



research REPORT

2006



Cape Peninsula
University of Technology

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University of Technology



*the heart of technology education
and innovation in Africa*





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from the vice-chancellor

PROF L VUYISA MAZWI-TANGA



In March 2001, the then-Minister of Education, Prof Kader Asmal, announced the National Plan on Higher Education which was set to change the higher education landscape of South Africa. By 2006, the Cape Peninsula University of Technology had emerged fully from a protracted merger process, with six new faculties: Applied Sciences, Business, Education & Social Sciences, Engineering, Health & Wellness Sciences, and Informatics & Design.

Becoming a university of technology encompasses measuring research performance: the establishment of research niche areas and research units, the number of peer-reviewed journal publications and conference papers produced by staff and postgraduate students, the throughput and quality of postgraduate students, income generated through scholarly grants and contract funding, the registration of intellectual property in the form of patents, and the recognition of the research standing of staff, both by peers at other higher education institutions, but chiefly through NRF ratings, are just some of the key indicators of a university research environment.

Specific mention should be made of CPUT's performance in the NRF's Thuthuka programme: the aim of Thuthuka is to develop and advance excellence in researchers, more specifically researchers-in-training, women in research, and black academics. For the period 2002 – 2005, CPUT showed the highest return on investment of all South African higher education institutions. This is commendable, and I should like to express my congratulations to the researchers in this programme.

In conclusion, I should like to thank our researchers (both staff and postgraduate students) for their commitment to research during 2006. The vision of the Cape Peninsula University of Technology is to be at the heart of technology education and innovation in Africa; to this end, our mission is to develop and sustain an empowering environment where, through teaching and learning, research and scholarship, our students and staff, in partnership with the community and industry, create and apply knowledge that contributes to development.

from the deputy vice-chancellor: *teaching, learning and research*

PROF ANTHONY STAAK

The 2006 Research Report is the first to be structured along the lines of the new six-faculty configuration of the Cape Peninsula University of Technology and provides us with evidence that research is being actively pursued in all faculties. It is encouraging to note the steady growth in postgraduate student enrolments across the institution and the establishment of additional research niche areas, mostly in the various interdisciplinary research units and centres on campus. Of course this increase in research activity has placed further strain on our resources, particularly our capacity to supervise research. Fortunately our strategy of appointing adjunct professors appears to be reaping benefits, and has assisted us in maintaining a steady growth in research outputs over the period covered by the report.

Most noteworthy, however, has been the increase in commissioned research work, as well as the broadening of research networks and partnerships. This is important as it provides us with a measure of the relevance of our research work and our capacity to innovate. As a university of technology we should try to ensure that our research does not only end up on the shelves of libraries but that every effort is made to utilise research findings and convert these into benefits for society. Invariably our research tends to be of a strategic and applied nature directed at problems of the real world. It thus provides us with a ready platform for innovation. Our challenge will be to identify opportunities for innovation in our undergraduate and postgraduate programmes, and to provide the necessary systems and infrastructure to support the innovation process.

Thanks to all our researchers who contributed to the outputs featured in this report. Their efforts are all

the more commendable if one considers the distractions of the merger and other salient factors that have adversely affected the research environment over the past year. In the year ahead greater attention will be given to creating a culture and climate that is more supportive of research and it is hoped that this will help us maintain the growth in research outputs and provide a sound platform for innovation in the years ahead.



messages



research & technology promotion acting dean's report

DR SHAHEED HARTLEY



With the dust slowly settling on merger issues, it is becoming increasingly important to establish this university of technology as one that pursues excellence in research, in striving to be at the heart of technology and innovation in Africa. Our role as a strategic partner in the region, nationally and internationally, depends on our ability to deliver quality research outputs. To this end we have to look critically internally at our research programmes, expertise and processes, and develop and implement strategies that will support areas of strength and potential. The investment of our limited resources must be directed at areas that will provide the necessary returns, which in turn generate additional income and further build the research status of CPUT.

The past year has seen the emergence of a silver

research lining. The recent report by the NRF Thuthuka programme shows that our black and female researchers produced the highest number of research outputs of all institutions for the period 2002-2005. The number and value of contract research projects have increased exponentially over the past two years, while more young researchers are making demands on the internal University Research Fund. The university bursary and scholarship scheme has almost doubled and CPUT has advertised 13 postdoctoral research fellowships in key research areas. At the same time faculties are developing research plans with an eye to expanding their centres of excellence. All of this augurs well for an institution determined to live out its vision and mission. Let us congratulate and continue to support our active and avid researchers.

nrf ratings

CLASSIFICATION

B	Researchers who enjoy considerable international recognition by their peers for the high quality of their recent research outputs
C	Established researchers with a sustained record of productivity in the field who are recognised by their peers as having: • produced a body of quality work, the core of which has coherence and attests to ongoing engagement with the field • demonstrated the ability to conceptualise problems and apply research methods to investigating them
L	Persons (normally younger than 55 years) who were previously established as researchers or who previously demonstrated potential through their own research products, and who are considered capable of fully establishing or re-establishing themselves as researchers within a five-year period after evaluation. Candidates should be South African citizens or foreign nationals who have been resident in South Africa for five years during which time they have been unable for practical reasons to realise their potential as researchers. Candidates who are eligible in this category include: • black researchers • female researchers • those employed in a higher education institution that lacked a research environment • those who were previously established as researchers and have returned to a research environment
Y	Young researchers (normally younger than 35 years of age), who have held the doctorate or equivalent qualification for less than five years at the time of the application, and who are recognised as having the potential to establish themselves as researchers within a five-year period after evaluation, based on their performance and productivity as researchers during their doctoral studies and/or early post-doctoral careers.

nrf ratings

Researcher	Rating	Research Areas
Prof F Dakora	B	Biological nitrogen fixation, nitrogen metabolism, plant physiology
Dr TC Haupt	B	Construction management and industry development, construction worker safety and health, infrastructure policy and delivery, occupational health, sustainable construction, affordable/low-cost housing, cooperative education, construction environment management, HIV/Aids, construction quality management
Prof M Robinson	C	Educator development, teacher education policy, diversity in education, justice and equity in education, mentor training, classroom pedagogy, action research, organisational learning, educator identity
Prof P Slatter	C	Rheology, fluid/solid processes, non-Newtonian fluid mechanics, postgraduate didactics, fluid dynamics, fluid mechanics
Prof P van Brakel	C	Information management, information aggregators, information portals, intelligent information agents, virtual communities
Dr AJ van der Merwe	C	Partial differential equations, vibration models, numerical analysis
Assoc Prof R Chetty	L	African and Indian literature in English, critical educational studies, multiculturalism, language policy, higher education transformation
Prof B Sun	L	Composite structures: beams, plates and shells Smart devices, applied mechanics, micro-electrical-mechanical systems (MEMS), sensors and actuators
Prof C Winberg	L	Relationships and partnerships between higher education and its broader contexts. Policy studies, curricular research, audits of graduates, education and workplace alignment studies, evaluation of programmes, service-learning audits, language studies (technical and professional writing, multilingual practices in higher education and work)
Dr JL Marnewick	Y	Health properties (cancer modulation, antioxidant) of rooibos and honeybush teas and other indigenous medicinal plants; clinical evaluation of traditional medicinal plants in human intervention studies; evaluation of dietary components that may modulate or prevent degenerative diseases (cancer, heart disease); enhancing marketability of local industries' indigenous products
Prof GJ Oliver	Y	Welding, heat treatment, finite element methods, phase transformation kinetic modelling, thermo-mechanical simulation, computational mechanics, constitutive modelling incorporating microstructure, thermodynamics of solids



nrf funding

FOCUS AREAS AND INSTITUTIONAL RESEARCH DEVELOPMENT PROGRAMME (IRDP)

Faculty/Unit	Researcher	Programme	Niche Area (where applicable)	NRF	CPUT	Total (Rands)
Research & Technology Promotion	Dakora FD	Focus Area		104 000		104 000
Research & Technology Promotion	Hartley MS	Focus Area		47 000		47 000
Engineering (SABERC)	Haupt TC	Focus Area		142 000		142 000
Engineering	Sun B	Focus Area		260 666		260 666
Applied Sciences	Khan W	IRDP	Environmental & occupational health	172 000	86 000	258 000
Applied Sciences	McMaster LD	IRDP	Instrumentation	258 000	129 000	387 000
Applied Sciences	Odendaal JP	IRDP	Environmental & occupational health	169 000	84 500	253 500
Applied Sciences	Snyman RG	IRDP	Environmental & occupational health	91 000	45 500	136 500
Applied Sciences	Volschenk H	IRDP	Environmental & occupational health	264 000	132 000	396 000
Business	Rudman SF	IRDP	Effective management of e-commerce in SMMEs	60 500	30 250	90 750
Education & Social Sciences	Robinson M	IRDP	Work-integrated learning	120 000	60 000	180 000
e-Innovation Academy	Bytheway AJ	IRDP	Effective management of e-commerce in SMMEs	44 000	22 000	66 000
e-Innovation Academy	Erwin GJ	IRDP	Effective management of e-commerce in SMMEs	15 000		15 000
e-Innovation Academy	Pather S	IRDP	Effective management of e-commerce in SMMEs	88 000	44 000	132 000
e-Innovation Academy	Warden SC	IRDP	Effective management of e-commerce in SMMEs	116 000	58 000	174 000
e-Innovation Academy	Weideman M	IRDP	Effective management of e-commerce in SMMEs	157 000	78 5000	235 500
Engineering	Alexander WW	IRDP	Applied & computational technologies	96 000	48 000	144 000
Engineering	Aziz M	IRDP	Separations technology	52 000	26 000	78 000



nrf funding

Faculty/Unit	Researcher	Programme	Niche Area (where applicable)	NRF	CPUT	Total (Rands)
Engineering	Cairncross EK	IRDP	Environmental & occupational health	225 500	112 750	338 250
Engineering	Davies JR	IRDP	Instrumentation	464 000	232 000	696 000
Engineering	Dube NM	IRDP	Real-time distributed systems	65 000	32 500	97 500
Engineering	Erfort EK	IRDP	Applied & computational technologies	154 000	77 000	231 000
Engineering	Esau AB	IRDP	Separations technology	44 000	22 000	66 000
Engineering	Fester VG	IRDP	Flow process	175 000	87 500	262 500
Engineering	Groenewald BBJ	IRDP	Instrumentation	206 000	103 000	309 000
Engineering	Haldenwang R	IRDP	Flow process	191 000	95 500	286 500
Engineering	Haupt TC	IRDP	Work-integrated learning	163 000	81 500	244 500
Engineering	Kohlhöfer W	IRDP	Applied & computational technologies	126 000	63 000	189 000
Engineering	Ludick MH	IRDP	Applied & computational technologies	138 900	69 450	208 350
Engineering	Masalova IA	IRDP	Flow process	270 000	135 000	405 000
Engineering	Mwiinga G	IRDP	Community water supply & sanitation	66 000	33 000	99 000
Engineering	Oliver GJ	IRDP	Applied & computational technologies	274 000	137 000	411 000
Engineering	Omar I	IRDP	Applied & computational technologies	192 000	96 000	288 000
Engineering	Philander O	IRDP	Applied & computational technologies	373 000	186 500	559 500
Engineering	Sery GA	IRDP	Flow process	39 000	19 500	58 500
Engineering	Sheldon MS	IRDP	Separations technology	184 000	92 000	276 000
Engineering	Slatter PT	IRDP	Flow process	139 000	69 500	208 500
Engineering	Sun B	IRDP	Applied & computational technologies	93 600	46 800	140 400
Engineering	Sutherland APN	IRDP	Flow process	85 000	42 500	127 500
Engineering	Tzoneva RG	IRDP	Real-time distributed systems	391 000	195 500	586 500





Faculty/Unit	Researcher	Programme	Niche Area (where applicable)	NRF	CPUT	Total (Rands)
Engineering	Van Zyl RR	IRDP	Real-time distributed systems	217 000	108 500	325 500
Engineering	Wheeler J	IRDP	Instrumentation	31 000	15 500	46 500
Fundani CHED	Garraway JW	IRDP	Work-integrated learning	30 500	15 250	45 750
Fundani CHED	Winberg C	IRDP	Work-integrated learning	144 000	72 000	216 000
Health & Wellness Sciences	Wright JL	IRDP	Work-integrated learning	31 000	15 500	46 500
Informatics & Design	De la Harpe M	IRDP	Effective management of e-commerce in SMMEs	134 000	67 000	201 000
Service Learning & Community Engagement	Nduna JN	IRDP	Work-integrated learning	35 000	17 500	52 500
Technology Institute	Lagardien A	IRDP	Community water supply & sanitation	216 000	108 000	324 000
Engineering (SABERC)	Haupt TC	SA/India	Construction worker health & safety	45 000		45 000
Engineering (SABERC)	Haupt TC	SA/Italy	Construction worker health & safety	60 000		60 000
Engineering	Oliver GJ	SA/Poland Warsaw University of Technology	Multi-scale model for simulation of plastic deformation in polycrystalline metals	115 400		115 400
Applied Sciences	Jacobs A	Thuthuka	Selective enclathration	110 200	109 200	219 400
Applied Sciences	Valentine AJ	Thuthuka	Poverty alleviation	173 000	61 000	234 000
Business (CETRA)	Swart K	Thuthuka	Sport tourism	178 000	46 000	224 000
Engineering	Riddles MN	Thuthuka		15 000		15 000
Engineering	Ziegler R	Thuthuka	Language & education	40 000	26 000	66 000
Health & Wellness Sciences	Botha T	Thuthuka	Infectious diseases/ tuberculosis	80 000	62 000	142 000
Health & Wellness Sciences	Khan S	Thuthuka	Microbial pathogens	227 000	139 000	366 000
Health & Wellness Sciences	Meehan K	Thuthuka	Biological radiation dosimetry	122 500	103 500	226 000

THRIP

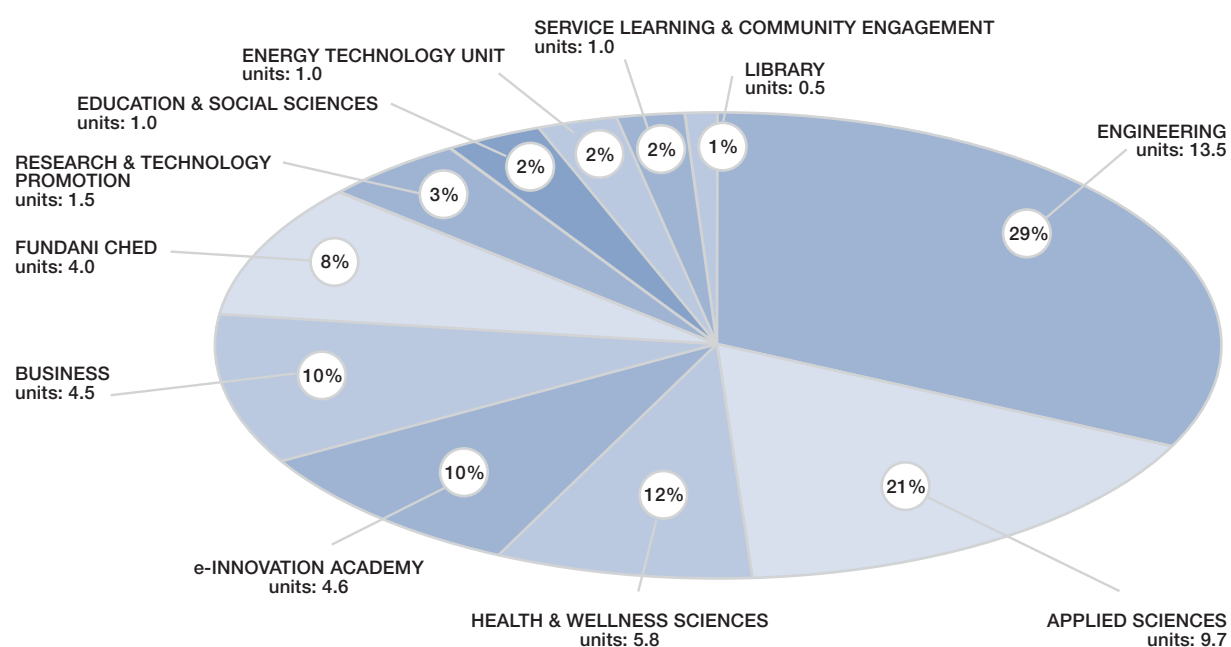
Researcher	Dept/Unit	Title	Industry Partner	Industry Contribution	THRIP	Total (Rands)
Haupt TC	SABERC	Construction health & safety management	Eskom Holdings Ltd	494 310	202 667	696 977
Kahn MTE	Electrical Engineering	Distributed power electronic systems	Eskom	80 000	80 000	160 000
Neilson RG	Electrical Engineering	Signal integrity	Peralex Electronics (Pty) Ltd	521 750	192 250	714 000
Nesbitt AB	Chemical Engineering	Gravity separation	AMIRA International Ltd/ Debtech division	240 000	240 000	480 000
Slatter PT	Civil Engineering	High concentration suspension pumping	AMIRA International Ltd	60 000	60 000	120 000
Uken E-A	Electrical Engineering	Domestic use of energy	Eskom Holdings Ltd	80 000	40 000	120 000
TOTAL				1 476 060	814 917	2 290 977



DoE output 2006: analysis

JOURNAL ARTICLES

TOTAL UNITS: 47.1



faculty of applied sciences acting dean's report

PROF VICTOR HUGO



The research outputs of the faculty during 2006 have shown a 25% increase from the previous year in terms of publications in accredited journals. This is a significant achievement if the reconfiguration of the Applied Sciences and Science faculties of the University at the beginning of 2006 is taken into account. Our successes can be ascribed to various strategic decisions taken a few years ago. These include the appointment of PhDs who can deliver on teaching and learning, and research and capacity building; attracting retired academics and researchers from other institutions to boost expertise in a range of science disciplines; and providing opportunities for staff to engage in research and to improve their qualifications. During 2006 three staff members obtained higher degrees in their fields of teaching.

However, there are several challenges we need to address. These include the current low postgraduate component of the faculty in terms of master's and doctoral students, the slow completion rate of some part-time master's and doctoral candidates, increasing postgraduate student facilities such as communal office and computer space in each academic department, and facilitating staff participation. We also need to increase our international collaborations and partnerships in order to sustain quality outputs.

Research in the faculty revolves around the following groups and focus areas (coordinators shown in brackets): Synthetic organic chemistry (*Prof Victor Hugo*); Solid state chemistry and crystal engineering (*Prof Luigi Nassimbeni*); Toxicology, environmental health and bio remediation (*Dr Heinrich Volschenk, and Dr Wesaal Kahn*); Teaching and learning (*Dr Mike Young*); Anti-oxidant research unit, including nutrition and functional foods (*Prof Spinney Benadé and Dr Sharon Crafford*); Marine sciences (*Dr Wayne Florence and Conrad Sparks*); the Agrifoods Technology station (*Dr Helene Coetzee and Larry Dolley*); Plant physiology and nitrogen metabolism

(*Dr Alex Valentine and Dr Patrick Ndakidemi*); Fungal taxonomy (*Dr JC Coetzee*); Cosmology (*Dr Deon Solomons*); Microbiology in food and nutrition (*Dr Lynn McMaster*); the Analytical chemistry facility for the analysis of metabolites in the urine of autistic children, and natural products in plants (*Dr Merrill Wicht and Lorna Marshall*); Environmental chemistry analyses (*Abdullah Solomons*); and Inorganic syntheses and catalysis (*Francois Wevers*).

NRF funding to staff in the faculty for 2006 amounted to R954 000, while we also received R850 000 from the University for research development and capacity building.

We published 22 articles in DoE accredited journals (9.7 units) which equates to 21% of the output of the university, while staff also presented 15 papers and posters at national and international conferences.

The Anti-oxidant Research Unit has now established itself as a novel facility in South Africa and is in the process of obtaining accreditation for the analysis of a range of food-and natural components used in the food and nutrition manufacturing industries.

The Agrifoods Technology station has also completed an important audit for Parmalat on milkshed best practices in the Western Cape and has shown the potential to be an invaluable R&D partner to several smaller food manufacturers in the Western Cape.

The faculty management wishes to thank the Executive Management and Council of the University for supporting our initiatives and expresses its gratitude to the NRF and other external funding organisations for financial support.

Last but not least, I wish to thank all staff who have made a contribution to our research initiatives during 2006.



applied sciences

UNIVERSITY RESEARCH FUNDING

Researcher	Department	Total (Rands)
Benadé AJS	<i>Antioxidant Research</i>	60 000
Bronkhorst JP, Human I, Kalis ML	<i>Environmental & Occupational Studies</i>	30 000
Coetzee H	<i>Food Technology</i>	41 000
Coetzee JC	<i>Horticultural Sciences</i>	8 000
Florence W	<i>Foundation Programme</i>	65 000
Keyser Z	<i>Food Technology</i>	30 000
Khan W	<i>Biotechnology</i>	49 500
Khan W	<i>Biotechnology</i>	50 000
Marnewick JL	<i>Antioxidant Research</i>	54 000
Mei MN	<i>Chemistry</i>	60 000
Rautenbach F	<i>Antioxidant Research</i>	46 000
Snyman R	<i>Biodiversity & Conservation Management</i>	50 000
Sparks CAJ	<i>Biodiversity & Conservation Management</i>	70 000
Valentine AJ	<i>Horticultural Sciences</i>	60 000
Venter I	<i>Agricultural & Food Sciences</i>	8 000
Volkwyn TS	<i>Mathematics & Physics</i>	20 000
Volschenk H et al	<i>Agricultural & Food Sciences</i>	75 000
Wicht M	<i>Chemistry</i>	54 000
Wyngaardt W	<i>Food Technology</i>	20 000



CONFERENCE PAPERS

Braun M, Rautenbach F, Benadé AJS,

Swanevelder S & Venter I

Effect of thermal household processing on the total antioxidant capacity of stewed tomato flavoured with parsley

Nutrition Congress 2006

Port Elizabeth

24-27 September 2006

Human I

The personal and general hygiene practices of food handlers in the delicatessen sections of a prominent South African retail group

20th International Committee on Food Microbiology & Hygiene (ICFMH) Symposium

Food Safety and Food Biotechnology: Diversity and Global Impact

Bologna, Italy

29 August-2 September 2006



Jackson V, Snyman R, Odendaal, J & Khan W

Metal contamination in the Plankenburg River, Western Cape, South Africa

14th Biennial Conference of the South African Society for Microbiology
Pretoria
9 -12 April 2006

Paulse A, Barnes J, Khan S, Khan W

Investigation of bacterial pollution in the Berg River, Western Cape, South Africa

14th Biennial Conference of the South African Society for Microbiology
Pretoria
9-12 April 2006

Tobin M, Abrahams R, Davison S & Khan W

Analysis of bacterial pollution in the Berg River, Western Cape, South Africa

14th Biennial Conference of the South African Society for Microbiology
Pretoria
9-12 April 2006



Venter I & Hanekom M

Pro- and prebiotic awareness and understanding of consumers purchasing yoghurt at large retail food stores in Pretoria

Nutrition Congress 2006
Port Elizabeth
24-27 September 2006

Wicht MM, Rees DJG & Minaar F

Comparative study of peptide levels in the urine of children with autism versus a matched control group

2nd World Autism Congress and Exhibition: Autism Spectrum Disorder
Cape Town
30 October-2 November 2006

CONFERENCE POSTERS

Behardien L & Khan W

Investigation into the level of contamination in a spring water distribution system

14th Biennial Conference of the South African Society for Microbiology
Pretoria
9-12 April 2006

Du Toit L & Venter I

Dietary intake of female students in self-catering residences at the Cape Peninsula University of Technology, Cape Town campus

8th National Conference of the South African Association of Family Ecology and Consumer Sciences (SAAFECS)
Cape Town
12-14 July 2006

Faleni N, Jacobs A & Nassimbeni LR

Inclusion behaviour of two related host compounds

38th Convention of the South African Chemical Institute
Durban
3-8 December 2006

Kleinert A, Kossmann J & Valentine AJ

Carbon allocation between amino acid and organic acid pools in Pi-stressed lupin nodules

7th European Nitrogen Fixation Conference
Aarhus, Denmark
22-26 July 2006

Mutua MJ, Khan S & Volschenk H

Isolation and characterization of the fibrinolytic enzyme, Nattokinase, from olive waste water biofilms

14th Biennial Conference of the South African Society for Microbiology
Pretoria
9-12 April 2006



Van Stormbroek T, Snyman RG, Reinecke AJ & Odendaal JP

The contribution of agricultural and urban activities to metal contamination of a river system

27th Annual Meeting of the Society of Environmental Toxicology and Chemistry (SETAC) North America
Global Environment and Sustainability: Sound Science in a World of Diversity

Montréal, Canada

5-9 November 2006

Wicht MM, Hugo VI & Green I

Synthesis and antimicrobial activity of oleanolic acid derivatives

9th Frank Warren Conference on Organic Chemistry

University of Cape Town

22-25 January 2006

PUBLICATIONS: CONFERENCE PROCEEDINGS

Mbanjwa MK, Samakande A, Hartmann PC,

Sanderson RD & **Hugo V**

Dynamic mechanical analysis in the characterization of PS-layered clay nanocomposites. In *Conference Proceedings of SASOR 2006: 1st Southern African Conference on Rheology, Cape Town, 24-27 September 2006*. Cape Town: CPUT, 2006, pp 87-88

PUBLICATIONS: JOURNALS

(* indicates publication in a DoE accredited journal)

April L & Garraway J

Integrating generic skills into teaching. *Paradigms: Journal for Debate into Higher Education*, (13):19-23, 2006

*Caira MR, **Jacobs A, Nassimbeni LR** & Toda F
Complexation with diol host compounds. Part 36: inclusion compounds of 1,1,6,6-tetraphenylhexa-2,4-diyne-1,6-diol with benzene, toluene and mesitylene. *Journal of Chemical Crystallography*, 36(7):435-443, 2006

*Carlioni S, Dunsby PKS & **Solomons D**

Bounce conditions in f (R) cosmologies. *Classical and Quantum Gravity*, 23(6):1913-1922, 2006

*Christiansen IM & **Slammert L**

A multi-faceted approach to research development (II): supporting communities of practice. *South African Journal of Higher Education*, 20(1):15-28, 2006

*Green IR, **Hugo VI** & Mei MN

Bromination products of 2-substituted 5,7-dimethoxy-4-naphthols. *Synthetic Communications*, 36(3):331-346, 2006

***Hugo VI, Masenya T** & Green IR

Synthesis of some C-4 hydroxybenzo[c]pyrans: a new approach. *Synthetic Communications*, 36(11):1631-1636, 2006





*Husnik JI, **Volschenk H**, Bauer J, Colavizza D, Luo Z & Van Vuuren HJJ

Metabolic engineering of malolactic wine yeast. *Metabolic Engineering*, 8:315-323, 2006

***Jacobs A**, **Nassimbeni LR** & Taljaard JH
Inclusion compounds of isomeric xanthenol hosts with aniline. *CrystEngCom*, 7:731-734, 2006

***Jacobs A**, **Nassimbeni LR** & Taljaard JH
Inclusion of acetone by 9-(1-naphthyl)-9H-xanthen-9-ol. *Acta Crystallographica Section E: Structure Reports Online*, E62:o825-o827, 2006

***Jacobs A**, Le Roux T, **Nassimbeni LR** & Toda F
Inclusion of volatile guests by a tetrapedal host: structure and kinetics. *Organic & Biomolecular Chemistry*, 4:2452-2457, 2006

***Le Roux MR**, Ward CL, Botha FC & **Valentine AJ**
Routes of pyruvate synthesis in phosphorus-deficient lupin roots and nodules. *New Phytologist*, 169:399-408, 2006

*Lues JFR, Theron MM & **Van Tonder I**
Food-associated bacteria in bioaerosols of delicatessens. *International Journal of Environmental Health Research*, 16(6):419-426, 2006

*Lynam CP, Gibbons MJ, Axelsen BE, **Sparks CAJ**, Coetzee J, Heywood BG & Brierley AS
Jellyfish overtake fish in a heavily fished ecosystem. *Current Biology*, 16(13):R492-R493, 2006

***Ndakidemi PA**, **Dakora FD**, Nkonya EM, Ringo D & Mansoor H
Yield and economic benefits of common bean (*Phaseolus vulgaris*) and soybean (*Glycine max*) inoculation in northern Tanzania. *Australian Journal of Experimental Agriculture*, 46:571-577, 2006

***Ndakidemi PA** & Semoka JMR
Soil fertility survey in western Usambara mountains, northern Tanzania. *Pedosphere*, 16(2):237-244, 2006

***Solomons D**, Dunsby PKS & Ellis GFR
Bounce behaviour in Kantowski-Sachs and Bianchi

cosmologies. *Classical and Quantum Gravity*, 23:6585-6597, 2006

***Somers A**, **Hassan MS**, **Rusford E** & Erasmus RT
Overweight and obesity in learners residing in the Belhar, Delft and Mfuleni communities of Cape Town, Western Cape, South Africa. *Medical Technology South Africa*, 20(1):11-20, 2006

***Somers A**, **Rusford E**, **Hassan MS** & Erasmus RT
Screening for diabetes mellitus in learners residing in the Belhar, Delft and Mfuleni communities of Cape Town, Western Cape, South Africa. *South African Family Practice*, 48(6):16a-16d, 2006

***Valentine AJ** & **Kleinert A**
Respiratory costs of P uptake in arbuscular mycorrhizal roots supplied with NH₄⁺ and NO₃⁻ nutrition. *Symbiosis*, 41:119-125, 2006

***Valentine AJ**, **Mortimer PE**, Lintnaar M & Borgo R
Drought responses of arbuscular mycorrhizal grapevines. *Symbiosis*, 41:127-133, 2006

*Van der Merwe JD, Joubert E, Richards ES, Manley M, Snijman PW, **Marnewick JL** & Gelderblom WCA
A comparative study on the antimutagenic properties of aqueous extracts of *Aspalanthus linearis* (rooibos), different *Cyclopia* spp. (honeybush) and *Camellia sinensis* teas. *Mutation Research – Genetic Toxicology and Environmental Mutagenesis*, 611:42-53, 2006

***Venter I**
Development of a valid and reliable test for higher-educated young adults measuring dietary fibre food source and health-disease association knowledge. *Journal of Family Ecology and Consumer Sciences*, 34:10-19, 2006

***Volschenk H**, Van Vuuren HJJ & Viljoen-Bloom M
Malic acid in wine: origin, function and metabolism during vinification. *South African Journal of Enology and Viticulture*, 27(2):123-136, 2006

POSTGRADUATE DEGREES CONFERRED

MTech: Chemistry

Wicht MM

Oleanic acid: its isolation and derivatisation to potential antimicrobial compounds

MTech: Consumer Science: Food & Nutrition

Braun M

Total antioxidant capacity of stewed tomato and onion flavoured with parsley: effect of thermal household processing

MTech: Nature Conservation

Hanekom NW

The impact of different land uses on the phytodiversity of the West Coast Strandveld in and around Rocherpan Nature Reserve

POSTGRADUATE DEGREES OBTAINED BY STAFF MEMBERS

PhD

University of the Western Cape

Florence WK

The shallow water bryozoans of the west coast of South Africa

PhD Education (Curriculum Studies)

University of Stellenbosch

Crafford S

A curriculum framework for consumer learning at a higher education institution

MTech: Nature Conservation

Tshwane University of Technology

Harley V

An optimized monitoring programme for ungulate numbers in the North West Parks, South Africa



faculty of business *dean's report*

PROF SAHEED BAYAT



Research in the faculty remains part of its core business, and is recognised as such by all role players, from the office of the dean through to first-year students. The importance of research is stressed at all levels, as it is believed that applied research is a major driver of organisational and social change.

The point of departure for all research executed in the faculty revolves around making a contribution to/having an impact on the lives of people in the broader community. Non-focused research, i.e., research for the sake of research, is not acceptable within faculty context – improvement of the quality of lives of individuals and communities is the ethos of research in the faculty.

The merging of research activities between the two campuses has been very successful. A good working relationship exists between staff, and a real sense of unity and synergy has been the result. Taking the size and extent of the faculty into account, it is understandable that there is no one particular focal area of research, but rather a wide array of interests which continue to emerge. As a result of this expansion, pressure is placed on staff members to become more involved in research, especially in the area of postgraduate supervision. This is considered to be a problem, but also a developmental opportunity for academics, in the sense that CPUT needs to enhance and protect its presence on the South African tertiary academic landscape.

The postgraduate student component continues to expand, and at present 147 master's and 21 doctoral students are registered for their theses, while a further 100 are registered for subjects at postgraduate level. At the April 2007 graduation ceremonies, master's degrees were awarded to 15 students, while 2 doctoral degrees were conferred.

This represents 26 percent of all postgraduate degrees conferred by CPUT.

Particular research areas which continue to excite are the work done by the bio-kinetics researchers in the Sports Management programme, among which is an international liaison project which evaluates the load-bearing head capacity of black women – a project which satisfies the demands of the research ethos, as alluded to earlier.

Further, the Centre for Tourism Research is continuing to deliver important input in the run-up to the 2010 World Cup. The Department of Public Management, under the auspices of Dr Naas Ferreira, manages its research activities on a proactive basis, with regular workshops, targeted outputs and another textbook which is due to be published during the course of 2007.

Further developments in research are awaited with anticipation.

business

FUNDING RECEIVED FROM INDUSTRY

Researcher	Industry	Field	Amount (Rands)
Dr K Swart	Cape Town Routes Unlimited	Contract Tourism Research	2 000 000 per year (2006 - 2008)

UNIVERSITY RESEARCH FUNDING

Researcher	Department	Total (Rands)
Bechan N	<i>Public Relations Management</i>	40 000
Ismail R	<i>Tourism Management</i>	40 000
Kalula M & Fox W	<i>Public Management</i>	18 500
Knott B	<i>Sport Management</i>	29 500
Ntonzima L	<i>Public Management</i>	20 000
Swart K	<i>Tourism Management</i>	35 000



CENTRE FOR TOURISM RESEARCH IN AFRICA (CETRA)

Prof Douglas Turco of De Sales University, USA, visited South Africa from 31 July – 13 August 2006 as part of the NRF sport tourism project. He served as technical advisor on the project and provided data analysis input and student support.

A paper co-authored by Dr Kamilla Swart received the best paper award at the Valencia Summit.

NRF Thuthuka niche area funding was received for “Management and impacts of sport tourism events: a comparative analysis of selected events in KwaZulu-Natal and the Western Cape”. The researchers were Dr Kamilla Swart and Prof Urmilla Bob of the University of KwaZulu-Natal.

Contract research totalling R2m for 2006 – 2008 was funded by Cape Town Routes Unlimited.

Participating institutions on this project, which encompasses visitor tracking, delegate tracking, event evaluations, economic impact analysis and Geographical Information Systems (GIS) mapping, are CPUT, Stellenbosch University, the University of the Western Cape, and African Equations. The project is managed by Dr Kamilla Swart.





CONFERENCE PAPERS

America C

Management education via the Internet: factors facilitating and inhibiting the adoption of WebCT at a faculty in an HEI

Southern African Computer Lecturers' Association (SACLA)
Somerset West
26-27 June 2006

Bechan N

Protecting the name
South African Communication Association Annual Conference (SACOMM 2006)
Cape Town
28-30 September 2006

Bell D

Developing the university to meet the needs of physically challenged students
6th Conference of the International Consortium for Educational Development
Enhancing Academic Development Practice: International Perspectives
Sheffield, UK
11-14 June 2006

Bob U, **Swart K** & Turco D
Crime and sport tourism events in South Africa: implications for the 2010 World Cup
Valencia Summit 2006: Major Sport Events and Opportunity for Development: The International Promotion of the Cities
Valencia, Spain
17-19 October 2006

Davies SEH

Work-related upper limb disorders: implications for sport managers?
South African Sport and Recreation Conference (SASRECON)
Potchefstroom
7-9 September 2006

Everett T & Steyn B

Defining the core elements of management in PR context in South Africa: an international comparative study
8th Annual European Public Relations Education &

Research Associations (EUPRERA) Conference
Carlisle, UK
6-9 September 2006

Fox W

Theoretical debate on public administration
10th International Winelands Conference: Public Management & Development: Illusion, Delusion, Illumination
Stellenbosch
5-7 April 2006

Hendrickse R

Governance and financial sustainability of NGOs in South Africa
10th International Winelands Conference: Public Management & Development: Illusion, Delusion, Illumination
Stellenbosch
5-7 April 2006

Joubert E

Service quality at leisure events: a case of the Puffer Endurance Trail Run
South African Sport and Recreation Conference (SASRECON)
Potchefstroom
7-9 September 2006

Joubert E

Sport management for sport clubs and multiple sport codes
Sport Management Workshop for Sport Council
Zimbabwe
Johannesburg
7-8 July 2006

Kiley J

The delusion of training captains in the SAPS
10th International Winelands Conference: Public Management & Development: Illusion, Delusion, Illumination
Stellenbosch
5-7 April 2006



Knott BK

Consumer reactions to sport event sponsorship: a case study of the Cape Argus Pick 'n Pay cycle tour
South African Sport and Recreation Conference (SASRECON)
Potchefstroom
7-9 September 2006

Mageni GF & Slabbert A

The South African workplace: meeting the work-life balance challenge
South African Conference on Positive Psychology
Potchefstroom
3-7 April 2006

Mentor D & America C

Adoption and perspectives: WebCT administrators at higher education institutions in South Africa
5th Annual WebCT European User Conference
Edinburgh, Scotland
27 February-1 March 2006

Myrick DR

The post-Washington consensus: addressing economic disparities
10th International Winelands Conference: Public Management & Development: Illusion, Delusion, Illumination
Stellenbosch
5-7 April 2006

Parr BM

Supervised vs unsupervised exercise for patients with peripheral vascular disease
Vascular Surgeons of Southern Africa Conference
Durban
20-22 July 2006

Rust AA

Labour relations in the air travel industry: some lessons for South African Airways
18th South African Institute of Management Scientists Annual Conference: Demystifying the Art of Management through Research
Stellenbosch
13-15 September 2006

Rust AA & Swart K

A new era in South African air travel: a suggested labour relations model
1st International Conference, Faculty of Management, University of Johannesburg
29-31 October 2006

Steyn B & Akwunwa TJ

The need for a proactive approach to issues management: the case of Shell Nigeria & MOSOP
South African Communication Association Annual Conference (SACOMM 2006)
Cape Town
28-30 September 2006

Steyn B & Everett T

Two managerial roles for public relations: "strategic PR manager" and "operational PR manager"
South African Communication Association Annual Conference (SACOMM 2006)
Cape Town
28-30 September 2006

Steyn B & Green M

Dominant coalition of recently privatised SA telecommunications service provider expects "reflectionist" and "educationist" roles of PR practitioners
8th Annual European Public Relations Education & Research Associations (EUPRERA) Conference
Carlisle, UK
6-9 September 2006

Swart K

Sport tourism in South Africa
Illes Balears Forum: Sport and Tourism Global Network for Development of Regions: the Selection of a Sports Portfolio for the Development of a Tourist Destination's Image
Mallorca, Spain
22-24 November 2006

Swart K & Bob U

Soccer stadium venue selection, city legacies and the 2010 FIFA World Cup: a case study of Cape Town
2010 and the Life of the City
Johannesburg
4-6 September 2006





Van Jaarsveld JP

Stakeholder management during transformation: Transnet housing
South African Communication Association Annual Conference (SACOMM 2006)
Cape Town
28-30 September 2006

Venter B-P & Van der Merwe J

A rose is a rose: public relations is public relations and marketing is marketing – or is it?
South African Communication Association Annual Conference (SACOMM 2006)
Cape Town
28-30 September 2006

Whiting C

Enhancing student learning through multilingual materials
Far Eastern English Language Teachers' Association (FEELTA)
Best Practice in ELT Conference
Birobidjan, Russia
22-24 June 2006

Worrall D & Steyn B

Different contributions by corporate communication and marketing to organisational strategy formulation
South African Communication Association Annual Conference (SACOMM 2006)
Cape Town
28-30 September 2006

Worrall D & Steyn B

Different contributions by corporate communication and marketing to organisational strategy formulation: a case study
8th Annual European Public Relations Education & Research Associations (EUPRERA) Conference
Carlisle, UK
6-9 September 2006

CONFERENCE POSTERS

Davies SEH

Performance and exertional variations during walking, running and jumping on terrains of varying compliance
11th Annual Congress of the European College of Sport Science
Lausanne, Switzerland
5-8 July 2006

PUBLICATIONS: BOOKS/CHAPTERS IN BOOKS

Cornelissen S & Swart K

The 2010 Football World Cup as a political construct: the challenge of making good on an African promise. In Horne J & Manzenreiter W (eds). *Sports mega-events: social scientific analysis of a global phenomenon*. Malden, MA: Blackwell/The Sociological Review, 2006, pp 108-123. ISBN 1-4051-5290-7

Hendrickse RF

Actors in public policy making. In Fox W, Bayat MS & Ferreira IW (eds). *A guide to managing public policy*. Cape Town: Juta, 2006, pp. 39-45. ISBN 0-702-17267-7

Fox W, Bayat MS & Ferreira IW (eds)

A guide to managing public policy. Cape Town: Juta, 2006. ISBN 0-702-17267-7



PUBLICATIONS: CONFERENCE PROCEEDINGS

Davies SEH & MacKinnon SN

The energetics of walking on sand and grass surfaces. In Thatcher A & Christie C (eds). *Proceedings of ESSA 2006: 9th Conference of the Ergonomics Society of South Africa*, Pretoria, 19-20 January 2006. 17 pp (CD-Rom)

Davies SEH & MacKinnon SN

The validity of the tri-axial accelerometer for the estimation of energy expenditure during simulated load carrying. In Thatcher A & Christie C (eds). *Proceedings of ESSA 2006: 9th Conference of the Ergonomics Society of South Africa*, Pretoria, 19-20 January 2006. 12 pp (CD-Rom)

Kiley J

The role of higher education institutions in the development of entrepreneurs. In Boshoff C, Terblanche NS, Du Plessis PJ *et al.* (eds). *Proceedings of the 18th Annual Conference of the Southern African Institute for Management Scientists (SAIMS): Demystifying the Art of Management through Research*, Stellenbosch, 13-15 September 2006. Pretoria: SAIMS, 2006, pp 627-628. ISBN 0-7972-1130-6

Salomon C, Khabisi S, Ames T & Jere M

Leadership values in South African business: expectations of MBA students. In Ayadi OF (ed.). *Proceedings of the 7th Annual international Conference of the International Academy of African Business and Development: African Development: What Role for Business? Accra, Ghana, 23-27 May 2006*. Accra, Ghana: GIMPA, 2006, pp 586-593. ISBN 0-9765288-1-9

Slabbert A

The knowledge-based society and structural unemployment: mutually exclusive concepts? In Lesjak D (ed.). *Proceedings of MIC '06: Advancing Business and Management in Knowledge-based Society*, Portoroz, Slovenia, 23-25 November 2006. Portoroz: University of Primorska, 2006, pp 273-280. ISBN 961-6573-16-0

Slabbert A

The knowledge-based society and structural unemployment: mutually exclusive concepts? In Mastorakis N, Cecchi A *et al.* (eds). *Proceedings of the 5th World Scientific and Engineering Academy and Society (WSEAS) International Conference on E-Activities*, Venice, Italy, 20-22 November 2006. Athens: WSEAS, 2006, pp 294-300. ISBN 960-8457-56-4



PUBLICATIONS: JOURNALS

(* indicates publication in a DoE accredited journal)

***Ballard H & Reid E**

The impact of monetary compensation as a form of land restitution on the current lifestyles of certain Paarl residents. *Administratio Publica*, 14(1):1-16, 2006

Bell D

Developing the organisation to meet the needs of physically challenged students. *Paradigms: Journal for Debate into Higher Education*, (13):39-49, 2006

Bütschi G & Steyn B

Theory on strategic communication management is the key to unlocking the boardroom. *Journal of Communication Management*, 10(1):106-109, 2006

***Dassah MO & Uken E-A**

Monitoring and evaluation in Africa with reference to Ghana and South Africa. *Journal of Public Administration*, 41(4):705-720, 2006

***Davies SEH & MacKinnon SN**

The energetics of walking on sand and grass at various speeds. *Ergonomics*, 49(7):651-660, 2006

***Le Roux T & Steyn B**

Exploring practitioner constraints in advancing to more senior corporate communication roles. *Communicare: Journal for Communication Science in Southern Africa*, 25(1):23-58, 2006



***Lukamba-Muhiya JM & Uken E**

The electricity supply industry in the Democratic Republic of Congo. *Journal of Energy in Southern Africa*, 17(3):21-28, 2006

***Meintjies C & Steyn B**

A critical evaluation of the Downs-Hazen instrument (CSQ) by measuring employee communication satisfaction at a private higher education institution in South Africa. *Communicatio: South African Journal for Communication Theory and Research*, 32(1):152-188, 2006

***Parr BM & Derman EW**

The effects of exercise training in patients with peripheral vascular disease – a review. *The South African Journal of Sport Medicine*, 18(4):116-121, 2006

***Rust AA & Swart K**

A new labour era for South African Airways. *Acta Commercii*, 6:63-74, 2006

Swart K

Strategic planning – implications for the bidding of sport events in South Africa. *Journal of Sport Tourism*, 10(1):37-46, 2005

POSTGRADUATE DEGREES CONFERRED

DTech: Public Management

Steyn JW

A critical analysis of working partnerships aimed at increasing quality of life for population groups with special reference to urban rural development in the Western Cape Province

DTech: Tourism & Hospitality Management

Muhanna EH

Strategic process model for community participation in tourism development

MBA

Richards AD

Sustainable micro-entrepreneurship to ensure positive economic growth in the Western Cape

MTech: Business Administration

Beneke R

Application for Trocchia's four non-financial motivations for motor vehicle leasing in South Africa: a comparative study

Manise LDK

Critical analysis of selected outsourced services at CPUT residences, Cape Town campus

Norton I

Quality assurance framework for small manufacturing companies in the clothing metropolitan area

Skorbinski RG

The impact of performance management processes on employee-employer relationship in a listed telecommunications company

MTech: Human Resource Management

Anthony RL

Stress management module for shift workers

MTech: Marketing

Pei L

Perspective of travel agencies in China with regard to promoting South Africa as a leisure tourist destination: an exploratory study

MTech: Office Management & Technology

Dumas C

An investigation into the optimisation of the use of the Internet by SMMEs in the property market

MTech: Public Management

Jantjies SO

A critical evaluation of the effectiveness of performance appraisal in the Western Cape Provincial Treasury (WCPT)

Maas-Olsen MI

Empowering representative councils of learners through policy-making

Rashe SA

An evaluation of care and support centres for HIV/Aids orphans in Khayelitsha

Sulayman S

Transformation policy for South African rugby: comparative perception

MTech: Tourism & Hospitality Management

Mbaze-Ebock AV

Residents' perceptions of the Berg River canoe marathon

Nthoko NJ

Management and impacts of sport tourism events: a case study on the Red Bull Big Wave Africa

Tseane LA

Service quality in sport tourism: the case of the Berg River canoe marathon



faculty of education & social sciences *dean's report*

PROF MAUREEN ROBINSON



The promotion of research and scholarship is a fundamental cornerstone of the work in this faculty. The 2006 report provides evidence of an increased number of participants at conferences and in research projects and a steady increase in higher degrees awarded to staff and students. The faculty is attracting more grants than in past years and is receiving the attention of a number of international scholars. Grants were received from the Shuttleworth Foundation, SANPAD, the NRF and private educational trusts.

We are particularly proud that the faculty is contributing to an area of study that is under-theorised and under-reported in South Africa, namely teacher education. Pedagogical and professional needs of teachers are changing as global and local developments impact on modes of teaching and learning. In this respect, the faculty is proving to be a leader in the field, with many of the research projects investigating different aspects of teacher practices in a modern-day South African context. Research projects include the teaching of particular subject areas like numeracy, literacy, art, children's literature and science, as well as teacher education policy and practice, rural education, and diversity. In all these fields, papers have been presented and published. The faculty hosted the national conference for the Reading Association of South Africa and both students and staff participated actively in presenting papers as well as organising the conference.

The formation of local and international research partnerships is another area where encouraging work is happening. Two international scholars spent extended periods of time in the faculty: Prof Paula Cordeiro of the University of San Diego and Prof Peter Hewson of the University of Wisconsin. A number of conference presentations have emanated through the partnership with the University of York in the field of argumentation in science. The faculty appointed its first Adjunct Professor in 2006, Prof John Volmink, and he has been instrumental in exploring the establishment of a research unit in the faculty.

2006 saw the MEd programme attaining full accreditation by the Higher Education Quality Committee (HEQC). The second cohort of students began their coursework in this programme. A successful postgraduate seminar series has been introduced and a wide range of topics were facilitated by invited scholars, researchers and staff. The research seminars also provided staff with a platform to discuss work in progress as well as completed research projects. A research culture is taking root very firmly in the faculty with the increased number of postgraduate students working on their research projects and theses. The consequence of this is that many novice supervisors have teamed up with experienced supervisors and this augurs well for the developing research ethos as the continuum between the scholarships of teaching and research will enhance the work in the faculty.

The faculty was proud to graduate its first two doctoral candidates, one of whom travelled from the USA for the ceremony. The graduation of five staff members with higher degrees has greatly increased staff capacity for supervision and it is anticipated that the postgraduate retention and completion rate will continue to grow.

INDUSTRY FUNDING

Researcher/s	Area	Source	Amount (Rands)
Hartley S	Promotion of science, mathematics and technology in rural Breede River and Overberg schools	Trust Funding	100 000
Hill A Alexander J Thornhill C	Reading and teaching: pre-service teachers and the schooling context	SA Institute for Distance Education (SAIDE)	100 000
Hill A	Teacher education	HSRC	25 000
Johnson S	Mentoring	Masimanyane	50 000
Lombard AP (with UCT)	Numeracy project	SANPAD	300 000
Scholtz Z Sadeck M	Critical thinking	Shuttleworth Foundation	500 000
Smith G	Foundation phase numeracy	Shuttleworth Foundation	100 000



education & social sciences

UNIVERSITY RESEARCH FUNDING

Researcher	Total (Rands)
Chetty R	26 000
Chigona A	11 300
Coetzee R	11 600
Joubert J	45 000
Vermeulen N	30 000

SANPAD COCA PROJECT

COCA (Count One Count ALL) is a three-year SANPAD research and development project working in three primary schools in Mbakweni, near Paarl, in collaboration with the Western Cape Education Department, the School of Education of the University of Cape Town and its Schools Development Unit, the Cape Peninsula University of Technology and the Freudenthal Institute of Utrecht University, The Netherlands. Ana-Paula Lombard is the CPUT member on the project team. Aimed at improving the teaching and learning of mathematics in the Foundation Phase, the project encompasses the design and implementation of a new educational tool, Learning Pathway for Number (LPN).

The project runs from May 2004 to May 2007.



CONFERENCE PAPERS

Basadien S

Algebraic and graphical solution of logarithmic inequalities
3rd International Conference on the Teaching of Mathematics at the Undergraduate Level (ICTM 3)
Istanbul, Turkey
30 June-5 July 2006

Chetty R

Cultural wars: transforming the canon
Association of University English Teachers of South Africa (AUETSA)/South African Association of Commonwealth Literature and Language Studies (SAACLALS)/South African Society for General Literary Studies (SAVAL)
Forging the Local and the Global
Stellenbosch
9-12 July 2006

Chetty R

Normative management principles to ensure quality in teacher education
Education Association of South Africa (EASA)/Kenton International Conference
Wilderness
28 November-1 December 2006

Condy J

The development of an enabling self-administered questionnaire for enhancing reading teachers' pedagogical insights
Reading Association of South Africa (RASA) Conference
Cape Peninsula University of Technology
10-12 November 2006

Johnson S

Practising policy purposefully
Education Association of South Africa (EASA)/Kenton International Conference
Wilderness
28 November-1 December 2006

Joubert J

Multigrade curriculum: a South African and African perspective

98th Annual National Rural Education Association (nReA) Symposium
nReA: Crossing into our Next Century
Kansas City, MO, USA
21-25 October 2006

Robinson M & Zinn D

Educating in and for transition: teacher educators in a newly democratic South Africa
51st International Council on Education for Teaching (ICET) World Assembly
Fortaleza, Brazil
17-20 July 2006

Sadeck M

Border crossing in pre-service science teachers at Peninsula Technikon, Cape Town, South Africa
14th Annual Meeting of the Southern African Association for Research in Mathematics, Science and Technology Education (SAARMSTE)
Pretoria
9-12 January 2006

Scholtz Z, Hodges M, Koopman R & Braund M
Thinking critically: developing teachers' abilities to engage in critical thinking through argumentation
14th Annual Meeting of the Southern African Association for Research in Mathematics, Science and Technology Education (SAARMSTE)
Pretoria
9-12 January 2006

Scholtz Z, Sadeck M, Lubben F & Braund M
Argumentation about data: learners' ability to think critically
14th Annual Meeting of the Southern African Association for Research in Mathematics, Science and Technology Education (SAARMSTE)
Pretoria
9-12 January 2006



Stone R

A composite exhibition of selected traditional African artefacts and children's storybooks that highlight African indigenous knowledge systems
2nd World Curriculum Studies Conference
Tampere, Finland
21-24 May 2006

Westraadt G

The potential for a rich variety of learning opportunities that can be facilitated through the Learning Area Arts and Culture, with emphasis on visual art
1st International Conference on the Arts in Society
Edinburgh, UK
15-18 August 2006

CONFERENCE POSTERS

Stone R

Wired to the pulse of Africa
2nd World Curriculum Studies Conference
Tampere, Finland
21-24 May 2006

PUBLICATIONS: CONFERENCE PROCEEDINGS

Sadeck M, Scholtz Z, Braund M & Lubben F
Responding to curriculum change requiring critical thinking: developing and teaching argumentation tasks in Grade 10 lessons in South Africa. In *Proceedings of the XII IOSTE Symposium: Science and Technology Education in the Service of Humankind, Penang, Malaysia, 30 July-4 August 2006*. s.l.: s.n.: 2006, pp 331-338. ISBN 983-2700-39-6

PUBLICATIONS: JOURNALS

(* indicates publication in a DoE accredited journal)

*Robinson M & McMillan W

Who teaches the teachers? Identity, discourse and policy in teacher education. *Teaching and Teacher Education*, 22:327-336, 2006

Scholtz Z, Sadeck M, Hodges M, Lubben F & Braund M

Argumentation about data: learners' ability to think critically. *Paradigms: Journal for Debate into Higher Education*, (13):24-30, 2006

Westraadt G

The possibilities for learning opportunities through the visual arts. *Paradigms: Journal for Debate into Higher Education*, (13):31-38, 2006

Westraadt G

The potential for a rich variety of learning opportunities that can be facilitated through the learning area Arts and Culture, with emphasis on visual art. *International Journal of the Arts in Society*, 1(6):153-160, 2006





POSTGRADUATE DEGREES CONFERRED

DEd

Greenfield D

Conscious practice in higher education: empirical and theoretical explorations

Smyth AA

Community counselling: a contextual curriculum design for Christian higher education in Africa

MEd

Strauss BS

School discipline and collaborative rulemaking: pupil perceptions

MTech: Education

Cupido BG

School stakeholder perceptions of the contributions non-college and school educators make to the orderly and effective operation of school processes

Johnson AJ

Identifisering van die belangrikste areas wat skoolklimaat kan verbeter in die drie nie-multigraad plaasskole in die Wellington-distrik

POSTGRADUATE DEGREES OBTAINED BY STAFF MEMBERS

PhD: Education

University of Cape Town

Condy J

The development of an enabling self-administered questionnaire for enhancing reading teachers' professional pedagogical insights

University of Cape Town

Mosito CP

Cognitive change in out-of-school learners in a Western Cape intervention programme

MBA

University of Cape Town

Chetty R

A paradigm shift in teacher education: towards appropriate normative management principles to enhance quality

MEd cum laude

University of Stellenbosch

Scholtz ZE

Exploring the development of a mentorship programme for teachers through a reflexive democratic practice

MPhil: Teaching

University of Cape Town

Lombard AP

An investigation into the teaching and learning of shape and space concepts in the reception year

faculty of engineering

dean's report

DR OSWALD FRANKS

The year under review was a milestone in the short history of the Cape Peninsula University of Technology (CPUT). In 2006 the university introduced the six faculty structure with the Engineering faculty operated across three campuses, i.e., Bellville, Cape Town and Granger Bay.

In 2006 the researchers in the Faculty of Engineering contributed significantly to the university's research output.

The research income to the faculty was just under R10 million, with about 65 percent coming from the NRF and a further 15 percent from industry.

Faculty researchers generated 29 percent of the university's journal articles.

Of the ten CPUT staff rated by the NRF, five were from the Faculty of Engineering.

Academic staff and postgraduate students in the Faculty of Engineering are engaged in a wide range of research projects. Research in the faculty during 2006 was located in NRF-funded niche areas, research units or centres, as well as in singular researchers.

The 2006 research niche areas funded by NRF were:

- Real-time Distributed Systems
- Process Instrumentation Research
- Flow Processes
- Applied and Computational Technologies

Research Units or Centres included:

- South African Built Environment Research Centre (SABERC)
- Energy Technology Unit (ETU)
- Centre for Power Systems Research
- Centre for Wireless Application and Integration
- Centre for Instrumentation Research

The faculty's researchers are collaborating with a diverse community of scholars at both the national and internal level. Examples of these collaborative research initiatives include Environmental and

Occupational Health, Distributed Power Systems, Gravitational Separation, Domestic and Commercial Use of Energy, and Monitoring and Control of Energy Systems.

The faculty is proud of the quality and impact of the research conducted by our academics and postgraduate students.

Congratulations to our researchers on their many accomplishments during 2006.

I am also indebted to the faculty and university research administrative staff for their support for and dedication to promoting the research agenda of the Faculty of Engineering.



engineering



UNIVERSITY RESEARCH FUNDING

Researcher	Department	Total (Rands)
Adonis M	Electrical Engineering	15 000
Atkinson-Hope GA	Electrical Engineering	50 000
Cain V	Mechanical Engineering	9 000
De Vries I	Electrical Engineering	47 000
Esterhuyse AC	Mechanical Engineering	20 000
Fish A	Electrical Engineering	15 000
Jacobs K	Mechanical Engineering	50 000
Kilfoil M	Mechanical Engineering	20 000
Madzimbamuto TF	Mathematics & Physics	50 000
Martin L	Built Environment	6 500
Meru A	Electrical Engineering	7 000
Narsingh U	Mathematics & Physics	45 000
Neal PM & Haldenwang R	Civil Engineering	30 000
Setlhare B	Civil Engineering	40 000
Sheldon M	Chemical Engineering	50 000
Van der Plas P	Chemical Engineering	30 000
Voss E	Electrical Engineering	50 000
Wilkinson R & Davies J	Electrical Engineering	45 000
Zietsman R	Built Environment	14 000



TECHNOLOGY STATION IN CLOTHING AND TEXTILES (TSCT)

PROJECT HIGHLIGHTS

Eerste Rivier Project: Community Women's Action

A training initiative by the TSCT culminated in the Community Women's Action procuring manufacturing and delivering an order of luminous jackets for road workers to LAFARGE Construction.

House of Monatic

Visiting professor Barbara Puscher of the Albstadt University of Applied Science spent a three-month sabbatical with a TSCT client, House of Monatic, and trained three staff members on CAD software during the development and launch of the new Carducci women's wear range.

KZN Clothing and Textile Cluster

With support from Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ), Tshumisano, and Durban Institute of Technology, and the KZN Clothing and Textile Cluster, the TSCT was able to take Prof Dieter Liekweg of Germany to Durban. A 20 percent increase in output was achieved by participating companies.



Luspin, Mthatha, Eastern Cape

The TSCT liaised with the South African Bureau of Standards on behalf of this SME in respect of a capability report, further subsidised training, and certification which would allow the business to tender for government contracts.

Integral Safety Products

A production system was implemented, increasing output from 160 to 270 overalls per day.

Darkie Clothing

This is an emerging brand of clothing by young designer Themba Mnogomezulu, whose clothing is retailed by Young Designers Emporium. The TSCT prepared patterns for production and graded patterns into various sizes on the TSCT CAD system.

USABCO

USABCO, manufacturer of plastic products under the ADDIS brand, is a regular client, and was able to secure an order for products from the USA based on test reports from the TSCT.

TWR Automotive

This manufacturer of air bags and safety belts previously sent their materials to Germany for light fastness and ageing tests; however with the high quality of light fastness testing equipment at the TSCT, their materials are now tested locally. The TSCT conducted tests on safety belts for the new series Mercedes to be launched in 2007.

Testing laboratory

The testing laboratory was again audited by the CSIR on behalf of Woolworths and accredited to conduct tests according to Woolworths' test methods until December 2007. There has been a significant growth in clientele and 1458 tests were conducted for the period under review.

CONFERENCE PAPERS

Chileshe N & Haupt TC

Industry and academia perceptions of construction management education: the case of South Africa
2nd Annual Built Environment Education Conference (BEECON 06)

London

12-13 September 2006

De Vries ID & Jenman DB

The future role of electric bicycles in South Africa
Velo Mondial 2006: International Bicycle Planning Conference
Cape Town
5-10 March 2006

De Vries ID & Jenman DB

The potential of electric bicycles to provide low-cost transport, mobility and economic empowerment in South Africa

25th Annual Southern African Transport Conference (SATC 2006)

Pretoria

10-13 July 2006

De Vries ID & Jenman DB

The potential of electric bicycles to provide low cost transport, mobility and economic empowerment for both genders in South Africa.

Gender, Transport & Development: Bridging the Divide between Goals, Research & Development Policy in Developing Countries
Port Elizabeth
27-30 August 2006





Jacobs CA

Designing integrated approaches: the teaching of academic literacies within disciplinary domains

Seminar: University of Maastricht

Maastricht, The Netherlands

28 June 2006

Jacobs CA

Designing integrated approaches: the teaching of academic literacies within disciplinary domains

Seminar: Faculty of Education

University of KwaZulu-Natal

Durban

31 August 2006

Jacobs CA

Integrating content and language: whose job is it anyway?

2nd International Conference: Integrating Content and Language in Higher Education

Maastricht, The Netherlands

28 June-1 July 2006

Jacobs CA

Integrating writing into the mainstream curriculum

Seminar: Centre for Higher Education Development

Durban University of Technology

13 October 2005

Jacobs CA

Keynote address: Collaborating in content and language-integrated instruction

International Symposium: Learning Language through Content, Learning Content through Language

University of La Sabana, Colombia

27-28 October 2006

Jacobs CA

Mainstreaming academic literacy teaching: implications for how academic development understands its work in higher education

Higher Education Learning and Teaching in South Africa (HELTASA) Conference

Pretoria

27-29 November 2006

Jacobs CA

Methodological meditations on discourse analysis

CREE Research Seminar Series

University of Cape Town

24 May 2006

Jacobs CA

The process approach to assessment: when language and content lecturers collaborate

Seminar: Faculty of Education

University of KwaZulu-Natal

Durban

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Lyon, France

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Matei S

Optimal supply for SSL systems with LEDs: new methods of evaluation in DP course

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Romania

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Haupt T & Jaftha C

Impact of culture on construction project success. Bellville: SABERC, CPUT, 2006. Commissioned by Eskom. Report no. 306

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Measuring health and safety (H&S) performance. Bellville: SABERC, CPUT, 2006. ISBN 0-620-36561-7. Commissioned by Eskom. Report no. 106

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Masalova I

To investigate the effect of emulsion formulation on the kinetic of ammonium nitrate crystallization during ageing of P100 emulsions (Part 2 – Mini Rig Technique). Report prepared for African Explosives Ltd



POSTGRADUATE DEGREES CONFERRED

DTech: Electrical Engineering

Malindi P

RF power amplifier design, exploring linearization techniques

MTech: Chemical Engineering

Aziz M

The recovery of copper by tubular-supported liquid membrane

Mbanjwa MB

Ultrasonic measurement of membrane fouling during micro-filtration of natural brown water

Nkohla MA cum laude

Characterisation of ferrochrome smelter slag and its implications in metal accounting

Oosthuizen FJ

Simulating ion exchange processes using artificial neural networks

Witi J cum laude

Development and validation of a predictive haze index to reflect observed visibility degradation in the City of Cape Town

MTech: Civil Engineering

Kabamba BM

Evaluation of derating procedure for centrifugal pump performance

MTech: Electrical Engineering

Chang Y-T

An investigation of liquid velocity measurement using PZT cylinders

Esbach J

How entrepreneurship influences the engineering faculty at a new university of technology

Fritz W cum laude

Development of a solid-state distributed lighting system for rural energy-efficient applications

Hanekom AN cum laude

A torque ripple analysis on reluctance synchronous machines

Lotter PA

Development of feedforward RF power amplifier

Smith TMJ cum laude

Driving techniques for high-power piezoelectric transducer arrays



MTech: Mechanical Engineering

February EJ

Fatigue crack properties of the base and weld metal of gas metal arc welded 300 WA

Lourens C Le R

Sea water desalination by solar evaporation

Mahomed S

An evaluation of mathematics within an engineering foundation programme

Saal SC

The development of an active surface using shape memory alloys

Xing Z

A novel approach to control the shape change of a reconfigurable wing using shape memory alloy

POSTGRADUATE DEGREES OBTAINED BY STAFF MEMBERS

DEd

University of KwaZulu-Natal

Jacobs CA

Negotiated understandings of the academic literacy practices of tertiary educators

MSc: Civil Engineering

University of Cape Town

October CS

The derivation of a set of rates and formulae for the determination of operational costs for municipal engineering services in the Western Cape



faculty of health & wellness sciences *dean's report*

DR DHIRO GIHWALA



In this, our first year of operation as an all-inclusive Faculty of Health & Wellness Sciences, the staff and students continued to build on the tradition of conducting quality research as they had done in the past. The newly configured faculty also provided the platform for talented young staff members to engage with established researchers. This bodes well for growth in unique interdisciplinary research in the future. The related research activities in the faculty form a rich tapestry of various facets of health and health-education investigations within the context of a university of technology.

Our research degree programmes had some 30 master's and five doctoral research degree students enrolled in the various fields of health. Some have concluded their studies, while others are near completion. Postgraduate students were offered the opportunity to do oral presentations at national and regional conferences and symposia and these were of customary high quality.

A large number of staff were engaged with their own postgraduate studies and the achievements of our staff continue to be recognised by the conferment of academic qualifications. The following staff members obtained doctorates: Nicole Brooks from the University of the Western Cape, Marina Clarke from the Karolinska Institutet in Sweden, and Peter Clarke-Farr from the University of the Free State. All three individuals continue to contribute to research in the faculty and are supervising a number of graduate students. One of our leading researchers in the specialised area of molecular biology, Dr Sehaam Khan, returned from a research institution in Singapore where she spent a year on a post-doctoral fellowship. She is supervising two master's and two doctoral students.

The year saw the first steps in the establishment of an Oxidative Stress Research Centre which is envisaged to be the flagship laboratory-based research entity of the Faculties of Health & Wellness

Sciences and Applied Sciences. The Centre has a number of master's and doctoral students. Collaborative interest has been shown by various international and national researchers. The Centre has done leading research work for the Malaysian Palm Oil Board from which it received funding. It also formed a partnership with a prestigious research Institute in Hungary through a grant from the NRF. Another major strength of the Centre is that it is well poised to do research on the anti-oxidative properties of local flora and in this regard, one of our researchers is a foremost authority on the medicinal properties of rooibos tea. Continuing research is being conducted in this area.

The prevalence of tuberculosis in the Western Cape region and the high incidence of diabetes led to significant research in these areas. A number of epidemiological studies associated with local communities were undertaken leading to a range of conference presentations and intervention strategies. Part of the work was in collaboration with the Pathology Department of the University of Stellenbosch where we had five master's students engaged in research investigations. Studies are not, however, confined to field work investigations; laboratory-based pathological research was also carried out.

As a faculty continually striving for optimal student development, and conscious of the fact that students need to be exposed to relevant learning opportunities, important investigations were done in the area of the readability of science texts, language factors affecting student learning and appropriateness of curricula related to practice. The latter was of particular significance in the context of our undertaking to provide services to the African continent. In this regard Dr Penelope Engel-Hills has been a key investigator on assignment by the International Atomic Energy Agency to assist with radiography programmes throughout Africa. Other staff contributed to the research of the



Work-Integrated Research Unit (WILRU) of the university which focused on the knowledge transfer between higher education and workplace.

In all, the year was productive, despite the fact that much time was taken up with issues associated with amalgamation of academic departments. We managed to establish a nationally recognised Research Ethics Committee for Health Sciences and Applied Sciences. Our request for research

funding was modest but on a relative scale we had significant outputs. However, none of this would be possible without the continuing support of the university, the NRF, industry, individuals and other stakeholders of the faculty. We are very appreciative of their support and their ongoing confidence in our abilities. I also want to thank those people who offer their ideas, feedback and encouragement to our researchers as they strive for greater knowledge contribution.



health & wellness sciences

UNIVERSITY RESEARCH FUNDING

Researcher	Department	Total (Rands)
Botha T	Somatology	52 000
Brooks NL	Biomedical Sciences	90 000
Esterhuyse AJ	Biomedical Sciences	75 000
Khan S	Biomedical Sciences	50 000

CONFERENCE PAPERS

Bester DJ, Esterhuyse AJ, Du Toit EF & Van Rooyen J

The effect of Carotino red palm oil supplementation on serum lipid concentrations in rats fed an oxidative risk-induced diet and a high saturated fat diet

34th Meeting of the Physiological Society of Southern Africa

Durban

26-29 September 2006

Clarke-Farr PC

Interventions in diabetic eye conditions in South Africa

Vision 2006

Midrand

15-18 August 2006

Clarke-Farr PC

The development of a postgraduate education and training programme for health care workers for the prevention and management of ocular complications in diabetic patients

3rd Annual South African Association of Health Educationalists (SAAHE) Regional Health Sciences Conference

University of the Western Cape

19-20 May 2006





Engel-Hills P

A national survey on radiography education in South Africa

3rd Annual Conference of the South African Association of Health Educationalists (SAAHE)
Bellville
19-20 May 2006

Engel-Hills P

Broadening the spectrum through curriculum
Radiographers' Scientific Conference (RASCO)
Mombasa, Kenya
29 April-1 May 2006

Engel-Hills P

Curriculum response to contextual change
24th International Congress of Radiology (ISR 2006)
Radiology into Africa
Cape Town
12-16 September 2006

Engel-Hills P

Education and training of radiation therapists for Africa
IAEA Nobel Peace Prize Fund for Regional Cancer Training Initiatives
An African Region Special Event: Human Resources Development in Radiation Oncology, in the Context of Cancer Control Programmes
Cape Town
11-15 December 2006

Lackay CL, Rubow SM & Hassan MS

The influence of anti-tuberculosis drugs on Tc-99m red blood cell labelling efficiency
12th Congress of the South African Society of Nuclear Medicine
Port Elizabeth
15-18 September 2006

Paulse A, Barnes J, Khan S, Khan W

Investigation of bacterial pollution in the Berg River, Western Cape, South Africa
14th Biennial Conference of the South African Society for Microbiology
Pretoria
9-12 April 2006

Ryffel B, Jacobs M, **Botha T**, Fremond C, Togbe D & Quesniaux V

Role of toll-like receptors sensing and control of mycobacterial infection
Euroconference: Infections and Lung Diseases
Paris, France
8-9 June 2006

Tobin M, Abrahams R, Davison S & Khan W

Analysis of bacterial pollution in the Berg River, Western Cape, South Africa
14th Biennial Conference of the South African Society for Microbiology
Pretoria
9-12 April 2006

Williams I

Addressing key issues regarding professional role extension of radiographers
24th International Congress of Radiography
Cape Town
12-16 September 2006

Williams I

Radiologist support for professional role extension of South African radiographers to include plain film reporting
24th International Congress of Radiography
Cape Town
12-16 September 2006

Wright J

Lecturers' perceptions of content and language integration: implications for future projects
Integrating Content and Language in Higher Education (ICLHE) 2006
Maastricht, The Netherlands
28 June-1 July 2006

Wyrley-Birch B

Aspects of ICL in a multilingual classroom and clinical workplace
Integrating Content and Language in Higher Education (ICLHE) 2006
Maastricht, The Netherlands
28 June-1 July 2006

CONFERENCE POSTERS

Abrahams R, Davison S & Khan S

Identification of a nucleocapsid virion protein VP 1054 in Trichoplusia ni single enveloped nucleopolyhedrovirus (TnSNPV)
14th Biennial Conference of the South African Society for Microbiology
Pretoria
9-12 April 2006

Hon D, Hassan MS, Van Rensburg SJ, Smuts CM, Abel S, Haug, P, Rensburg M & Erasmus RT
Correlation of erythrocyte N-6 to N-3 fatty acid ratio with disease severity in multiple sclerosis
7th Congress of the International Society for the Study of Fatty Acids and Lipids
Cairns, Queensland, Australia
23-28 July 2006

Lackay C, Hassan S & Rubow S

The influence of anti-tuberculosis drugs on Tc-99m red blood cell labelling efficiency
9th World Congress of Nuclear Medicine and Biology
Seoul, Korea
22-27 October 2006

Mash R, Powell D, Du Plessis F, Van Vuuren U, Michalowski M, **Clarke-Farr P & Jowell M**
Improving the quality of chronic care for diabetes in the Cape Town metropolitan district health services
IDF 2006 19th World Diabetes Congress
Cape Town
3-7 December 2006

Mutua MJ, Khan S & Volschenk H

Isolation and characterization of the fibrinolytic enzyme, Nattokinase, from olive waste water biofilms
14th Biennial Conference of the South African Society for Microbiology
Pretoria
9-12 April 2006

Saayman M, Tobin M & Khan S

The isolation and detection of viral pathogens found in river water close to two informal settlements within the Western Cape region of South Africa
14th Biennial Conference of the South African Society for Microbiology
Pretoria
9-12 April 2006

PUBLICATIONS: CONFERENCE PROCEEDINGS

Ryffel B, Jacobs M, Parida S, **Botha T**, Togbe D & Quesniaux V
Toll-like receptors and control of mycobacterial infection in mice. In Chadwick D & Goode J (eds). *Symposium on Innate Immunity to Pulmonary Infection: Novartis Foundation Symposium 279, Cape Town, 28-30 November 2005*. Chichester: John Wiley, 2006. ISBN 978-0-470-02656-4

Sheik O & Gihwala D

Readability of science texts. In *Proceedings of the XII IOSTE Symposium: Science and Technology Education in the Service of Humankind, Penang, Malaysia, 30 July-4 August 2006*. s.l.: s.n.: 2006, pp 346-352. ISBN 983-2700-39-6

PUBLICATIONS: JOURNALS

(* indicates publication in a DoE accredited journal)

***Bester DJ, Van Rooyen J, Du Toit EF & Esterhuysen AJ**

Red palm oil protects against the consequences of oxidative stress when supplemented with dislipidaemic diets. *Medical Technology South Africa*, 20(1):3-10, 2006

*Chou C-F, Loh CB, Foo YK, Shen S, Fielding BC, Tan THP, **Khan S**, Wang Y, Lim SG, Hong W, Tan Y-J & Fu J

ACE2 orthologues in non-mammalian vertebrates (*Danio*, *Gallus*, *Fugu*, *Tetraodon* and *Xenopus*). *Gene*, 377:46-55, 2006





***Clarke M**, Dick J & Bogg L

Cost-effective analysis of an alternative tuberculosis management strategy for permanent farm dwellers in South Africa amidst health service contraction. *Scandinavian Journal of Public Health*, 34:83-91, 2006

***Clarke-Farr PC**, Nel MM & Wilkinson AC

An investigation into diabetic patients' knowledge of diabetes and its ocular complications in the Western Cape. *The South African Optometrist*, 65(4):134-143, 2006

***Engelbretcht A-M, Esterhuyse J**, Du Toit EF, Lochner A & Van Rooyen J

P38-MAPK and PKB /Akt, possible role players in red palm oil-induced protection of the isolated perfused rat heart? *Journal of Nutritional Biochemistry*, 17(4):265-271, 2006

Engel-Hills P

Appointed to the International Editorial Board of *Journal of Radiotherapy in Practice*

Engel-Hills P

Radiation protection in medical imaging. *Radiography*, 12:153-160, 2006

***Esterhuyse JS**, Van Rooyen J, Strijdom H, **Bester D** & Du Toit EF

Proposed mechanisms for red palm oil induced cardioprotection in a model of hyperlipidaemia in the rat. *Prostaglandins, Leukotrienes and Essential Fatty Acids*, 75:375-384, 2006

Mucheusi L & **Engel-Hills P**

An evaluation study of the perceptions of oncology staff on the problems and solutions in care of children undergoing radiotherapy. *The South African Radiographer*, 44(1):10-15, 2006

***Somers A, Hassan MS, Rusford E** & Erasmus RT

Overweight and obesity in learners residing in the Belhar, Delft and Mfuleni communities of Cape Town, Western Cape, South Africa. *Medical Technology South Africa*, 20(1):11-20, 2006

***Somers A, Rusford E, Hassan MS** & Erasmus RT

Screening for diabetes mellitus in learners residing in the Belhar, Delft and Mfuleni communities of Cape Town, Western Cape, South Africa. *South African Family Practice*, 48(6):16a-16d, 2006

Winberg C, Engel-Hills P, Garraway J, Jacobs C & Volbrecht T

Editorial: Higher education and work. *Perspectives in Education*, 24(3):vii-ix, 2006

***Wright J**

Reflections on process writing. *Journal for Language Teaching*, 40(2):88-109, 2006

***Wright J**

Teaching and assessing mind maps. *Per Linguam: A Journal of Language Learning*, 22(1):23-38, 2006

***Wyrley-Birch B**

The multilingual radiography classroom and the world of clinical practice. *Perspectives in Education*, 24(3):71-82, 2006

POSTGRADUATE DEGREES CONFERRED

MTech: Biomedical Technology

Aboua YG

The influence of superoxide and antioxidants on human sperm function and apoptosis with special reference to the role of red palm oil

Hikuum WC

Characterisation of allergens in pilchard, responsible for development of occupational allergy in the seafood industry in the Western Cape

Hon GM

The role of the fatty acid composition of blood cell membrane in the aetiology of multiple sclerosis

Zerabruk MA

Repair of sub-lethal damage following single and split-dose irradiation using 6° co-gamma and p (66)/ BE neutrons

MTech: Radiography

Davidson FE

Using the Delphi technique to define the clinical competencies required by newly qualified diagnostic radiographers in South Africa

Neethling-Du Toit M

Ultrasound features of the deep infrapatellar bursa



POSTGRADUATE DEGREES OBTAINED BY STAFF MEMBERS

PhD

University of the Western Cape

Brooks N

Apoptotic markers on human ejaculate sperm

PhD

Karolinska Institutet, Sweden

Clarke M

Towards cost-effective tuberculosis control in the Western Cape of South Africa: intervention study involving lay health workers on agricultural farms

PhD

University of the Free State

Clarke-Farr P

The development of a postgraduate education and training programme for health care workers for the prevention and management of ocular complications in diabetic patients



faculty of informatics & design *dean's report*

MS MEL HAGEN



On 1 January 2006 the new Faculty of Informatics and Design came into being, representing a unique combination of disciplines, from information systems, to visual and communication studies, to a wide range of design studies. The juxtaposing of this range of disciplines offers great potential for cutting-edge and meta-disciplinary research and, in the course of the year, researchers started exploring the potential for developing a new niche research area.

In particular, the faculty will be looking at focusing on the use of all manner of technologies specifically designed to facilitate human-information interactions, as ways and means of strengthening the relationship between information generation, information storage, and knowledge creation, within socially constructed networks.

This ties in well with research that is already being undertaken at both doctoral and master's level in the fields of universal design, design for development, and medical applications.

The national and provincial governments have both increasingly come to recognise the primacy of information systems technology, and design, as prime drivers in economic development; this bodes well for future government support of initiatives in the faculty. In particular, the provincial government of the Western Cape has established a unit to develop policy and strategies within the creative industries which embrace both design, and aspects of information systems technology. This will extend the current relationship with the provincial government enjoyed by the faculty in respect of our joint initiative of the Cape Craft and Design Institute. The establishment of a FabLab (Fabrication Laboratory) in the institute, a programme funded by the national Department of Science and Technology and the provincial government's Department of Economic Development and Tourism, and resourced by the Center for Bytes and Atoms of the Massachusetts Institute of Technology (MIT),

provides exciting product development possibilities, particularly for postgraduate students in the design disciplines.

The incorporation of one section of the previous Faculty of Business Informatics into our faculty has meant that, while the faculty builds its own capacity, the supervision of formal postgraduate qualifications is being partly serviced by the free-standing e-Innovation Academy, the research arm of the former faculty. This year saw the awarding of one DTech and twelve MTech qualifications: eleven in information technology disciplines, and two in town and regional planning.

Over the past few years, the faculty has placed a strong emphasis on the development of research capacity and has actively encouraged the development of staff postgraduate qualifications. In 2006 one member of staff (e-Innovation Academy) obtained a doctorate, while several staff members from the faculty were awarded master's qualifications by the institution. A further master's degree was conferred on a staff member by the University of Cape Town. In addition, seven staff members were registered for doctoral studies, and 24 for master's degrees.

This is the last research report that I shall be filing as Dean, and I am positive that, in going into the next academic year with a new Dean who will be required to have a strong research focus, the current progress will not only be maintained, but will accelerate.



informatics & design

UNIVERSITY RESEARCH FUNDING

Researcher	Department	Total (Rands)
Dakela S	Information Technology	25 000
De Villiers J & Barker A	Architectural Technology	18 000
Khan G & Lakay D	Information Technology	40 000
Lewis M-T	Interior Design	6 000
Meyer I	Photography	7 000
Morkel J	Architectural Technology	10 000
Parker M	Information Technology	10 000
Snaddon B	Graphic Design	2 000
Van der Merwe J & Trimble C	Informatics & Design	30 000
Verster B	Town & Regional Planning	60 000
Vlok A	Fashion & Surface Design	6 000



PUBLICATIONS: CONFERENCE PROCEEDINGS

Boulain PR, **Parker MB**, Millard DE & Wills G

Weerkat: an extensible semantic Wiki. In Van Brakel PA (ed.). *Proceedings of the 8th Annual Conference on World Wide Web Applications, Bloemfontein, 6-8 September 2006*. Cape Town: CPUT, 2006. 17 pp <http://www.zaw3.co.za>. ISBN 0-620-37309-1

Chisin AV

Enhancing curricula: sociocultural approaches to design curriculum development within the outcomes-based education and training system in South Africa. In Davies A (ed.). *Proceedings of the Centre for Learning and Teaching in Art & Design (CLTAD) 2006 International Conference: Enhancing Curricula: Contributing to the Future, Meeting the Challenges of the 21st Century in the Disciplines of Art, Design and Communication, Lisbon, 6-7 April 2006*. London: CLTAD, 2006, pp 453-473. ISBN 0-9541439-5-7

Dahl A

Shifting pedagogies: the impact of re-curriculation of secondary education at tertiary level. In *Proceedings of the DEFSA Conference, Port Elizabeth, 21-22 September 2006*. 9 pp (CD-Rom). ISBN 1-920176-01-2

M'Rithaa MK

Redesigning education for inclusiveness: universal design in context. In *Proceedings of the DEFSA Conference, Port Elizabeth, 21-22 September 2006*. 13 pp (CD-Rom). ISBN 1-920176-01-2

Parker M, De la Harpe R, Wills G, **Stoffberg C** & Venter I

Data quality: how the flow of data influences data quality in a small-to-medium medical practice. In Bytheway A & Strümpfer C (eds). *Proceedings of CIDC 2006: Community Informatics for Developing Countries: Understanding and Organising for a Participatory Future Information Society, Cape Town, 31 August-2 September 2006*. Cape Town: CPUT, 2006, pp 290-305. ISBN 0-620-37058-0

Parker MB, Moleshe V, De la Harpe R & Wills GB

An evaluation of information quality frameworks for the World Wide Web. In Van Brakel PA (ed.). *Proceedings of the 8th Annual Conference on World Wide Web Applications, Bloemfontein, 6-8 September 2006*. Cape Town: CPUT, 2006. 13 pp <http://www.zaw3.co.za>. ISBN 0-620-37309-1





Shivute MI, De la Harpe R & Maumbe B

Medical practitioners' interactions with their communities: a Nambian perspective. In Bytheway A & Strümpfer C (eds). *Proceedings of CIDC 2006: Community Informatics for Developing Countries: Understanding and Organising for a Participatory Future Information Society, Cape Town, 31 August-2 September 2006*. Cape Town: CPUT, 2006, pp 331-351. ISBN 0-620-37058-0

POSTGRADUATE DEGREES CONFERRED

DTech: Information Technology

Pather S

E-commerce information systems (ECIS) success: a South African study

MTech: Business Information Systems

Kritzinger WT

The effect web page body keyword location has on ranking in search engine results: an empirical study

MTech: Information Technology

Bester A

Information systems performance in the construction sector: the role of the chief executive officer

Bowers GG

Adoption intentions and benefits realised: a study of e-commerce in SMMEs

Featonby M

M-commerce in SMMEs: an investigation into the barriers and motivators to the adoption of mobile commerce by cellular subscribers

Maree DC

A strategy for software testing in SMMEs

Naidoo K

Impact of e-loyalty on the business success of SMEs

Ozonuwe UF

SMME website validation for consumer protection

Rothman WC

Optimisation of business processes for e-transformation in SME legal practices

Topkin JH

Web service as an integral part of the SME value chain

Visser EB cum laude

Search engine optimisation elements' effect on website visibility: the Western Cape real estate SMME sector

Voges FW

A guideline for the adoption of order processing for B2B e-commerce

MTech: Town & Regional Planning

Gyogluu SY

Infrastructure delivery in rapidly urbanising communal lands: case studies in Ghana

Warnich S

Public transport as a catalyst for development opportunities along the northern growth corridor, Cape Town

POSTGRADUATE DEGREES OBTAINED BY STAFF MEMBERS

MEd cum laude

University of Cape Town

Snaddon B

Finding my woof by tweaking the warp: a personal account of an attempt to better understand learning in a communication design course

cooperative education

CONFERENCE PAPERS

Forbes BE

Programme design and quality management for work-integrated learning in a co-operative education partnership

SASCE International Conference 2006: Quality Work Integrated Learning and National Skills Development Strategy

Vanderbijlpark

17-20 April 2006



e-innovation academy



Front row:
Prof Melius Weideman
Ms Ignitia Motjolepane
Ms Corrie Strümpfer
Mr Stuart Warden

Back row:
Prof Geoff Erwin (Director)
Prof Pieter van Brakel
Mr Wouter Kritzinga

Inset:
Dr Shaun Pather
Mr Zoran Mitrovic

The e-Innovation Academy (e-IA) was established in 2006 by CPUT Executive Management as a pilot dedicated research centre, and operates across the university. e-IA is directly aligned with the CPUT Strategic Plan, and the Vision, Mission, Strategic Directions and Objectives of CPUT, as well as with Cape Town City, and provincial and national priorities for the Information Society. e-IA has partnerships with local, provincial and national government, international research communities and institutions, and boasts extensive research publications. e-IA focuses specifically on research and postgraduate studies towards an inclusive Information Society. It is a cross-faculty group, therefore multi-disciplinary, with two main thrusts:

- Social appropriation of information and communications technologies (ICT) for local community benefit
- E-business/e-commerce for SMMEs

e-IA's focus is reinforced by the National Research Foundation's Research Niche Area (awarded in 2006): "ICT in e-government, e-business for community engagement and shared growth".

e-IA undertakes the following activities:

- Developing and delivering postgraduate programmes
- Facilitating postgraduate projects
- Proposing, tendering for, and conducting contract research
- Providing research outputs
- Environmental scanning, policy advice and formulation in respect of ICT and Information Society issues
- Liaison with government, business and civil society with regard to contract research
- Formation of multi-stakeholder partnerships with government, business and civil society

e-IA is uniquely positioned in Africa and has already addressed many of the expectations of its stakeholders in government and civil society, using the CPUT-established NGO called TISI (The Information Society Institute).

INDUSTRY FUNDING

Researcher	Client	Project	Amount (Rands)
Taylor W	Provincial Government Western Cape	<i>e-Service Delivery (Phase 1)</i>	109 000
Taylor W	Dept of Communications	<i>Comment on national policy</i>	9 969

RESEARCH FUNDING

Researcher	Project	Amount (Rands)
Bytheway A	Information technology	19 000

UNIVERSITY RESEARCH FUNDING

Researcher	Project	Amount (Rands)
Maumbe BM	Information technology	50 000
Owei V	Information technology	50 000

CONFERENCE PAPERS

Mlitwa N

Information society networks, community informatics, and socio-technical identities: an ANT perspective
3rd International Community Informatics Conference: CIRN 2006
Constructing and Sharing Memory: Community Informatics, Identity and Empowerment
Prato, Italy
9-11 October 2006

Onojaefe D & Bytheway A

Branding essentials in the South African petroleum industry
2nd SIMSR Asia 2006 International Marketing Conference
Mumbai, India
17-18 December 2006

Taylor W, Erwin G & Wesso H

New public policies for the emerging information society in South Africa – a strategic view
Governments & Communities in Partnership: From Theory to Practice
Melbourne, Australia
25-27 September 2006

Weideman M

Making the move from regurgitation to research: BTech project 4 @ e-IA
Teaching and Learning Week
Cape Peninsula University of Technology
31 August 2006

CONFERENCE POSTERS

Hamdulay Z & Weideman M

Search engine visibility: the effect of generic top-level domain choice
8th Annual Conference on WWW Applications
Bloemfontein
5-8 September 2006

Neethling R & Weideman M

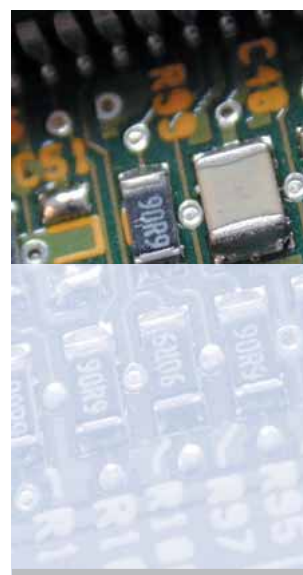
Identification of user profiles for preferences of SEO versus PPC
8th Annual Conference on WWW Applications
Bloemfontein
5-8 September 2006

Nukukwana S & Weideman M

Improving Internet search tools by means of LSA technology
8th Annual Conference on WWW Applications
Bloemfontein
5-8 September 2006

Weideman M & Kritzing WT

An empirical study on the relationship between body keyword location and search engine result ranking
IADIS International Conference: E-Society 2006
Dublin, Ireland
13-16 July 2006





PUBLICATIONS: BOOKS/CHAPTERS IN BOOKS

Czerniewicz L, Ravjee N & **Mlitwa N**
Information and communication technologies (ICTs) and South African higher education: mapping the landscape: research report for the Council on Higher Education. Pretoria: CHE, 2006. ISBN 1-919856-55-2

Erwin G & Taylor W
 Assimilation by communities of Internet technologies. In Marshall S, **Taylor W** & Yu X (eds)

Encyclopedia of developing regional communities with information and communication technology. Hershey, PA: Idea Group Reference, 2006, pp 40-48. ISBN 1-59140-575-0

Marshall S, **Taylor W** & Yu X (eds)
Encyclopedia of developing regional communities with information and communication technology. Hershey, PA: Idea Group Reference, 2006. ISBN 1-59140-575-0

PUBLICATIONS: CONFERENCE PROCEEDINGS

Alexander H, **Maumbe B** & De Tolly K
 Keeping up with the Joneses: questioning the pace of e-government in the developing world. In Cunningham P & Cunningham C (eds). *Proceedings of the IST-Africa 2006, Pretoria, 3-5 May 2006*. Dublin: International Information Management Corporation, 2006. 13 pp (CD-Rom). ISBN 1-905824-01-7

De Tolly, K, **Maumbe B** & Alexander H
 Rethinking e-government development: issues, lessons and future prospects for the Cape Gateway portal in South Africa. In Cunningham P & Cunningham C (eds). *Proceedings of the IST-Africa 2006, Pretoria, 3-5 May 2006*. Dublin: International Information Management Corporation, 2006. 11 pp (CD-Rom). ISBN 1-905824-01-7

Foth M, Gonzalez VM & **Taylor W**
 Designing for place-based social interaction of urban residents in Mexico, South Africa and Australia. In *Proceedings of OZCHI 2006: Design: Activities, Artefacts and Environments, Sydney, 20-24 November 2006*. New York: ACM Digital Library, 2006, pp 345-348 <http://portal.acm.org/dl.cfm>

Hamdulay Z & Weideman M
 Search engine visibility: the effect of generic top-level domain choice. In Van Brakel PA (ed.). *Proceedings of the 8th Annual Conference on World Wide Web Applications, Bloemfontein, 6-8*

September 2006. Cape Town: CPUT, 2006. 15 pp <http://www.zaw3.co.za>
 ISBN 0-620-37309-1

Inusa D & **Bytheway A**
 The e-community forums of the Western Cape. In Bytheway A & Strümpfer C (eds). *Proceedings of CIDC 2006: Community Informatics for Developing Countries: Understanding and Organising for a Participatory Future Information Society, Cape Town, 31 August-2 September 2006*. Cape Town: CPUT, 2006, pp 126-138. ISBN 0-620-37058-0

Maumbe BM & Owei V
 Bringing m-government to South African citizens: policy framework, delivery challenges and opportunities. In Kushchu I, Broucki C & Fitzpatrick G (eds). *Proceedings of the 2nd European Conference on Mobile Government: Opportunities for e-Government: Adapting to Mobile and Ubiquitous Business, Brighton, 3-5 September 2006*. s.l.: Mobile Government Consortium International, 2006. ISBN 0-9763341-1-9

Maumbe BM & Owei V
 The remittance economy in Africa: information communication technology (ICT), socio-economic development and poverty alleviation for community benefits. In Bytheway A & Strümpfer C (eds). *Proceedings of CIDC 2006: Community Informatics for Developing Countries: Understanding and*

Organising for a Participatory Future Information Society, Cape Town, 31 August-2 September 2006. Cape Town: CPUT, 2006, pp 202-215. ISBN 0-620-37058-0

Mitrovic Z & Bytheway A

Community informatics research and practice: a discussion of the status quo and the use of grounded theory. In Bytheway A & Strümpfer C (eds). *Proceedings of CIDC 2006: Community Informatics for Developing Countries: Understanding and Organising for a Participatory Future Information Society, Cape Town, 31 August-2 September 2006.* Cape Town: CPUT, 2006, pp 229--246. ISBN 0-620-37058-0

Mlitwa N & Strümpfer C

Exploring the concepts of the appropriation and usability of community technology – from the activity theory perspective. In Bytheway A & Strümpfer C (eds). *Proceedings of CIDC 2006: Community Informatics for Developing Countries: Understanding and Organising for a Participatory Future Information Society, Cape Town, 31 August-2 September 2006.* Cape Town: CPUT, 2006, pp 247-260. ISBN 0-620-37058-0

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Internet and WWW applications for the digital economy: skills sufficiency, policy and legislative environment in Botswana. In Van Brakel PA (ed.). *Proceedings of the 8th Annual Conference on World Wide Web Applications, Bloemfontein, 6-8 September 2006.* Cape Town: CPUT, 2006. 16 pp <http://www.zaw3.co.za>. ISBN 0-620-37309-1

Nkukwana S & Weideman M

Working paper: using LSA matrix comparison to improve the relevancy of search engine answers. In Van Brakel PA (ed.). *Proceedings of the 8th Annual Conference on World Wide Web Applications, Bloemfontein, 6-8 September 2006.* Cape Town: CPUT, 2006. 14 pp <http://www.zaw3.co.za>. ISBN 0-620-37309-1

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Unbundling e-government service delivery in developing countries: framework, marketing strategies and lessons. In Irani Z *et al.* (eds).

Proceedings of the European & Mediterranean Conference on Information Systems (EMCIS) 2006: Engaging International Information Systems and Management Perspectives: No Barriers, No Divides, Alicante, Spain, 6-7 July 2006. s.l.: ISEing, 2006. 9 pp (CD-Rom). ISBN 1-902316-46-0

Remenyi D & Pather S

How much have you actually invested in your ICT systems? In Remenyi D & Brown A (eds). *Proceedings of the 13th European Conference on Information Technology Evaluation, Genoa, Italy, 28-29 September 2006.* Reading: Academic Conferences, 2006, pp 398-406. ISBN 978-1-905305-32-2

Salum A & Pather S

Harmonising website design and service quality criteria. In Van Brakel PA (ed.). *Proceedings of the 8th Annual Conference on World Wide Web Applications, Bloemfontein, 6-8 September 2006.* Cape Town: CPUT, 2006. 18 pp <http://www.zaw3.co.za>. ISBN 0-620-37309-1

Schauder D, Johanson G & Taylor W

Libraries, ICT policy, and Australian civil society: issues and prospects from national consultations. In Vouch S (ed.). *Proceedings of VALA 2006 13th Biennial Conference and Exhibition, Melbourne, Australia, 8-10 February 2006.* Melbourne: VALA-RMIT, 2006 <http://www.vala.org.au/vala2006/auth2006.htm>

Shivute MI, De la Harpe R & Maumbe B

Medical practitioners' interactions with their communities: a Nambian perspective. In Bytheway A & Strümpfer C (eds). *Proceedings of CIDC 2006: Community Informatics for Developing Countries: Understanding and Organising for a Participatory Future Information Society, Cape Town, 31 August-2 September 2006.* Cape Town: CPUT, 2006, pp 331-351. ISBN 0-620-37058-0

Taylor W

The e-volution of the i-society in the business of e-governance. In *Proceedings of the UNESCO Between Two Phases of the World Summit on the Information Society International Conference, Saint Petersburg, Russia, 17-19 May 2005*, pp 50-59. ISBN: 5-901907-14-0





Taylor W, Maumbe BM & Day P

Some research lessons from the e-economy forums in the Western Cape of South Africa. In Cunningham M & Cunningham P (eds). *Proceedings of eChallenges 06: Exploiting the Knowledge Economy: Issues, Applications and Case Studies, Barcelona, Spain, 25-27 October 2006*. Amsterdam: IOS Press, 2006, vol. 3, part 1, pp 374-381. ISBN 1-58603-682-3

Taylor W, Schauder D & Johanson G

The emerging role of civil society in the information society: Australian civil society engagement in the WSIS process. In *Proceedings of the UNESCO Between Two Phases of the World Summit on The Information Society International Conference, Saint Petersburg, Russia, 17-19 May 2005*, pp 471-481. ISBN: 5-901907-14-0

Van Brakel PA (ed.)

Proceedings of the 8th Annual Conference on World Wide Web Applications, Bloemfontein, 6-8 September 2006. Cape Town: CPUT, 2006. <http://www.zaw3.co.za>. ISBN 0-620-37309-1

Visser EB, Kritzinger WT & Weideman M

Search engine optimising elements and their effect

on website visibility: implementation of the Chambers model. In Van Brakel PA (ed.).

Proceedings of the 8th Annual Conference on World Wide Web Applications, Bloemfontein, 6-8 September 2006. Cape Town: CPUT, 2006. 27 pp <http://www.zaw3.co.za>. ISBN 0-620-37309-1

Weideman M

Crawler visibility and human usability of a government services website from a technomunity angle. In Bytheway A & Strümpfer C (eds).

Proceedings of CIDC 2006: Community Informatics for Developing Countries: Understanding and Organising for a Participatory Future Information Society, Cape Town, 31 August-2 September 2006. Cape Town: CPUT, 2006, pp 368-385. ISBN 0-620-37058-0

Weideman M & Chambers R

Improving website visibility and information retrieval of e-commerce ventures: a specification to please the crawlers. In Isalas P, McPherson M & Bannister F (eds). *Proceedings of the IADIS International Conference: e-Society 2006, Dublin, 13-16 July 2006*. s.l.: IADIS Press, 2006, pp 285-289. ISBN 972-8924-16-X

PUBLICATIONS: JOURNALS

(* indicates publication in a DoE accredited journal)

Groenewald DC, Kritzinger WT &

Weideman M (eds)

ICT Research Forum: Project IV, (3). Cape Town: e-Innovation Academy, CPUT, 2006

Maumbe BM

Digital financial service delivery to poor communities in South Africa: a preliminary assessment. *Journal of International Business Research and Policy*, 2(2):72-78, 2006

***Mbikiwa FN & Weideman M**

Implications of search engine spam on the visibility of South African e-commerce websites. *South African Journal of Information Management*, 8(4), 2006 (online)

***Mutula SM & Van Brakel PA**

An evaluation of e-readiness assessment tools with respect to information access: towards an integrated information rich tool. *International Journal of Information Management*, 26:212-223, 2006

***Mutula SM & Van Brakel PA**

E-readiness of SMEs in the ICT sector in Botswana

with respect to information access. *Electronic Library*, 24(3):402-417, 2006

***Pather S, Remenyi D & De la Harpe A**

Evaluating e-commerce success – a case study. *Electronic Journal of Information Systems Evaluation*, 9(1):15-26, 2006

***Remenyi D, Grant KA & Pather S**

The chameleon: a metaphor for the Chief Information Officer. *Journal of General Management*, 30(3):1-11, 2005

***Thomas HJ & Van Brakel PA**

Investigating the administrative professional's information management role in a networked enterprise. *South African Journal of Information Management*, 8(4), 2006 (online)

Van Brakel, PA (ed.)

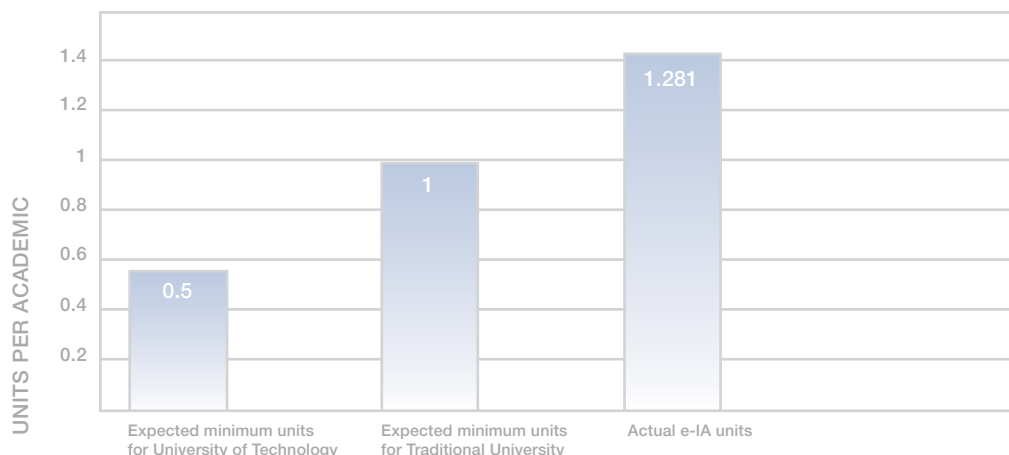
South African Journal of Information Management, 1(1), June 1999+. ISSN 1560-683X <http://www.sajim.co.za> [DoE accredited journal]

***Weideman M & Schwenke F**

The influence that JavaScript™ has on the visibility of a website to search engines – a pilot study.
Information Research – An International Electronic Journal, 11(4), 2006 (online)

Weideman M, Kritzinger W & Visser E (eds)

ICT Research Forum (2): Project IV 2005. Cape Town: e-Innovation Academy, CPUT, 2005.
 ISSN 1814-9812

DoE UNITS PER ACADEMIC PER YEAR**POSTGRADUATE DEGREES SUPERVISED*****DTech: Information Technology*****Pather S**

E-commerce information systems (ECIS) success: a South African study

MTech: Business Information Systems**Kritzinger WT**

The effect web page body keyword location has on ranking in search engine results: an empirical study

MTech: Information Technology**Bowers GG**

Adoption intentions and benefits realised: a study of e-commerce in SMMEs

Dumas C

An investigation into the optimisation of the use of the Internet by SMMEs in the property market

Featonby M

M-commerce in SMMEs: an investigation into the barriers and motivators to the adoption of mobile commerce by cellular subscribers

Maree DC

A strategy for software testing in SMMEs

Naidoo K

Impact of e-loyalty on the business success of SMEs

Ozonuwe UF

SMME website validation for consumer protection

Rothman WC

Optimisation of business processes for e-transformation in SME legal practices

Topkin JH

Web service as an integral part of the SME value chain

Visser EB *cum laude*

Search engine optimisation elements' effect on website visibility: the Western Cape real estate SMME sector

Voges FW

A guideline for the adoption of order processing for B2B e-commerce



energy technology unit



UNIVERSITY RESEARCH FUNDING

Researcher	Project	Amount (Rands)
Uken E-A & Lukamba-Muhiya JM	Energy Technology Unit	7 000

INDUSTRY CONTRACT FUNDING

Source	Amount (Rands)
Eskom (CTAD)	422 145
Eskom Enterprises	477 355
Eskom (DSM)	97 014

PUBLICATIONS: JOURNALS

(* indicates publication in a DoE accredited journal)

Bredekamp A, Uken E & Borrill L

Standby power consumption: domestic appliances in South Africa. *ESI Africa: The Power Journal of Africa*, 13(2):52-54, 2006

*Dassah MO & Uken E-A

Monitoring and evaluation in Africa with reference to Ghana and South Africa. *Journal of Public Administration*, 41(4):705-720, 2006

*Lukamba-Muhiya JM & Uken E

The electricity supply industry in the Democratic Republic of Congo. *Journal of Energy in Southern Africa*, 17(3):21-28, 2006

fundani centre for higher education development

UNIVERSITY RESEARCH FUNDING

Researcher	Total (Rands)
Tisani N	20 000

CONFERENCE PAPERS

Deyi S

The impact that the language used in giving feedback has on students' writings

Higher Education Teaching & Learning Association of Southern Africa (HELTASA) Conference
Tshwane University of Technology
Pretoria
27-29 November 2006

Deyi S

When assessment mediates the gap between vocational and academic literacy

The Assessment Event
Grahamstown
11-12 September 2006

De Graaf-Mazaza F

The interpretation of knowledge in higher education during the recognition of prior learning: a theoretical analysis

Higher Education Teaching & Learning Association of Southern Africa (HELTASA) Conference
Tshwane University of Technology
Pretoria
27-29 November 2006

Garraway J

Crossing boundaries in assessment

The Assessment Event
Grahamstown
11-12 September 2006

Garraway J

Knowledge difference and boundary activity between different communities

6th International Conference on Knowledge, Culture & Changes in Organisations
Prato, Italy
11-14 July 2006

Garraway J

The role of difference in the creation of responsive curriculum

Higher Education Teaching & Learning Association of Southern Africa (HELTASA) Conference
Tshwane University of Technology
Pretoria
27-29 November 2006

Hewson C & Pearce C

Juggling change in learning awareness: lecturers, peer facilitators, novice learners and academic developers get in on the act!

Higher Education Teaching & Learning Association of Southern Africa (HELTASA) Conference
Tshwane University of Technology
Pretoria
27-29 November 2006

Mkonto N

Understanding students' learning styles

Higher Education Teaching & Learning Association of Southern Africa (HELTASA) Conference
Tshwane University of Technology
Pretoria
27-29 November 2006





Nsibande R

Exploring the use of professional dialogue to enhance reflection on practice

Higher Education Teaching & Learning Association of Southern Africa (HELTASA) Conference
Tshwane University of Technology
Pretoria
27-29 November 2006

Nsibande R

Teachers' assessment practices: implications for successful implementation of continuous assessment programmes

24th Annual Conference of the Association for Educational Assessment in Africa
Mbabane, Swaziland
28 August-1 September 2006

Tisani N

Challenges in producing a portfolio for assessment
The Assessment Event

Rhodes University, Grahamstown
11-12 September 2006

Tisani N

Educators as learners: lecture rooms as new frontiers for knowledge production

Higher Education Teaching & Learning Association of Southern Africa (HELTASA) Conference
Tshwane University of Technology
Pretoria
27-29 November 2006

Volbrecht T

A new day of judgement? Accrediting assessors in South African higher education

The Assessment Event
Rhodes University, Grahamstown
11-12 September 2006

Volbrecht T

RPL in South African teacher upgrading: some curriculum issues

Higher Education Teaching & Learning Association of Southern Africa (HELTASA) Conference
Tshwane University of Technology
Pretoria
27-29 November 2006

Winberg C

Language practices in higher education and related workplaces

Higher Education Teaching & Learning Association of Southern Africa (HELTASA) Conference
Tshwane University of Technology
Pretoria
27-29 November 2006

Winberg C & Van der Geest TM

Teaching technical writing to ESL students: a meta-analysis

Integrating Content and Language in Higher Education (ICLHE) 2006
Maastricht, The Netherlands
28 June-1 July 2006



CONFERENCE POSTERS

Deyi S

The influence of SMS language on students' writing

Southern African Applied Linguistics Association & Linguistics Society of Southern Africa Joint Linguistics Conference 2006: Language Variation in Changing Contexts
Durban
5-7 July 2006

PUBLICATIONS: CONFERENCE PROCEEDINGS

Volbrecht T

A new day of judgement? Accrediting assessors in South African higher education. In Bunker A & Vardi I (eds). *Proceedings of the 29th Higher Education Research and Development Society of Australasia (HERDSA) Annual Conference: Critical Visions:*

Thinking, Learning and Researching in Higher Education, Perth, Western Australia, 9-13 July 2006. (Research and Development in Higher Education, vol. 29.) Milperra, Australia: HERDSA, 2006, pp 372-379. ISBN 0-908557-69-8



PUBLICATIONS: JOURNALS

(* indicates publication in a DoE accredited journal)

April L & Garraway J

Integrating generic skills into teaching.

Paradigms: Journal for Debate into Higher Education, (13):19-23, 2006

*Garraway J

Creating productive interactions between work and the academy. *Higher Education*, 52:447-464, 2006

*Tisani N

Assessment by portfolio: an encounter with contradictory discourses. *South African Journal of Higher Education*, 20(3):546-557, 2006

*Winberg C

Knowledge production in an architectural practice and a university architectural department. *Perspectives in Education*, 24(3):83-95, 2006

*Winberg C

Undisciplining knowledge production: development driver higher education in South Africa. *Higher Education*, 51(2):159-172, 2006

Winberg C, Engel-Hills P, Garraway J, Jacobs C & Volbrecht T

Editorial: Higher education and work. *Perspectives in Education*, 24(3):vii-ix, 2006

Winberg C & Volbrecht T

Towards a teaching and learning strategy for the CPUT: views from the ground. *Paradigms: Journal for Debate into Higher Education*, (13):4-11, 2006

TECHNICAL REPORTS

Garraway J

The conceptualisation, design and implementation of learnerships in three sectors. Pretoria: EDTP SETA, 2006 (Report no. L 520702194)

Volbrecht T, Hendricks N, Ralphs A & Tisani N

Recognition of prior learning in the National Professional Diploma in Education (submitted to ETDP SETA, March 2006)

Winberg C, Nduna J, Engel-Hills P, Garraway J, Jacobs C, Wright J & Wyrley-Birch B

South Africa's indigenous and international language practices in science, engineering and technology disciplines in higher education and related workplaces. Report no. 03/55 commissioned by the South African Netherlands Partnership for Alternatives in Development (SANPAD), 2006



POSTGRADUATE DEGREES OBTAINED BY STAFF MEMBERS

MPhil Ed (Applied Language Studies and Literacy)

University of Cape Town

Deyi S

Ulwakhiwo lwamagama enza ingqiqo: amagama enza ingqiqo nolwimi ekufundeni/ekufundiseni izifundo zezibalo

hiv/aids unit

CONFERENCE PAPERS

Mohammed Ashraf

Challenging HIV/Aids stigma and discrimination by
incorporation of HIV/Aids in the curricula
Core Competencies in Human Rights for Health
Professionals
University of Cape Town
5-7 July 2006

CONFERENCE POSTERS

Mohammed Ashraf

*Randomized controlled trial of isoniazid preventive
therapy, administered by patient-nominated
supervisors, in South African adults with advanced
HIV disease*
XVI International Aids Conference: Time to Deliver
Toronto, Canada
13-18 August 2006

Mohammed Amina & Mohammed Ashraf

*Knowledge, attitudes and practices (KAP) survey
regarding HIV/Aids hotel staff from a selected hotel
in Cape Town*
XVI International Aids Conference: Time to Deliver
Toronto, Canada
13-18 August 2006



library services

CONFERENCE PAPERS

Frier M

Information literacy initiatives: the case of mechanical engineering

Western Cape Higher Education Libraries Interest Group (WCHELIG) Winter Colloquium: Collaboration for Success

Cape Peninsula University of Technology
14 June 2006

Moll M

Going the extra mile(s)

Western Cape Higher Education Libraries Interest Group (WCHELIG) Winter Colloquium: Collaboration for Success

Cape Peninsula University of Technology
14 June 2006

Moll M

Swallowing an elephant: the experience of college libraries and the Cape Technikon

UKZN & LIASA Mini-Conference: Institutional Mergers and their Impact on the LIS Sector: Challenges, Experiences and Lessons

Durban
10-12 April 2006

Panayiotou S

Building school libraries, creating learning relationships and partners in education

Western Cape Higher Education Libraries Interest Group (WCHELIG) Winter Colloquium: Collaboration for Success

Cape Peninsula University of Technology
14 June 2006



PUBLICATIONS: CONFERENCE PROCEEDINGS

Frier MD

Information literacy assessment in an information society: the case of the mechanical engineering department at CPUT (Cape Peninsula University of Technology). In Pistorius C (ed.). *Proceedings of the 3rd African Regional Conference on Engineering Education & 4th Southern African Conference on Engineering Education: Engineering Education for Sustainable Development, Pretoria, 26-27 September 2006*. Pretoria: University of Pretoria, 2006, pp 277-287. ISBN 0-620-37232-X

PUBLICATIONS: JOURNALS

(* indicates publication in a DoE accredited journal)

*Verster FP & Coreejes-Brink P

Adoons-hulle: 'n satiriese dierestrokke deur T.O. Honiball. *South African Journal of Cultural History*, 20(2):140-158, 2006

research & technology promotion



UNIVERSITY RESEARCH FUNDING

Researcher	Department	Total (Rands)
Hartley MS	Contract Research Unit	30 000

CONFERENCE PAPERS

Hartley MS

Assessing the needs of eight rural schools in the Eastern Cape Province, South Africa, as a premise for the development of informal science and mathematics interventions

XII International Organisation for Science & Technology Education (IOSTE) Symposium
Science and Technology Education in the Service of Mankind
Penang, Malaysia
30 July-4 August 2006

Hartley MS

Learning physical science in a rural South African school: a case study of student perceptions of the value of computer-assisted learning

37th Annual Conference of the Australasian Science Education Research Association (ASERA)
Canberra, Australia
5-8 July 2006



PUBLICATIONS: JOURNALS

(* indicates publication in a DoE accredited journal)

*Dawood A & Stam EM

The taxonomic status of the monotypic frog genus *Anhydrophrane* Hewitt from South Africa: a molecular perspective. *South African Journal of Science*, 102:249-253, 2006

Hartley MS & Treagust DF

Learning physical science in a rural South African school: a case study of student perceptions of the value of computer-assisted learning. *Science Education International: The Journal of the International Council of Associations for Science Education*, 17(1):13-29, 2006

*Ndakidemi PA

Manipulating legume/cereal mixtures to optimize the above and below ground interactions in the traditional African cropping systems. *African Journal of Biotechnology*, 5(25):2526-2533, 2006

*Ndakidemi PA, Dakora FD, Nkonya EM, Ringo D & Mansoor H

Yield and economic benefits of common bean (*Phaseolus vulgaris*) and soybean (*Glycine max*) inoculation in northern Tanzania. *Australian Journal of Experimental Agriculture*, 46:571-577, 2006

service learning & community engagement

FUNDING

Source	Project	Amount (Rands)
CPUT	Service learning grants to faculties	575 000



PUBLICATIONS: JOURNALS

(* indicates publication in a DoE accredited journal)

*Nduna NJ

Locating and managing service-learning: a complex issue in higher education. *South African Journal of Higher Education*, 20(4):488-502, 2006

student affairs student counselling

CONFERENCE PAPERS

Hanning Y, De Villiers AB & Petersen C

Contextualising life skills for foundation engineering programmes

27th Annual Society for Student Counselling in

Southern Africa (SSCSA) Conference

Contextualising the Way Forward: Exploring Roots and Future Directions for Student Counselling in Southern Africa

Mpekweni Beach Resort, Eastern Cape

18-21 September 2006



technology institute community water supply & sanitation



RESEARCH FUNDING

Source	Project	Amount (Rands)
Local Government SETA	National sanitation skills project	200 394
Dept of Water Affairs & Forestry/USAid	Five-year skills development plan for the ESETA	112 404
Dept of Water Affairs & Forestry /RUDO Consultancy	Sanitation gearing-up capacity building	141 148
Development Bank of Southern Africa	Disaster mitigation project	137 632
NRF	Peri-urban sanitation research	130 000
CPUT	Research support	37 000

PUBLICATIONS: CONFERENCE PROCEEDINGS

Cousins D

Community involvement in the provision of basic sanitation service to informal settlements. In *Proceedings of the Water Institute of Southern Africa (WISA) Biennial Conference & Exhibition, Durban, 21-25 May 2006*. 12 pp (CD-Rom)

Lagardien A

Accredited skills development for community participants on sanitation projects – lessons from the sanitation sector lead project in South Africa. In *Proceedings of the Water Institute of Southern Africa (WISA) Biennial Conference & Exhibition, Durban, 21-25 May 2006*. 10 pp (CD-Rom)

Van Wyk R

A review of sanitation and health promotion as part of sanitation delivery programmes to informal settlements (City of Cape Town). In *Proceedings of the Water Institute of Southern Africa (WISA) Biennial Conference & Exhibition, Durban, 21-25 May 2006*. 11 pp (CD-Rom)



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