medical equipment and related reporting – 2007-2008.
- Council for Scientific and Industrial Research (CSIR) and National Institute for Occupational Health (NIOH) – engineering approaches to airborne infection control, 2010-2014.
- Advisor and Facilitator: JICA-sponsored project and workshops on development of District Health Technology Committees (DHTC) and the Medical Equipment Management and Maintenance (MEMM) system in Eastern Cape Province, South Africa, 2011-2013.