



## CURRICULUM VITAE

- Name : Jan Ryno Smith
- Position : Executive Manager
- Qualifications : M.Sc (Med) in Biomedical Engineering, University of Cape Town  
B.Eng (Mech), Stellenbosch University
- Areas of interest :
- Ergonomics:
    - ◆ Applied anthropometry (engineering, clothing and workspace design, development and evaluation)
    - ◆ Anthropometric Measuring Systems
    - ◆ Human functional performance measurement
    - ◆ Human-machine interface design and evaluation
    - ◆ Application of modelling and simulation towards ergonomics solutions
  - Project management
  - Mechanical design

### Previous experience :

Jan Ryno has more than 15 years' experience in ergonomics consulting, design, specification and research. He joined IMSE in 1987. He worked primarily in the areas of anthropometry and control and displays in military vehicle applications. He developed ergonomics specifications and protocols for the task synthesis of complex control and information room applications. This work was directed at workstation, human equipment interface and work process design on the user, product and equipment levels for major engineering projects. He also gained extensive experience in the ergonomics evaluation of systems specifically with regards to anthropometry, controls and displays and the measurement of environmental stressors. In 1992 he joined ERGOTECH. During this time he gained experience in the commercial application of ergonomics in South Africa and worked extensively in the chemical, automotive and mining industries. He developed the first South African seat specification for military vehicles and contributed substantially to the initial drafting of the South African military data book of ergonomics (RSA-MIL-STD-127). He has been closely involved with the development of a new generation uniform system for the South African military. As anthropometry advisor and later ergonomics team leader he was responsible for the application of anthropometry data, fit evaluations, size range projections and the development of size allocation criteria for the uniform system. He was chief engineer for the development of the Anthropometric Measuring System (AMS) that is used for clothing size allocation and basic anthropometry data collection. He was project leader for a number of human functional performance studies for different corps of the South African National Defence Force and is involved in the development of human performance models utilizing the data generated from the experiments. He has



produced a large number of ergonomics research, specification and evaluation reports. Recent papers and reports in the public domain include:

Smith, J.R. and Mac Duff, L. 2001. "Soldier capabilities with regard to energy consumption and load carriage in the South African context. International Soldier Systems Conference, 1-3 December, Bath, UK.

Smith, J.R., Shaba, M.N., Marais, P., Schutte, P.C., Mac Duff, L., Malapane, N.C., Harper, G.S. and Romoshebi, J. 2001. The ergonomics of locomotive design in South African gold and platinum mines. SIMRAC project SIMGAP 704. Pretoria: Department of Minerals and Energy.

Schutte, P.C. and Smith, J.R. 2002. Practical Ergonomics in mechanized mining. SAIMM Journal, Volume 102, No 3 (April).

Smith, J.R. 2003. Ergonomics in Systems Engineering. The International Council on Systems Engineering Conference, 11-13 August, Pretoria, South Africa.

Smith, J.R. 2003. Human Functional Performance in Soldier Day Field Experiments. Human Performance 2003. NASA Advanced Integration Technology Symposium, 28-29 October, Houston, TX USA.

Mac Duff L, Smith J.R and Smit K. 2004. Load carriage of heavy masses. Proceedings of the International Soldier Systems Conference (ISSC) 2004, Boston USA, 13-16 December.

Mac Duff L, Smith J.R. 2002. African body dimensions - A South African anthropometric initiative, Proceedings of Cyberg 2002. The Third International Cyberspace Conference on Ergonomics, IEA Press.

Membership of professional associations :

- Ergonomics Society (UK)
- Ergonomics Society of South Africa (ESSA)
- Engineering Council of South Africa
- South African Institution of Mechanical Engineers