

GRA 1/4/60

- with errata pasted in.

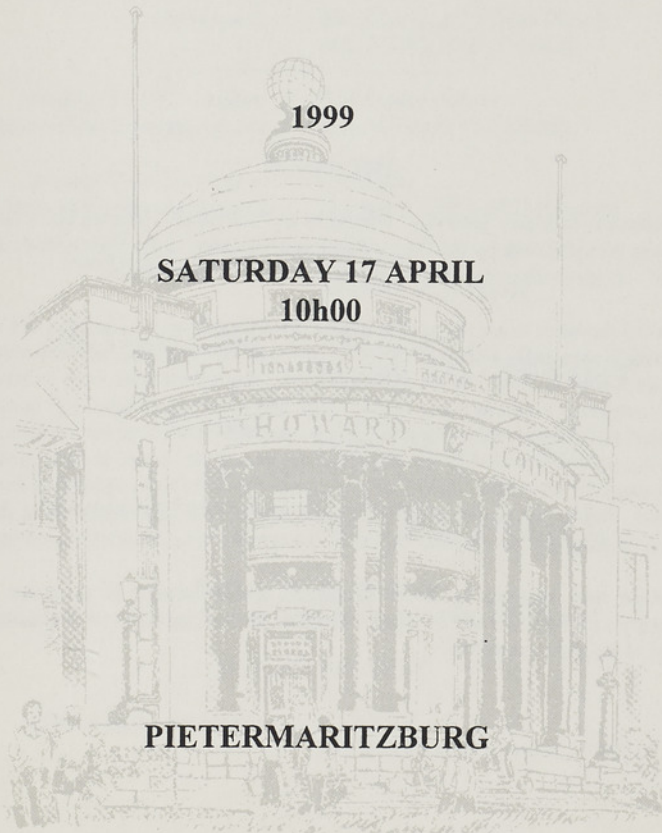


UNIVERSITY OF NATAL

**GRADUATION/DIPLOMA
CEREMONY**

1999

**SATURDAY 17 APRIL
10h00**



PIETERMARITZBURG

THE CHANCELLOR

"Chancellor" is an office that goes back to antiquity; the original cancellarius regulated access to the Roman Tribune. In medieval times, the office became associated with the heads of the writing departments of early kings. Because so few people were literate, a chancellor was automatically learned. This explains why heads and spokesmen of the early universities were also accorded the title. More recently, the office has become largely symbolic. The executive head of a university is its vice-chancellor.

Justice Pius Langa is the sixth Chancellor of the University of Natal. His predecessors were: The Honourable D G Shepstone (1949-1966), Dr G G Campbell (1967-1973), Dr B A Armitage (1973-1983), the Honourable R N Leon QC (1983-1992) and Archbishop D E Hurley (1993-1998)

THE MACE

The Chancellor's Mace, generally referred to as "The Mace", is used on ceremonial occasions presided over by the Chancellor and is regarded as the Chancellor's staff of "office". It symbolises the University's protection of its Chancellor.

The use of the mace as a symbol of authority has a long history. The head of a copper mace, which apparently dates back to the 12th century before Christ, has been excavated at Beyce Sultan in Asia. In the early centuries, churchmen who went to war often carried a mace in preference to a sword. One side of the mace-head was beautifully decorated with the owner's emblem and on the other side was a large knob which served as a weapon, and was always round so that the church law never to shed blood was always carefully observed! In the early centuries the mace was a symbol of the king's authority. During the power struggle between the king and the Commons in the 13th century, the king gave the speaker the mace as a symbol of his indemnity against arrest.

The Mace was designed by Mr G H Atkins, senior lecturer in sculpture in the University's Department of Fine Arts, was made in England and was first used at the 1970 graduation ceremonies.

OFFICERS

Chancellor	The Honourable Justice P N Langa Deputy President of the Constitutional Court <i>Bluris, LLB(Unisa), LLD(honoris causa)(Unizul)</i>
Vice-Chancellor and Principal	B M Gourley <i>CTA (Witwatersrand), MBL (Unisa), HonLLD (Nott)</i>
Chairman of Council	A Rogoff <i>CA (SA)</i>
Senior Deputy Vice-Chancellor	D A Maughan Brown <i>BA (Cape Town), MA (Cantab), DPhil (Sussex)</i>
Deputy Vice-Chancellor (Academic)	A C Bawa <i>BSc (Unisa), BSc(Hons) (Natal), MSc (UDW), PhD (Durham)</i>
Deputy Vice-Chancellor (Research and Development)	E M Preston-Whyte <i>BSocSc(Hons), PhD (Natal)</i>
Deputy Vice-Chancellor (Students and Transformation)	E A Ngara <i>BA(Hons), MPhil, PhD (London)</i>
Pro Vice-Chancellor	P M Zulu <i>BA(Hons), PhD (Natal)</i>
Pro Vice-Chancellor	J D Volmink <i>BSc(Hons) (UWC), PhD (Cornell)</i>
Registrar	G J Trotter <i>BA(Hons) (Natal), MA (Duke)</i>
Convocation President	Z Mlisana <i>MBChB (Natal), FCP(Paed)(SA)</i>
Orator	C O Gardner <i>BA(Hons) (Natal), MA (Oxon)</i>

DEAN OF FACULTY

Science and Agriculture	R J Haines <i>MSc (Natal), PhD (London), FRSSAf</i>
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PROGRAMME

The Academic Procession enters the Hall

THE CHANCELLOR CONSTITUTES THE CONGREGATION

WELCOME TO GUESTS

The Vice-Chancellor

ADDRESS

The President of the Students' Representative Council

PRESENTATION OF FELLOW OF THE UNIVERSITY

The Deputy Vice-Chancellor (Research and Development)

PRESENTATION OF DOCTORAL GRADUANDS

The Dean of the Faculty of Science and Agriculture

HONORARY DEGREE

The Orator introduces the Honorary Graduand

ADDRESS

Robert Graham Cooks
BSc (Hons), MSc, PhD (Natal)

UNIVERSITY OF NATAL CHORALE

Conductor : S E Mkhulusi, BMus (Unisa), BA(Hons) (Natal)

Two Traditional Songs

PRESENTATION OF GRADUANDS AND DIPLOMATES

The Dean of the Faculty of Science and Agriculture

THE CHANCELLOR DISSOLVES THE CONGREGATION

The Choir leads the singing of the National Anthem
(Words on the back cover of the Programme)

The Academic Procession leaves the Hall

The Convocation Procession leaves the Hall

The congregation is requested to stand, and to remain standing, while the processions enter and leave the Hall and to remain seated until the conclusion of the ceremony.

Only officially authorised persons are permitted to take photographs during the ceremony.

FELLOW OF THE UNIVERSITY OF NATAL

FACULTY OF SCIENCE AND AGRICULTURE

(see page 17)

Wolstenholme, Barry Nigel

BScAgric, PhD(Natal)

Awarded for distinguished contributions in Horticultural Science

DOCTORAL GRADUANDS

DOCTOR OF PHILOSOPHY IN THE FACULTY OF SCIENCE AND AGRICULTURE

Discipline

Abrie, Amelia Letitia, MSc Botany

Thesis: Regeneration and biotransformation of some members
of the cucurbitaceae

Supervisor: Professor J van Staden

Co-supervisor: Dr D I Ferreira

Adendorff, Rosemary, BSc(Hons) Plant Pathology

Thesis: Infection of kikuyu grass (*Pennisetum clandestinum*)
by the rust fungus *Phakopsora apoda*

Supervisor: Professor F H J Rijkenberg

Adie, Hylton Ralph, MSc Botany

Thesis: Vegetation and ant dynamics in the southern Karoo

Supervisor: Professor J van Staden

Co-supervisor: Professor R I Yeaton

Azizi, Abbas, MSc Applied Mathematics

Thesis: Developing an integrated decision support system for
an oil refinery

Supervisor: Professor J W Hearne

Bayliss, Paul Spencer, BSc(Hons) Entomology

Thesis: Systematic revision of *Tricholabiodes* Radoszkowski
(Hymenoptera: Mutillidae)

Supervisor: Professor D J Brothers

- Browning, Jane Beatrice Mary, MSc** Botany
 Thesis: A contribution to the taxonomy of *Bolboschoenus* (Cyperaceae), with particular reference to fruit morphology and the African species
 Supervisor: Professor J van Staden
 Co-supervisor: Professor K D Gordon-Kray
- Dehrmann, Frieda Marie, MSc** Biochemistry
 Thesis: Properties of cathepsin L in relation to a role in invasive cancer
 Supervisor: Professor C Dennison
- Gunning, Mark Julian, MSc** Physics
 Dissertation: Some experimental and theoretical studies in crystal optics
 Supervisor: Professor R E Raab
 Co-supervisor: Professor W Kucharczyk
- Hare, Peter Derek, MSc** Plant Molecular Biology
 Thesis: A regulatory role for proline metabolism in *Arabidopsis thaliana* (L.) Heynh.
 Supervisor: Dr WA Cress
 Co-supervisor: Professor J van Staden
- Jaganyi, Joan Nyangasi Ukiru, MSc (Imperial College, London)** Entomology
 Thesis: Response of carabid and cicindelid beetles to various types of landscape disturbances
 Supervisor: Professor M J Samways
- Kirkman, Kevin Peter, MScAgric** Range & Forage Resources
 Thesis: Impact of stocking rate, livestock type and livestock movement on sustainable utilisation of sourveld
 Supervisor: Professor T O'Connor
 Co-supervisor: Professor P J K Zacharias
- Magagula, Cebisile Ntombikayise, MSc (Dalhousie, Canada)** Entomology
 Thesis: Effects of insect growth regulators on non-target species, with an emphasis on coccinellids on citrus, in Swaziland
 Supervisor: Professor M J Samways

- Moji, Nthobane Cable, MSc** Physics
 Thesis: Investigation of conceptual and language difficulties affecting the understanding of several mechanics concepts among some African teachers and students
 Supervisor: Dr D Grayson
- Morty, Rory Edward, MSc** Biochemistry
 Thesis: A serine oligopeptidase from African trypanosomes
 Supervisor: Dr T H T Coetzer
 Co-supervisor: Dr J D Lonsdale-Eccles
- Wortmann, Joanne, MSc** Applied Mathematics
 Thesis: A modelling approach for determining the freshwater requirements of estuarine macrophytes
 Supervisor: Professor J W Hearne
 Co-supervisor: Professor J H Swart

HONORARY GRADUAND (see page 18)

Cooks, Robert Graham
 BSc(Hons), MSc, PhD(Natal)

GRADUANDS

MASTER OF SCIENCE

- Discipline*
- * **Badurally Adam, Muhammad Siddiq Ahmad, BCom(Hons)** Agricultural Economics
 Dissertation: Impact on South African meat demand of a possible Free Trade Agreement with the European Union
 Supervisor: Mr M A G Darroch
- * **Barbour, Graham David, BSc(Hons)** Mathematics
 Dissertation: On regularity, ideal determination and related Mal'cev properties of varieties of algebras
 Supervisor: Professor J G Raftery
 Co-supervisor: Professor T Sturm
- Cradock, Kenwyn Roan, BSc(Hons)** Plant Pathology
 Dissertation: Control of Insect-transmitted viruses in cucurbit crops in KwaZulu-Natal
 Supervisor: Professor J V da Graca
 Co-supervisor: Professor M D Laing

- Dikobe, Leonard Mogopodi, BSc, Botswana** Environment & Development
 Dissertation: Patterns and economic impacts of livestock predation
 in rural communities bordering Makgadikgadi Pans
 National Park in Botswana
 Supervisor: Mr M Darroch
 Co-supervisor: Dr R Bell
- Dimbi, Lilian Rungano, BScAgric(Hons)(Zimbabwe)** Environment & Development
 Dissertation: The role of leadership institutions in the structure and
 functioning of community based natural resource
 management organizations: A Zimbabwean case study
 Supervisor: Professor C M Breen
 Co-supervisor: Professor M W Murphree
- * **Dudley, Barry Thomas, BSc(Hons)** Microbiology
 Dissertation: Application of image analysis in microecophysiology
 research: methodology development
 Supervisors: Professor E Senior and Professor F M Wallis
 Co-supervisor: Mr A G Bruton
- Dobeyn, Ciranne Joy, BSc(Hons)** Environment & Development
 Dissertation: Greening small business - assessing the level of
 environmental awareness and practice in small
 businesses in Edenvale
 Supervisor: Mr D P de Waal
 Co-supervisor: Ms K Ireton
- Duncan, Andrew Cameron, BSc(Hons)** Botany
 Dissertation: An investigation of plants used in South Africa for the
 treatment of hypertension
 Supervisor: Professor J van Staden
 Co-supervisor: Dr A K Jäger
- Gumede, Stephen Napolian Zibusiso, BSc(Hons)** Physics
 Dissertation: Tracer diffusion of oxygen in $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ from
 Monte Carlo simulations of an Ising-type model
 Supervisor: Dr A S Illchev
 Co-supervisor: Professor O L de Lange
- Johnson, Caron Lisa, BSc(Hons)(Rhodes)** Zoology
 Dissertation: Urinary schistosomiasis surveillance in primary
 health care in South Africa
 Supervisor: Professor C C Appleton

- Johnson, Stephanie, BSc(Hons)** Zoology
 Dissertation: The effects of rainfall unpredictability on the circadian energy rhythms of the four-striped field mouse, *Rhabdomys pumilio*
 Supervisor: Dr B G Lovegrove
- Machaba, Kulani Patrick, BSc(Hons)** Plant Pathology
 Dissertation: The epidemiology and control of crucifer chocolate spot
 Supervisor: Professor M D Laing
 Co-supervisors: Professor F M Wallis & Dr M Qhobela
- Maughan Brown, Anthony Michael, BSc(Hons)(Cape Town)** Environment & Development
 Dissertation: Revisiting community based natural resource management: a case study of the Tchuma Tchato project in Tete province, Mozambique
 Supervisor: Professor C M Breen
- McKechnie, Andrew Edward, BSc(Hons)** Zoology
 Dissertation: The ecophysiology of the White-backed Mousebird (*Colius colius*)
 Supervisor: Dr B G Lovegrove
- Moffat, Andrew John, BScAgric** Environment & Development
 Dissertation: A suitability assessment of farms for inclusion in a UNESCO-approved biosphere reserve: the case of the Itala Biosphere Reserve, Kwa-Zulu-Natal
 Supervisor: Mr J Klug
 Co-supervisor: Dr F Ahmed
- Mohasi, Lieketseng, BSc(Hons)** Geography
 Dissertation: Adventure travel and sustainable tourism development in Lesotho: the case of pony trekking
 Supervisor: Professor R J Fincham
- Mosia, Mamoeletsi Rachel, BSc(Hons)** Chemistry
 Dissertation: Oxidation of primary alcohols to aldehydes and esters
 Supervisor: Dr N D Emslie
 Co-supervisor: Dr B Rahm
- Nyang'ali, Engelbert Engelbert, BScAgric, Sokoine Univ. of Agric. Tanzania** ... Geography
 Dissertation: Child survival, protection and development in Mara and Singida regions, Tanzania: a focus on the processess of implementation
 Supervisor: Professor R J Fincham
 Co-supervisor: Ms F M Ross

- Ramesar, Niyum Sathya, BSc** Chemistry
 Dissertation: Copper(I), Palladium(II) and Platinum(II) complexes of the 2-diphenylphosphino-1,10-phenanthroline ligand
 Supervisor: Professor R J Haines
 Co-supervisor: Professor J S Field
- Ramsden, Peter John, BSc(Hons)** Microbiology
 Dissertation: Biodeterioration of aluminium hot roll emulsions
 Supervisor: Professor F M Wallis
- Seholoholo, Masechaba, BSc(Hons)** Environment & Development
 Dissertation: Solid waste management in low and high income residential areas of Maseru: a comparative study of Maseru West and Sea Point
 Supervisor: Professor D G B Slade
- Sharratt, Norma Joan, BSc(Hons)** Entomology
 Dissertation: Ecological aspects and conservation of the invertebrate fauna of the sandstone caves of Table Mountain, Cape Town
 Supervisor: Professor M J Samways
 Co-supervisor: Dr M D Picker
- Shearer, Nicollette, BSc(Hons)** Biochemistry
 Dissertation: Analysis of the *Mycoplasma hominis* hsp70 gene and development of a PCR-ELISA assay
 Supervisor: Professor J W Hastings
- Shrader, Adrian Morgan, BSc(Hons)** Zoology
 Dissertation: Utilisation of low density vacuum zones by white rhinos in the Umfolozi Game Reserve
 Supervisor: Professor M R Perrin
 Co-supervisor: Dr D Balfour
- Slatter, Kerry Anne, BSc(Hons) Cape Town** Biochemistry
 Dissertation: Nickel accumulation and tolerance in *Berkheyia codii* and its application in phytoremediation
 Supervisor: Dr T R Anderson
- Steyn, Trevor, BSc(Hons)** Chemistry
 Dissertation: The chemical constituents of *Ehretia rigida*, *Apodytes dimidiata* and *Ocotea kenensis*
 Supervisor: Professor S E Drewes

- * **Taylor, Kerry Lynn, BSc(Hons)** Biochemistry
 Dissertation: Methods for serotype classification of *Haemophilus paragallinarum* field isolates
 Supervisor: Dr T H T Coetzer
 Co-supervisor: Dr RF Horner
- Tomlinson, Kyle, BScAgric** Environment & Development
 Dissertation: Modelling the effect of property size on the opportunity cost incurred by wildlife production
 Supervisor: Professor J W Hearne
 Co-supervisor: Professor T O'Connor
- * **Wheeler, Peter John, BSc(Hons)** Chemistry
 Dissertation: A kinetic and equilibrium study of rooibos tea infusions
 Supervisor: Dr D Jaganyi

MASTER OF SCIENCE IN AGRICULTURE

- Discipline*
- Armitage, Roger Myles, BScAgric** Agricultural Economics
 Dissertation: An economic analysis of irrigation water rights transfers in selected areas of South Africa
 Supervisor: Professor W L Nieuwoudt
- Burger, Caren, BScAgric(Hons) OFS** Agrometeorology
 Dissertation: Comparative evaporation measurements above commercial forestry and sugarcane canopies in the KwaZulu-Natal midlands
 Supervisor: Professor M J Savage
 Co-supervisor: Dr C S Everson
- Camp, Kelson Gerald Temple, Nat. Dip. Pta. Tech.** Range & Forage Resources
 Dissertation: A bioresource classification for KwaZulu-Natal, South Africa
 Supervisor: Mr J R Klug
 Co-supervisor: Mr C D Morris and Professor J C Hughes
- Fenwick, Louise Joy, BScAgric** Agricultural Economics
 Dissertation: Use of credit and its impact on small-scale farmer development in KwaZulu-Natal
 Supervisor: Professor M C Lyne

Kalala, Maloji, BScAgric Horticultural Science
 Dissertation: Absciscic acid metabolism in a *citrus sinensis* flavido enzyme system
 Supervisor: Professor A K Cowan

* **McLoughlin, Leigh, BScAgric** Poultry Science
 Dissertation: An investigation of factors influencing rate of lay, egg weight and embryonic growth in broiler breeder hens
 Supervisor: Professor R M Gous

Strydom, Marc Bradley, BScAgric Agricultural Economics
 Dissertation: An economic analysis of restructuring the South African hake quota market
 Supervisor: Professor W L Nieuwoudt

Young, Marion Belinda, BScAgric Poultry Science
 Dissertation: An evaluation of effective energy in the formulation of feeds for laying hens
 Supervisor: Professor R M Gous

BACHELOR OF AGRICULTURAL MANAGEMENT (HONOURS)

Discipline

Makiza, Sivuyile Brian, BAgricMgt Agricultural Management

BACHELOR OF SCIENCE (HONOURS)

Discipline

Anderson, Kirsten Peta, BSc Geography

* **Anthony, Lynette Maria, BSc** Computer Science

Barratt, Barbara Rene, BSc(Rhodes) Chemistry

* **Bennett, Amanda Judith, BSc** Plant Pathology

Brodie, Patricia Anne, BSc Entomology

Buntting, Elise Eva, BSc Biochemistry

Camp, Greville Lionel, BSc Chemistry

* **Clarke, Dino Justin, BSc** Chemistry

Cunningham, Debra Margaret, BSc Plant Pathology

* **Davies, Scott Llewellyn, BSc** Biochemistry

Dlamini, Dennis Jabulani Mduduzi, BSc Hydrology

* **Fincham, Jason Ian, BSocSc** Geography

Gnirck, Belinda Ulrike, BSc Biochemistry

Hadebe, Adolph Slindokuhle, BSc Chemistry

Hadebe, Sifiso Sokesimbone Devine, BSc Chemistry

Haffejee, Farhana, BSc Computer Science

Hansa, Aneesa, BSc Psychology

	Haynes, Delia Ann, BSc	Molecular Genetics
	Hogan, Shannon, BTech(Cape Technikon)	Geography
	Hollaway, William David, BSc(Cape Town)	Biochemistry
	Holness, Carolyn Joy, BSc(Cape Town)	Zoology
*	Hough, Nolan Charles, BA	Geography
*	Hughes, Kerry Louise, BSc	Microbiology
	Jackson, Jennifer Gouws, BSc(Pret)	Biochemistry
*	Jadoo, Rishaal, BSc	Computer Science
	Jones, Kenneth Evan, BSc	Computer Science
	Jordan, Ingrid Elizabeth, BSc	Zoology
	Kinvig, Richard Grant, BSc	Zoology
	Laing, Bronwyn Alison, BSc	Geography
	Lakhranj, Rakhee, BSc	Microbiology
	Leppan, Craig Donovan, BScEng	Computer Science
*	Luyt, Robyn Pamela, BSc	Botany
	Macdonald, Cedric Dougan, BSc	Zoology
	Manaka, Rebiditjoe Martha Patience, BSc(UNIN)	Microbiology
	Mansfield, Lara Ray, BSc	Entomology
	Mbatha, Khanyisile Rebecca, BSc(Unisa)	Zoology
	McLaren, James Maxwell, BSc	Plant Pathology
	Meyer, Brendan, BSc	Biochemistry
*	Miller, Michael James Macrae, BSc	Computer Science
*	Mitchell, Jennifer Lyn, BSc	Geography
	Mkhize, Nonhlanhla Patience, BSc	Microbiology
	Moodley, Yoshnie, BSc	Computer Science
*	Morgan, Leigh Ann, BSc	Molecular Genetics
	Mpanza, Patricia Thabisile, BSc(UDW)	Microbiology
	Msiska, Zola, BSc	Microbiology
	Mukona, Michael Mulalo, BSc(Vista)	Biochemistry
	Muller, David, BSc	Chemistry
	Neumann, Brendan John, BSc	Plant Pathology
	Nieuwoudt, Michelle Genevieve, BSc	Virology
	Nonyane, Bareng Aletta Sanny, BSc	Statistics
	Padayachee, Diandree, BSc	Chemistry
	Pay, Robyn Lynne, BSc	Chemistry
	Prince, Colin, BSc(Unisa)	Computer Science
	Ramballi, Sunil, BSc	Computer Science
	Ranjeeth, Sanjay, BSc(UDW)	Computer Science
	Robinson, Paula Marguerite, BSc	Zoology
	Roelofsen, Aukje, BSc	Hydrology
	Safla, Aslam, BSc	Computer Science
	Scheepers, Yunus, BSc	Information Technology
*	Schmidt, Tracy, BSc	Microbiology
*	Schuitemaker, Justin, BSc	Computer Science
	Sewambar, Nirasha, BSc	Chemistry
	Sewjee, Renoir, BSc	Physics
	Sibisi, Nomathamsanqa Nonjabulo Samukelisiwe, BSc	Soil Science

	Tetyana, Pokazi, BSc	Molecular Biology
*	Thomas, Neil William	Geography
	Titshall, Louis William, BSc	Grassland Science
	Torberger, Per Magnus Oskar	Geography
	Van Der Meer, Neil Anthony, BSc	Soil Science
	Warby, Richard Ashley Frank, BSc	Chemistry
	Wethered, Robyn, BSc	Zoology
	Williams, Lenti Patricia, BSc	Zoology
	Willis, Anita, BSc	Plant Pathology
	Wilson, David Andrew, BSc	Botany

BACHELOR OF SCIENCE IN DIETETICS (HONOURS)

		<i>Discipline</i>
	Bradley, Nicola Clare, BScDiet, PG Dip Diet	Dietetics
	Wiseman, Jane Margaret, BScDiet, PG Dip Diet	Dietetics

BACHELOR OF SCIENCE IN AGRICULTURE

		<i>Discipline</i>
	Anderson, Shaun David	Crop Science
	Archibald, Paul Bevis Deane	Horticultural Science
	Ballard, Graham John	Horticultural Science
	Bolton, Justine Erica	Wildlife Science
	Brocklehurst, Zoë Ann	Wildlife Science
	Butler, Graeme Andrew James	Horticultural Science
	Cronshaw, Drummond Bruce Iain	Horticultural Science
	Croudace, Sarah Jane	Agricultural Economics
	Dalling, Catherine Monique	Horticultural Science
	De Beer, Natalie	Wildlife Science
*	Dominy, Andrew Peter	Horticultural Science
	Dovey, Steven Bryan	Horticultural Science
	Fryer, Felicity Paula	Horticultural Science
	Galliers, William Anthony	Agricultural Economics
	Garrett, Brian Scott Alexander	Animal Science
*	Gerber, Natalie Dawn	Animal Science
	Gibson, Donald James Douglas	Wildlife Science
	Hamilton, Carol Susan	Horticultural Science
	Hendry, James Ridley Angus	Wildlife Science
	Hitchcock, Catherine Mignon	Wildlife Science
*	Irvine, Craig William	Animal Science
α	Judge, Angus	Soil Science
	Khumalo, Parton Ngcebo	Horticultural Science
	Larkan, Ryan Anthony	Horticultural Science
	Lebele, Sobi Samson	Animal Science
α	Macfarlane, Douglas Malcolm	Wildlife Science

α Degree awarded **summa cum laude**

* Degree awarded **cum laude**

Malevu, Xolo Ignatius	Genetics
Mills, Nicola Claire	Animal Science
Mnyandu, Mduduzi Brian	Microbiology
Murphy, Patrick Hunter	Animal Science
Myeni, Elias Maphumuzane	Crop Science
Myhill, Carl Peter	Grassland Science
Pringle, Grant Rupert	Horticultural Science
Reece, Catherine Sylvia	Agricultural Production
Rietz, Diana Nicolle	Agricultural Production
Roberts, Delwyn Owen	Agricultural Production
Roberts, Justin Thomas	Soil Science
Sheard, Andrew Grant	Horticultural Science
Simpson, Wayne Alexander	Horticultural Science
Smallie, Jonathan James	Wildlife Science
Smith, Linnet Jean Isobel	Animal Science
Spring, Warren Greg	Horticultural Science
Steytler, Brendon Mark	Wildlife Science
Strydom, Kevin Michael	Agricultural Economics
Sturgess, Michael Andrew	Horticultural Science
Thomson, Gayle	Animal Science
Timler, Carl Joachim	Agricultural Production
Tindall, Beth	Wildlife Science
van Niekerk, Ryan William	Wildlife Science
van Vuuren, Greig Michael	Horticultural Science
Venter, Jean-Pierre	Soil Science
Whitley, Andrew Horner	Wildlife Science
Williams, Louise Kim	Horticultural Science

BACHELOR OF AGRICULTURAL MANAGEMENT

Carroll, Shaun	Price, Shaun Victor
Crookes, Timothy John	Sibul, Bianca
Duckworth, Gary Michiel	Smith, Geoffrey Kenneth
Frank, Matthew Edward John	Stronge, Ivan Conway
Ghebremicael, Ghezae Kibreab	van Rooyen, Murray Cedric
Kay, Robert George	Viljoen, Anthony Richard
Powell, Peter Hugh	Williams, Ross John

BACHELOR OF SCIENCE IN DIETETICS

Baker, Louise Georgette	Collet-Serret, Jessica Anne
* Baxter, Joanne Louise	Conway, Shanine Lorraine
Bosse, Charmaine Tanya	Douglas, Megan
Capsopoulos, Natalie Peter	Govender, Anusia
* Carlisle, Angela Ann	Kunene, Thandie Buysiwe Vusile

Lee, Josie-Anne
Magubane, Jabulisile Fortunate
Mahon, Gráinne Kate
Maqungo, Gcobisa Gladys
Matthews, Pogisho Samuel
Mdlletshe, Hlengiwe Precious Nomsa
Mpanza, Hlanzeka Nompilo

Ntiisa, Magdeline Mamotseoa
Radue, Jennifer Jane
Ragubeer, Reka
Roberts, Carly Dale
Sebake, Judith Khomotso
Walton, Katherine Tarawa
Wright, Janine Louise

BACHELOR OF SCIENCE

(Major subjects passed in the first class are shown in brackets)

Ambrose, Natasha Noeleen
Anderson, Torben Sten
Beshe, Kanyisa Zingisa
Beveridge, Sarah Jane
Blanché, Claire
Blank, Elena
Blazeby, Pamela Samantha
Bollaert, Catherine Elizabeth
Carter, Simon Gerrit
Chetty, Estelle Colette
Chetty, Kamaseelan
Chetty, Kershani
Chetty, Melanie
Crawford, Yvonne Gail

* **Davies**, Shona Luann (Chemistry,
 Applied Chemistry)

de Meyer, Natalie
du Preez, Eve Diane
Dunn, Samantha Jane
Escott, Boyd John
Ford, Craig Malcolm
Fuzile, Patuxolo

α **Gessau**, John Eric (Computer Science,
 Applied Mathematics)

Goba, Sibusisiwe Innocentia

* **Gopaul**, Serenta (Physics)

Govender, Jaishni

Grace, Olwen Megan

Hajee, Farah

Hamilton, Lindsay Alexandra

Harrison, Ryan Alvin

Hawkins, Bryan Gregory

† **Hinde**, Kevin Richard Ross

Holeni, Miyelani
Holt, Shelley Louise
Houareau, Thomas Kevin
Howes, Duncan Mark
 * **Hull**, Tracy Lee (Microbiology)
Ismail, Naseem Ahmad
Johnson, Simon Vincent
Judge, Jason
Jwara, Nonkululeko Mary Julia
Kallen, Kobashini
Kelmanson, James Philip
Kerry, Honor Susan Victoria
Khondlo, Thabsile Beryl Thobekile
Langley, Sarah Jean

Lunika, Xasuxolo Lunga

Maharaj, Ashiva

Makhale, Nkhetheni Richard

Maseko, Nontombi Pearl

Mathonsi, Hlengiwe Fakazile

Mathule, Bantse Basetsana

Matlaba, Pulane

Maughan Brown, Brendan Geoffrey

Mazurczak, Sebastian Krzysztof

Mbese, Bongumusa Welcome

Mbhamali, Vusumuzi Thokozani

Mbhele, Phelelani Phetheni

Mbili, Mfanufikile Victor

α **McKenzie**, Jean Mary-Anne (Chemistry,
 Physics)

McKirdy, Debra Bernadette

Mdluli, Lindiwe Patience

Miller, Warren Laurence

Mkhize, Mpumelelo Hlangonani

α Degree awarded **summa cum laude**

* Degree awarded **cum laude**

† Degree awarded **posthumously**

Mkhize, Thokozani Michack
 Mkhize, Zimbili
 Mongwe, Tlou Patience
 Mqadi, Thembelihle Glenrose
 Mthembu, Sibusiso Lawrence
 Mullins, Robert Gregory
 Naicker, Aumenthren
 Naidoo, Koseelen
 Naidu, Devendree
 Nel, Belinda Ann
 Nigro, Sara Anna Maria Eleonora
 Nunkumar, Vishal
 Nxumalo, Ntombifikile Maureen
 Nzama, Mlandeleni Lofly
 Padayachee, Eneshra
 Papadakis, Marios George
 Parry, Kevin Algar
 Payne, Jo-Ann
 * Pearson, Nicole (Biochemistry, Chemistry)
 Peerbhai, Muhammed
 Phillips, Gareth Llewellyn
 Phillips, Shivaani
 Pillay, Kumari Devi (Genetics)
 Plunkett, Simon Rory Patrick
 Pryke, Sarah Rosalind
 Quale, Leo Malcolm
 Ramdeen, Manuja
 Ramnath, Alka
 Rawdon, James Frederick
 Read, Nicola Ann
 Reay, Philip Craig

Reddy, Vanisha
 Reid, Kirsty Ann
 Rosettenstein, Gina
 Royappen, Marilyn
 Sathekge, Mmaleho Maureen
 Schapers, Robert Ignatius
 Schönborn, Konrad Janek
 Schwikkard, Kerry-Lee
 Segal, Angela Robyn
 Sims, Deborah Ann
 Singh, Rehan Ranjit
 Sithole, Jeremia Malubathi Vusumuzi
 Sleed, Michelle (Biochemistry)
 Sparg, Shane Gordon
 Steart, Cheryl Mary
 Sukrajh, Verona
 Thema, Johanna Mmanoko Eunice
 Thompson, Matthew
 Thornton-Dibb, Sean Lesley Clive
 α Thubron, Gayle Pamela (Chemistry,
 Physics)
 Todd, Mark Llewellyn
 Tucker, Deborah Joan
 Tyhokolo, Mzwamadoda
 Van Heerden, Alastair Charles
 Vosloo, Tracy (Biochemistry)
 Whitehead, Kevin Andrew
 Wiles, Paul Wilson
 Wuite, Rudy Mark
 Zwane, Lindiwe
 * Zweni, Pretty Pumza (Chemistry)

BACHELOR OF AGRICULTURE

Bulose, Desmond Sithembiso
 Dladla, Vusi Collin
 Dlamini, Gugu Precious
 Mahaye, Nyawozabo Goodman
 Memela, Bhekathina Eugene Bhekizitha

Molefe, Sebastian Thabo
 Monatisa, Millicent Puleng
 Ngubane, Steven Zama
 Phakathi, Nompumelelo Goodness
 Shange, Nicholas Jabulani

α Degree awarded **summa cum laude**

* Degree awarded **cum laude**

DIPLOMATES

POSTGRADUATE DIPLOMA IN DIETETICS

Adonis , Sinethemba, BScDiet	Lord , Wendy Joy, BScDiet
Arnold , Margaret Louise, BScDiet	Meekin , Sarah Jean, BScDiet
# Austin , Genevieve, BScDiet	Mhembere , Zanele Prudence, BSc(SYRACUSE)
Bennett , Aileen Esther, BScDiet	Mincher , Lynne Jennifer, BScDiet
Bouchier , Carmen Michelle, BScDiet,	Moosa , Fathima Ismail, BScDiet
Bridgeford , Vanessa Gabrielle, BScDiet	Nkosi , Gugulethu Nonkululeko Lethokuhle, BScDiet
Buthelezi , Phumelele, BScDiet	Nunkoo , Sherleen, BScDiet
Clarke , Carine Michelle, BScDiet	Ponting , Lauren Marj, BScDiet
Conroy , Lara Kim, BScDiet	Pullan , Claire Deborah Ayrton, BScDiet
Cooper , Nicole Corinne, BScDiet	Redmond , Debrah-Kim, BScDiet
Cowie , Barbara Anne, BScDiet	Rothbart , Toni, BScDiet
Dhookhun , Rosida, BScDiet	Schaefer , Liesel Ruth, BScDiet
Ernest , Jean Ernestine, BScDiet	# Seidler , Michelle, BScDiet
Forman , Michal Dafna, BScDiet	Seymour , Emma Jane, BScDiet,
Gregersen , Sharon Lynn, BScDiet	Stein , Taryn Pier, BScDiet
Hlongwane , Nokuthula Khanyisiwe, BScDiet	Tapper , Shannon Jane, BScDiet
Holesgrove , Marcelle Dawn, BScDiet	Torr , Tina Sherie, B Sc, BScDiet,
Holzinger , Tamaryn Talitha, BScDiet	Vance , Carolyn Ann, BScDiet
Ketwa , Lindelwa, BScDiet	Walker , Jane, BScDiet
Lea , Valerie Suzanne, BScDiet	
Lekoloane , Masadiki Violet, BScDiet	

UNIVERSITY DIPLOMA IN RURAL RESOURCE MANAGEMENT

Khumalo , Nomonde Ethel	Ndlela , Nompumelelo Faith
Mahaye , Nyawozabo Goodman	Ndlovu , Duduzile Mavis
Mazibuko , Innocent Senzosihle	Ndlovu , Sibonelo
Mbatha , Nonhlanhla Pretty	Ngcaweni , Lindley Simpiwe
Mbatha , Phumzile Happiness	Ngcobo , Sandile Innocent
Mchunu , Bongumusa Reginald Emmanuel	Phiri , Hamilton George
Mdadane , Geffery Sifiso	Phungula , Sandile Muzomuhle Refuge
Mlaba , Zanele Zinhle Faith	Rakoloti , Michael Thabo
Mngomezulu , Zandile	Sethaba , Mpho Moeketsi
Muligwe , Ndishavhelafhi Obert	Tsambo , Sizakele Sellina

UNIVERSITY FELLOWSHIPS

University Fellowships have been instituted in order to give special recognition to members of the permanent academic staff for distinguished work of special merit in their chosen fields. The standard of the work is judged primarily by publications and the contribution those have made in the particular field. Public presentation of work in the performing and fine arts may be regarded as equivalent to research and publications.

BARRY NIGEL WOLSTENHOLME

The award of a Fellowship of the University of Natal to Professor Barry Nigel Wolstenholme comes as a fitting tribute to a long and full career, first as an undergraduate and graduate student and, subsequently, as a dedicated researcher and promoter of research at the University of Natal, Pietermaritzburg. Since 1961 he has authored or co-authored over 150 papers which are now extensively used and cited throughout the country, and particularly in Horticultural circles in KwaZulu Natal where his major research was undertaken. This work has focussed on the production and improvement of subtropical fruits and nuts, and his development work on the luscious avocado pear is internationally recognized.

Not surprisingly, Professor Wolstenholme has received several prestigious awards from both within and outside the University, including the Fellowship of the South African Society of Crop Production, and Life Membership of the South African Pecan Producer's Association. He has been invited to give keynote addresses at both national and international congresses and has found time to serve on a multitude of University committees, to act as Assistant Dean of the Faculty of Agriculture, and to take a leading role in the development and co-ordination of several interdisciplinary service courses in Agriculture.

Beyond this list of formal accomplishments, Professor Wolstenholme's referees, without exception, commented that it is his particular forte to share and impart his exceptional knowledge of horticultural practices to non-scientists. Indeed, his ability to communicate with, and enthuse others, be they students, research colleagues or outsiders to the University, is what has made "Wally", as he is affectionately known, one of the most revered lecturers in the Faculty of Agriculture. His insistence that if a project has no practical application to the horticultural community, its value is severely limited, and his emphasis in teaching on explicating the "Why" rather than merely the "How" of agricultural systems, has endeared him to undergraduates and lay people alike.

In summary, it is as a dedicated research scientist, humanist and teacher that we honour Barry Nigel Wolstenholme today by awarding him the Fellowship of the University of Natal.

A BRIEF HISTORY OF THE UNIVERSITY OF NATAL

In 1910, partly on the initiative of the Natal Colonial Government, the Natal University College (NUC) opened its doors in a corrugated annexe behind Maritzburg College. Eight professors taught 57 students Classics; English and Philosophy; Law; Modern Languages; Botany and Geology; Chemistry and Physics; Mathematics and Zoology. In 1912 the Old Main Building at Scottsville opened.

In 1922 the NUC extended its activities to Durban with university level courses in Commerce and Engineering taught at the Technical College. In 1932 Howard College was opened on the Durban Berea, firmly establishing the dual-based character of the University.

As a result of the initiatives of the Fabian Socialist, Dr Mabel Palmer, 19 "Non-European" students were enrolled at NUC in Durban in 1936. This grew to nearly 900 by 1960, thus firmly establishing the principle that the NUC would serve the needs of the whole community. However, like the Medical School, founded in 1951 for African Indian and "Coloured" students, classes still reflected the segregated nature of the surrounding society. The National Party's Extension of University Act of 1959 limited new enrolments, other than those at Medical School, to "Whites" and brought a temporary halt to the University's aim of serving the educational needs of the whole community. It also severely restricted the autonomy achieved when the NUC became the University of Natal in 1949. Only when racial restrictions were partially lifted in 1983 could the University resume its task of serving the whole community. Since then it has welcomed increasing numbers of Black students, who now make up the majority of the student body.

In 1952, Dr E G Malherbe, who had steered the NUC towards being a fully independent university in 1949, moved the administrative function from Pietermaritzburg to Durban. In 1973, in response to mounting travelling costs, the two centres were academically separated. Each centre came to have parallel faculties of Law, Humanities, Commerce, Science and Social Science. The teaching of Architecture, Engineering, Medicine and Music was, however, limited to Durban, and Agriculture, Theology and Fine Art to Pietermaritzburg. With the process of restructuring recently completed there has been a merging of some faculties across campuses. The present faculties are: Community and Development Disciplines (Dbn), Engineering (Dbn), Human Sciences (Dbn and Pmb), Law (Dbn and Pmb), Management Studies (Dbn), Science and Agriculture (Pmb), Science (Dbn) and Medicine (Dbn).

The University of Natal has had some outstanding persons as vice-chancellors and principals. The first principal, John Bews, was a world-renowned botanist and E G Malherbe was known throughout the world as an outstanding educationalist. In 1993, the University of Natal was the first university in South Africa to appoint a woman, Brenda Gourley, as its principal. The largely ceremonial Chancellors too, have been distinguished, not least the present incumbent, Justice Pius Langa and the recently retired Archbishop Denis Hurley. Students include people as diverse as Alan Paton, Steve Biko and Alec Erwin. Honorary Graduates include Nelson Mandela, Roy Campbell and Abdullah Ebrahim.

As the University stands on the brink of the new millennium, it is better placed than ever to achieve the goals of its Mission Statement: "to serve all sections of its community through excellence in scholarship, teaching, learning, research and development." It has hewed close to the goals of its Strategic Initiatives, is one of the top universities in South Africa and has formal ties with some 260 of the world's leading universities.

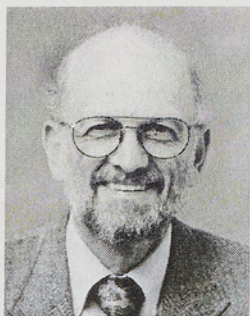
Gaudeamus Igitur

Gaudeamus igitur, juvenes dum sumus;
Gaudeamus igitur, juvenes dum sumus;
Post jucundam juventutem, post molestam
senectutem,
Nos habebit humus, nos habebit humus.

Ubi sunt qui ante nos in mundo fuere?
Ubi sunt qui ante nos in mundo fuere?
Vadite ad superos transite ad inferos,
Ubi jam fuere, ubi jam fuere.

Vita nostra brevis est, brevi finietur:
Vita nostra brevis est, brevi finietur:
Venit mors velociter, rapit nos atrociter,
Nemini parcetur, nemini parcetur.

Vivat Academia, Vivant Professores,
Vivat Academia, Vivant Professores,
Vivat membrum quodlibet, vivant membra
quaelibet,
semper sint in flore, semper sint in flore.



CONFERMENT OF THE DEGREE OF
DOCTOR OF SCIENCE *honoris causa* UPON
ROBERT GRAHAM COOKS

Graham Cooks was born on the south coast of KwaZulu-Natal and attended Port Shepstone High School. He studied at the University of Natal here in Pietermaritzburg, and attained Honours, Masters and PhD degrees in the Department of Chemistry.

In 1966 he went as an Elsie Ballot Scholar to the University of Cambridge. Here he pursued his interest in mass spectrometry and achieved a second doctoral degree.

Most of his working life has been spent in the USA -- at Purdue University in West Lafayette, Indiana. This is one of America's best universities, with special strengths in the sciences and technology; it is indeed the alma mater of the majority of the early astronauts. It also has a very strong chemistry department.

Graham Cooks is the Henry Bohn Hass Distinguished Professor. His field is analytical chemistry, and most of his research involves mass spectrometry. He is noted for having pioneered tandem mass spectrometry. His research interests are broad, and involve both fundamental work and practical applications. These interests include new instrumentation and its use for bio and environmental analysis; characterizing surfaces through reactive collisions of ion beams; the performance and understanding of the detailed motion of ions in ion traps; the direct on-line analysis of water samples for environmental contaminants; the application of patented technology to on-line monitoring of bioreactors; the mechanisms of organic reaction in the gas phase; and oligonucleotide modification by trace carcinogens. Professor Cooks has produced over 600 scientific publications.

He has been the recipient of many honours and awards. In 1981 he was Fulbright Fellow at the University of Warwick. He has received the Purdue Cancer Research Award, the American Chemical Society's Chemical Instrumentation Award, the Thomson Award for International Service to Mass Spectrometry, the Herbert McCoy Award, the National Science Foundation's Special Creativity Award (twice), the ACS Award for Mass Spectrometry and the ACS Award for Analytical Chemistry. He is also an honorary member of the Chinese Mass Spectrometry Society, and has since 1987 been an Adjunct Professor at the Beijing Institute of Technology.

The University of Natal honours Graham Cooks, a son of our province, for his outstanding and wide-ranging contributions to research in analytical chemistry.

THE ARMORIAL BEARINGS

(See front cover)

The armorial bearings of the University of Natal were awarded by the College of Arms in London.

The two black wildebeest come from the arms of the Province of Natal. They are shown in full course to symbolise movement and progress. The two open books represent the universal heritage of knowledge and the two centres of the University, Durban and Pietermaritzburg. The five-pointed star refers to the naming of Natal by Portuguese navigators when they landed for the first time at Durban on Christmas Day in 1497. *Stella Aurorae*, star of the dawn, symbolises the role of the University in bringing to light new knowledge and spreading the enlightening influence of education.

CONVOCATION

After being capped by the Chancellor, each graduate moves across the stage and hands to the President of Convocation, or a representative of Convocation, a hood incorporating colours that indicate the degree being awarded and the Faculty in which it is being awarded. The President of Convocation places the hood upon the graduate's shoulders, and, at the end of the ceremony, after the Chancellor's procession has left the stage, leads a procession of the new graduates out of the hall, row by row, to symbolise their acceptance into, and future membership of, the Convocation of the University of Natal, the statutory body through which graduates have the opportunity to play a continuing part in the affairs of the University.

National Anthem of South Africa

Nkosi sikelel' iAfrika
Maluphakanyisw' uphondo lwayo
Yizwa imithandazo yethu
Nkosi sikelela
Thina lusapholwayo.

Morena boloka
Setjhaba saheso
Ofedise dintwa lematshwenyeho.

O se boloke, O se boloke
Setjhaba saheso
Sethjaba sa, South Afrika,
South Afrika.

Uit die blou van onse hemel
Uit die diepte van ons see
Oor ons ewige gebergtes
Waar die kranse antwoord gee
Sounds the call to come together
And united we shall stand
Let us live and strive for freedom
In South Africa our land.

