

Department	Management Systems	
Discipline	Business ICTs	
Research Focus Area	ICTs for Business	
Supervision Team	Prof JA (André) van der Poll	
Name: Prof JA (André) van der Poll Email: vdpolja@unisa.ac.za	Academic Profile: Professor André van der Poll joined the then Department of Computer Science and Information Systems at Unisa in 1988. He holds a Doctorate in Computer Science and his areas of specialisation are the formal specification of software systems, reasoning about specifications, and evaluating formal and semi-formal specification notations. He joined the Unisa SBL in July 2013 as a Professor in ICT Management and his research interests are in the specification and reasoning of ICT management processes and the formalisation of business process models. He is an NRF rated researcher and is involved in a project to investigate the impact of computing formalisms in mission-critical software applications.	Capacity 5 DBL students
Research Agenda	The value proposition of ICT for the modern business can hardly be underestimated. The research to be undertaken in this project will address modern ICTs for business. The topics are given further down in this document.	
Reading: Subject Field	The specific readings will depend on the area of business ICT selected. More information can be obtained from the supervisor.	
Reading: Research Methodology	There are many good scholarly readings on research methodology; the following represent a good sample (some books may have later editions available): [1] Olivier, M.S. (2009) <i>Information Technology Research: A Practical Guide for Computer Science and Informatics</i> , Van Schaik. [2] Creswell, J.W. 2009. <i>Research design: Qualitative, quantitative and mixed methods approaches</i> . Los Angeles: Sage. [3] Henning, E. 2005. <i>Finding your way in qualitative research</i> . 2nd edition. Pretoria: Van Schaik Publishers. [4] Hofstee, E. 2006. <i>Constructing a good dissertation: A practical guide to finishing a master's, MBA or PhD on schedule</i> . South Africa: EPE Publishers. [5] Yin, R.K. (2013) <i>Case Study Research – Design and Methods</i> , 5 th edition, New York, Sage Publications. [6] Saunders, M., Lewis P. and Thornhill, A. (2009) <i>Research Methods for Business Students</i> , 5 th edition, Financial Times/Prentice Hall. [7] Oates B. J. (2006) <i>Researching Information Systems and Computing</i> , Sage Publications Ltd, London.	

Resources:	<p>Communities:</p> <p>[1] <i>Regular Conference on Business ICTs and Business Process Management</i>. Proceedings published as a volume in the Lecture Notes in Computer Science (LNCS)</p> <p>[2] Annual conference of the <i>South African Institute of Computer Scientists and Information Technologists (SAICSIT)</i></p> <p>In addition to the above, the following are relevant:</p> <p>[1] Various web sites and discussion forums can be obtained from the supervisor. Good groups to register on are “Dbworld” or “SEWorld” – obtained through (e.g.) a Google search.</p>
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Potential DBL Research Focus Areas or Research Projects

The following research projects or topics are possibilities for a DBL in Business ICTs:

- Business Intelligence (BI)
- Knowledge Management (KM)
 - ❖ Wisdom Management
- Data Intelligence
 - ❖ Big Data
- OLAP – DSS (Online Analytical Processing – Decision Support Systems)
- Data Warehousing
- Metadata Management
- Business IoT (Internet of Things)
 - ❖ Web Intelligence
 - ❖ Business Semantic Web
- Business Cloud
 - ❖ Business Fog
- AI for business
 - ❖ Fuzzy Logic
- BaaS (BI as a Service)
- Business Social media
- Green computing – Green Business ICTs
- BYOD
- 3D Printing for Business
 - ❖ What would 4D printing be?
- Formal Methods (FMs) aspects for all of the above (see a subproject associated with business ICTs).

Unit of Analysis	Research Focus
Theories/Models of ICT Development	<ul style="list-style-type: none"> • As above
Contemporary Issues in ICT	<ul style="list-style-type: none"> • As above