

# The South African Computer Journal

Volume No. 44. December 2009

ISSN 1015-7999

An official publication of the South African Institute of Computer Scientists and Information Technologists

Online: <http://blues.sabinet.co.za/comp/>

---

## Editor

Prof. Lucas Venter  
SAP\Meraka Unit for Technology Development  
[lucas.venter@sap.com](mailto:lucas.venter@sap.com)

## Co-Editor

Prof. Paula Kotze  
Meraka Institute  
[pkotzel@csir.co.za](mailto:pkotzel@csir.co.za)

## Sub-Editors: Information Systems

Prof. Irwin Brown  
Department of Information Systems  
University of Cape Town  
[Irwin.Brown@uct.ac.za](mailto:Irwin.Brown@uct.ac.za)

Dr Elaine Byrne  
Royal College of Surgeons in Ireland  
Mercer Street Lower, Dublin 2  
[elainebyrne2@rcsi.ie](mailto:elainebyrne2@rcsi.ie)

## Sub-Editor: Computer Science

Prof. Gary Marsden  
Computer Science  
University of Cape Town  
[gaz@cs.uct.ac.za](mailto:gaz@cs.uct.ac.za)

---

## Editorial Board

Prof. Judith M. Bishop  
University of Pretoria, South Africa  
[jbishop@cs.up.ac.za](mailto:jbishop@cs.up.ac.za)

Prof. Fred H. Lochovsky  
University of Science and Technology, Hong Kong  
[fred@cs.ust.hk](mailto:fred@cs.ust.hk)

Prof. Richard J. Boland  
Case Western University, U.S.A.  
[boland@spider.cwrw.edu](mailto:boland@spider.cwrw.edu)

Prof. Kalle Lyytinen  
Case Western Reserve University, U.S.A.  
[kale@po.cwru.edu](mailto:kale@po.cwru.edu)

Prof. Donald. D. Cowan  
University of Waterloo, Canada  
[dcowan@csg.uwaterloo.ca](mailto:dcowan@csg.uwaterloo.ca)

Prof. Mary L. Sofia  
University of Pittsburgh, U.S.A.  
[soffa@cs.pitt.edu](mailto:soffa@cs.pitt.edu)

Prof. Jürg Gutknecht  
ETH, Zurich, Switzerland  
[gutknecht@inf.ethz.ch](mailto:gutknecht@inf.ethz.ch)

Prof. Basie H. von Soims  
University of Johannesburg, South Africa  
[basie@rkw.rau.ac.za](mailto:basie@rkw.rau.ac.za)

Prof. R. Nigel Horspool  
University of Victoria, Canada  
[nigelh@csr.csc.uvic.ca](mailto:nigelh@csr.csc.uvic.ca)

---

## Subscriptions

	Annual	Single Copy
Southern Africa	R120.00	R80.00
Elsewhere	US\$60.00	US\$40.00

An additional US\$15 per year is charged for airmail outside Southern Africa, please send to:

School of Computing

P.O. Box 392, UNISA, 0003, South Africa

Phone: +27 (12) 429-6738 Fax: -1-27 (12) 429-6655