

UNIVERSITEIT STELLENBOSCH UNIVERSITY



RESEARCH IN THE FACULTY OF Economic and Management Sciences



The Faculty of Economic and Management Sciences is the largest amongst the ten faculties of Stellenbosch University, the leading research-led university in South Africa.

Research and teaching in the Faculty's five academic departments and three schools are augmented by five research centres and one institute. In addition, the Faculty hosts the Research Chair in the Economics of Social Policy. Research support is coordinated by the Vice-Dean (Research) and the Faculty's research committee.

The Faculty's prominent researchers and their fields of research are showcased in this brochure. All of these colleagues have established themselves as leading scholars as judged by their local and international peers. A few prominent research projects are also highlighted.



Prominent researchers

Business Management

Prof. Christo Boshoff (Distinguished Professor)

Research interest: service marketing and in particular the role that the sub-conscious and emotional responses of both employees and customers play in service delivery situations. In these studies Prof. Boshoff measures the neuro-physiological responses of subjects using methodologies such as brain activity measurement (EEG), facial muscle activity (EMG), skin conductance (GSR) and eye-tracking to assess, for instance, how consumers respond in stress-related situations such as a service failure or a customer-complaint situation. E-mail: cboshoff@sun.ac.za

Prof. Pierre Erasmus

Areas of specialisation: Value-based financial management, capital structure theory and corporate valuation. Attempting to dispel negative sentiments towards shareholder value theory resulting from corporate scandals, financial crises and executive mismanagement, Prof. Erasmus focuses his research on evaluating factors that successfully contribute towards the sustainable creation of shareholders' wealth. He also investigates the impact of changing ownership structures and increased investor influence on management behaviour by considering modified financing and capital budgeting decision-making. E-mail: pde@sun.ac.za

Prof. Nic Terblanche

Areas of specialisation: customer retention with the emphasis on customers' in-store experiences, co-production, co-creation, loyalty programmes and word-of-mouth. Prof. Terblanche is also researching customers as a key stakeholder group and their perceptions of corporate reputation. He furthermore researches how firms can enhance value as an outcome of marketing activities for customers. E-mail: nst@sun.ac.za

Prof. Suzette Viviers

Areas of specialisation: ethical, sustainable and responsible investing. Prof. Viviers has done extensive empirical research on the nature of the phenomenon and how it relates to risk-adjusted investment performance. She is currently focussing on two responsible investment strategies, namely impact investing and shareholder activism. E-mail: sviviers@sun.ac.za



Economics

Prof. Stan du Plessis

Areas of specialisation: monetary economics and monetary policy. As an active participant in the post-financial crisis debate on monetary policy, Prof. Du Plessis is involved in both empirical and institutional research about the tools and appropriate goals for monetary authorities. He also studies closely related themes in business cycle analysis and open economy macroeconomics. E-mail: stan@sun.ac.za

Prof. Guangling Liu

Research interests: dynamic macroeconomics (business cycles), monetary theory and policy, financial frictions and business cycles, sovereign debt and default, and bank capital regulations. E-mail: gliu@sun.ac.za

Prof. Servaas van der Berg (Distinguished Professor and SARChI Research Chair)

Research focus: issues of poverty and welfare including matters such as poverty measurement, income distribution, employment, access to and the quality of social services. Prof. Van der Berg is particularly interested in issues of social policy, inter alia the economics of education and the economics of health, and the role of social grants (such as the social old-age pension and the child support grant) in the social security system. He works with a team of researchers in a programme of Research on Socioeconomic Policy (ReSEP), often using large datasets to derive policy-relevant findings.

E-mail: svdb@sun.ac.za



Industrial Psychology

Prof. Ronel du Preez

Primary research focus: consumer behaviour, specifically areas related to consumer decision making, perception, image and advertising. Other research interests include generation studies (as employees and students) and student success. E-mail: rdp@sun.ac.za

Prof. Callie Theron

Research focus: psychometric challenges in personnel selection with regards to assessment and decision-making; human resource challenges in diversifying the South African workforce (with specific reference to learning potential, affirmative development and talent retention); and leadership and organisational unit performance.

Selection from a diverse applicant group poses the formidable challenge to the human resource management profession in South Africa to develop valid selection procedures that simultaneously add value, do not discriminate unfairly and minimise adverse impact. An intellectually honest solution to the adverse impact created by valid selection procedures used in a fair, non-discriminatory manner that optimises utility against members of protected groups lies in aggressive affirmative development interventions. These interventions should be aimed at developing the job competency potential latent variables required to succeed in the job.





Logistics

Prof. Alewyn Burger

Main research focus: graph theory and combinatorial optimisation. Prof. Burger often uses computing to solve problems by designing efficient algorithms that search through huge solution spaces, e.g. finding the minimum moves to solve a puzzle such as Rubik's cube.

A logic puzzle enthusiast, Prof. Burger developed WrapSlide, a rearrangement puzzle for Apple and Android devices. A reviewer has described it as elegant and simple yet uncompromisingly difficult. (Read the review at: http://nontrivialgames.blogspot. com/2014/05/wrapslide-review.html)

E-mail: apburger@sun.ac.za

Prof. Wessel Pienaar

Research interests: the disciplines of logistics, transport economics and transportation engineering. Prof. Pienaar is an authority on the theory and application of cost-benefit analysis of transport infrastructure projects, a field in which he publishes internationally. He is the main author and chief editor of an internationally used academic textbook on logistics. E-mail: wpienaar@sun.ac.za

Prof. Stephan Visagie

Research interests: Supply chain optimisation and nonlinear knapsack problems. Prof. Visagie has a keen interest in applying operations research in the retail industry, e.g. the optimisation of distribution centres, and optimising assortment planning and size-mix allocation. He also focuses on finding new exact or heuristic algorithms to solve concave knapsack problems. E-mail: svisagie@sun.ac.za



Public Leadership

Prof. Erwin Schwella

Research focus: effective and ethical public leadership in institutional and innovative contexts. Prof. Schwella's recent conference outputs included addresses at international conferences on public leadership in the next five years; public leadership for peace, safety and security; and innovative public leadership. His recent publications included contributions on speaking truth to power, and bad public leadership in South Africa.

He is also a professorial fellow at Leiden University where he is mandated to facilitate the leadership research agenda of the Leiden Leadership Centre.

E-mail: Erwin.Schwella@spl.sun.ac.za

Prof. Kobus Müller

Research focus: the new reality of public problem solving namely the emergence of collaborative governance models as no single actor, public or private, has the knowledge and information required to solve public problems.

The thrust of Prof. Müller's research over the last 10 years can be characterised by the convergence of separate tracks of thought into a single coherent focus of environmental governance incorporating and integrating previous work on organisational innovation/public reform with some publications on environmental management dating from the late nineties. His current projects include the role of social capital, organisational learning, adaptive co-management, resilience thinking and adaptive capacity in collaborative settings. E-mail: Kobus.Muller@spl.sun.ac.za



Statistics and Actuarial Science

Prof. Tertius de Wet

Research focus: the broad area of sample quantiles, investigating their properties and application in different areas of science. The research includes finite and large sample distribution theory of central and extreme quantiles in unstructured and structured (regression) situations. Current applications include finance, smoothing of sequences and estimation of measures of inequality.

E-mail: tdewet@sun.ac.za

Prof. Niel le Roux

Main research focus: multivariate statistical data analysis and the graphical representation of multivariate data. Biplot methodology is extended to deal with both continuous and categorical data as well as data of mixed types. R programmes are developed to implement the theory in practice. E-mail: njlr@sun.ac.za

Sustainability

Prof. Mark Swilling (Distinguished Professor)

Research focus: the transition to sustainable modes of production and consumption, with special reference to the decoupling of economic growth from rates of primary resource use. This is applied to the greening of the global economy, cities, the South African economy and the challenge of incremental upgrading of informal settlements.

Prof. Swilling coordinates the iShack Project, which addresses the practicalities of incremental upgrading with a case study of Enkanini near Stellenbosch.

E-mail: Mark.Swilling@spl.sun.ac.za

University of Stellenbosch Business School (USB)

Prof. Niel Krige

Research focus: portfolio management, including topics such as active versus passive investing, predictive models to determine market timing opportunities for the JSE, the active share measure as an investment performance indicator, the application of fundamental indexing to the South African stock market, market reaction to open market share repurchases on the JSE, investigating the sources of performance in South African general equity unit trusts, real-age adjusted life expectancy and the financial survival probability of living annuitants.

E-mail: jdkrige@sun.ac.za

Prof. Piet Naudé

Research focus: Prof. Naudé does research on the inter-face between theological confessions and matters of public justice. He publishes on both the theories of social justice and their application to cultural and economic justice in the context of debates about globalisation and its effect on the African continent. He has also developed expertise in applied ethics in the fields of business, accounting and governance. E-mail: Piet.naude@usb.ac.za

Prof. Eon Smit

Long-term research interest: the role of opinion survey data in economic forecasting. Prof. Smit's research publications over recent years have primarily dealt with the quantitative analysis of financial market phenomena, as well as applications of the survey methodology in a variety of business problems. E-mail: Eon.Smit@usb.ac.za

Prominent research initiatives

Graduate School of Economic and Management Sciences (GEM)

The Graduate School provides a structured programme for full-time doctoral education across all the academic disciplines in the Faculty. Its goal is to increase the Faculty's number of PhD graduates, and broaden access to the doctoral education in economic and management sciences.

Manager: Dr Jaco Franken, e-mail franken@sun.ac.za

Research chair in the Economics of Social Policy

The Faculty hosts the Research Chair in the Economics of Social Policy. The Chair is held by Prof. Servaas van der Berg and funded by the National Research Foundation under its South African Research Chair Initiative (SARChI).

Under this Research Chair, a team of researchers study aspects of social policy and provides policy advice in the South African and wider African contexts, with a strong emphasis on quantitative, policy relevant research.

A large part of recent research has focused on the economics of education. However, the research also covers topics such as poverty and inequality, the labour market, social grants, health policy, housing and municipal infrastructure. Incumbent: Prof. Servaas van der Berg, e-mail svdb@sun.ac.za

Research programme on Socio-Economic Policy (ReSEP)

Research on Socio-Economic Policy (ReSEP) is a research programme within the Department of Economics. Its researchers often use large datasets to derive policy-relevant findings. http://resep.sun.ac.za/



TsamaHUB

The TsamaHUB is an academic centre that acts as a coordinating mechanism by utilizing the transdisciplinary potential that exists among various faculties and departments within the University that have interests and expertise in sustainability, sustainable development and complexity.

It also pursues and coordinates solution-oriented research projects that support transdisciplinary research and praxis in those areas, while engaging in sustainable community-building activities in cooperation with community-based organisations. The PhD programme takes advantage of being situated in a project entitled Reinventing Sustainable Stellenbosch. It is a science-in-society initiative driven by the collaborative efforts of Stellenbosch University, Stellenbosch Municipality and the Sustainability Institute, and provides students with an opportunity to engage with real sustainability problems in a real-life learning environment.

www.tsama.org.za

Transport research leads to new app

Transport economists of the Department of Logistics have developed the first app of its kind in South Africa that uses the GPS system of a smartphone to track people's daily activities and travels.

It is used as part of research into transport and commuter route planning and transport mode choice. The data collected provides detailed information about the routes which are frequented, why people follow specific routines, and which modes of transport are being used.

Participants receive regular e-mail messages detailing precisely what their carbon footprint looks like, which routes they have used, how far they travel per week and how many trees they will have to plant to offset this. They may also opt to see the amount of carbon tax their travels generated. **Project leader: Prof. Stephan Krygsman**,

e-mail: skrygsman@sun.ac.za



Contact details

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Sustainability Institute

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