

Research areas within the School of Computing

The list below contains all current research fields offered within the School of Computing (SOC) at Unisa.

Please note that we may not have capacity to supervise research in all research areas at a given time. We cannot guarantee that capacity will be available in your preferred research areas as incoming students are allocated to supervisors with reference to their current load.

NB: The supervisors and their respective topics highlighted in **Orange** are **NOT** available for this registration period.

SUPERVISORS	EMAIL ADDRESS	RESEARCH AREA	MASTER'S AND PHD SUPERVISION
Hanifa Abdullah	abdulh@unisa.ac.za	Information Security, Risk Management	Master's
Danie Bisschoff	dbischof@unisa.ac.za	Designing Banking Technology for the Aged and Disabled	Master's
Prof Sheryl Buckley	bucklsb@unisa.ac.za	eLearning, Human Computer-interaction and Knowledge systems, Knowledge Management, Communities of Practice	Master's and PHD
Baldreck Chipangura	chipab@unisa.ac.za	Mobile Centric Access to Information	Master's
Bester Chimbo	chimb@unisa.ac.za	Human Computer Interaction, Children and Technology, Intergenerational Differences in Computer Use, Usability Evaluation	Master's
Evan Dembskey	dembsej@unisa.ac.za	IT Security, computer security, information warfare, multimedia, software engineering	Master's
Dr Alfred Coleman	colema@unisa.ac.za	ICT in health (e-health) and Business Informatics & Knowledge Management	Master's and PhD
Corné de Ridder	driddc@unisa.ac.za	Algorithm development within the context of Computational Biology	Master's
Cyrille Dongmo	dongmc@unisa.ac.za	Combining semi-formal and formal specification techniques	Master's
Prof Ruth de Villiers	dvillmr@unisa.ac.za	Usability and user experience, design and evaluation of e-learning, Research design and methodology	Master's and PhD
Klarissa Engelbrecht	engelk@unisa.ac.za	End-User Computing, e-Learning Focusing on Automated Testing	Master's
Prof Helene Gelderblom	geldejh@unisa.ac.za	Human-Computer Interaction, Psychological Aspects of Computing and Information Systems, Children and Technology, Intergenerational Differences in Computer Use, Interaction design for users with special needs	Master's and PhD
Prof Leila Goosen	GooseL@unisa.ac.za	e-Learning, Research Methodology, Psychological Aspects of Computing, Children and Technology, Teaching Programming in ODL, Knowledge Management, End-User Computing,	Master's and PhD
Patricia Gouws	gouwspm@unisa.ac.za	Data warehousing, information visualization, virtual learning environments and visual analytics	Master's
Ken Halland	hallaki@unisa.ac.za	Applied Logic, Description Logics and Ontology Engineering	Master's
Tertia Hörne	hornet@unisa.ac.za	Functional programming, formal methods, computer architecture, green computing, agile software development	Master's

Grant Howard	howargr@unisa.ac.za	Green Information Systems (Green IS)	Master's
Prof Elmarie Kritzinger	kritze@unisa.ac.za	Information Security Education	Master's and PhD
Prof Jan Kroeze	kroezjh@unisa.ac.za	IS Research Theory and Philosophy, Formal Ontologies, Data warehousing and business intelligence	Master's and PhD
Prof Les Labuschagne	labus@unisa.ac.za	IT Project, Programme and Portfolio Management	Master's and PhD
Prof Hugo Lotriet	lotrihh@unisa.ac.za	Epistemic issues in IS, Socio-technical systems, ICT4D	Master's and PhD
Petra le Roux	lrouxp@unisa.ac.za	Teaching Programming in ODL	Master's
Marianne Loock	loock@unisa.ac.za	Access Control in a Data Mining Environment; Information Security Awareness	Master's
Jan Mentz	mentzjc@unisa.ac.za	Enterprise Architecture, Enterprise Modelling, Enterprise Architecture Frameworks, reference architectures, cloud computing, Enterprise Governance and information systems in business.	Master's
Prof Ernest Mnkandla	mnkane@unisa.ac.za	Software Engineering, software project management (tools and techniques), the relations between PMI's PMBOK and Agile Project Management, the adoption issues in agile software development methods, the broader issues of software process improvement (SPI) and the application of predictive analytics to project management intelligence.	Master's and PhD
Jabu Mtsweni	mtswejs@unisa.ac.za	Internet of Services, Semantic Service-Oriented Architectures, Mobile Technologies, Web Engineering, ICT4D, Open Source Practices and Business Models	Master's
Mathias Mujinga	mujinm@unisa.ac.za	Information Security	Master's
Peter Mkhize	mkhizpl@unisa.ac.za	e-Learning, Business Intelligence, Strategic Information Systems Planning	Master's
Elsa Naudé	naudeei@unisa.ac.za	Computer Programming Education	Master's
Elisha Ochola	Ocholeo@unisa.ac.za	Routing Protocols in Mobile Wireless Ad Hoc Networks, Ad Hoc Networks Security	Master's
Dr Grant O'Reilly	oreilgb@unisa.ac.za	Swarm Intelligence, Multi-agent systems, Emergence, Swarm Computational intelligence and general Computational Intelligence.	Master's and PhD
Prof Isaac Osunmakinde	osunmio@unisa.ac.za	Machine Learning and Computational Intelligence - Robotics and Agent systems, Environmental Safety, Sensor and Telecommunication Networks, Business Intelligence, & Computational Sciences	Master's and PhD
Prof Keshnee Padayachee	padayk@unisa.ac.za	Aspect-Oriented Security, Usage Control; Information Security and Employee Compliance	Master's and PhD
Colin Pilkington	Pilkicl@unisa.ac.za	Computing education	Master's
Prof Ian Sanders	sandeid@unisa.ac.za	Computer Science Education particularly as regards teaching of programming and issues of access; Algorithms; Computational Geometry; Image Processing	Master's and PhD
Marthie Schoeman	schoema@unisa.ac.za	Teaching Programming in ODL	Master's
Dorothy Scholtz	scholid@unisa.ac.za	e-Learning, Project Management, Information Systems, ODL	Master's

Shawren Singh	singhs@unisa.ac.za	e-Government	Master's
Sam Ssemugabi	ssemus@unisa.ac.za	Human-Computer Interaction, e-Learning	Master's
Dr Bobby Tait	taibt@unisa.ac.za	Network Security, Voice Recognition, Biometrics, Applied Encryption Technologies	Master's and PhD
Anitta Thomas	thomaa@unisa.ac.za	Trust Negotiation in Information Security and Automated Image Interpretation	Master's
Prof Judy van Biljon	vbiljja@unisa.ac.za	Usability Evaluation; e-Learning; m-Learning, ICT4D	Master's and PhD
Dr Mac van der Merwe	vdmertm@unisa.ac.za	e-Learning, m-Learning, Psycho-physiological aspects of Human Computer Interaction, Open Source movement	Master's and PhD
Prof Etienne van der Poel	evdpoel@unisa.ac.za	Computational Intelligence, Artificial Intelligence, Machine Learning and NLP	Master's and PhD
Prof André van der Poll	vdpolla@unisa.ac.za	Formal Specification Techniques, Automated Reasoning, Combining Formal and Semi-formal Specification Techniques	Master's and PhD
Mr Tobie van Dyk	vdykti@unisa.ac.za	Open Source Usability, HCI Business Benefits	Master's
Dr Wynand van Staden	vstadwjc@unisa.ac.za	Privacy, Anonymity, and Identity Management	Master's and PhD
Edward White	whiteeg@unisa.ac.za	Human Computer Interaction, Usability, Mobile/cell phone Human Computer Interaction and Usability	Master's
Prof Laurette Pretorius	pretol@unisa.ac.za	Natural language processing and computational linguistics; Natural language technology for under-resourced languages; The role of natural language and multilingual natural language processing in <ul style="list-style-type: none"> semantic computing, semantic technologies, including ontology development; knowledge extraction from text; controlled natural language for domain specific precise machine translation and language generation. 	Master's and PhD
Prof Shengzhi Du (School of Engineering)	dus@unisa.ac.za	<ul style="list-style-type: none"> Computer Vision (Statistic Pattern Recognition, Image Processing, Image Recognition, Pattern Recognition) Computing Intelligence (Neural Networks, Genetic Algorithms) Network Traffic control Industry Control (Process Control) 	Master's and PhD
Prof Zenghui Wang (Dept of Electrical and Mining Engineering)	wangz@unisa.ac.za	<ul style="list-style-type: none"> Intelligent Optimization and Application: Particle Swarm Optimization, Ant colony optimization algorithms, Genetic Algorithm, Energy Optimization, Evolutionary Multi-Objective Optimization Intelligent Control: Optimal Control, Fuzzy and/or Neural Network Control, Fault Diagnosis and Fault Tolerant Control, Electrical Machine Control Encryption, Complex networks, Chaos, etc. 	Master's and PhD