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UNIVERSITY OF NATAL

DURBAN CAMPUS

**AMENDED**

DURBAN

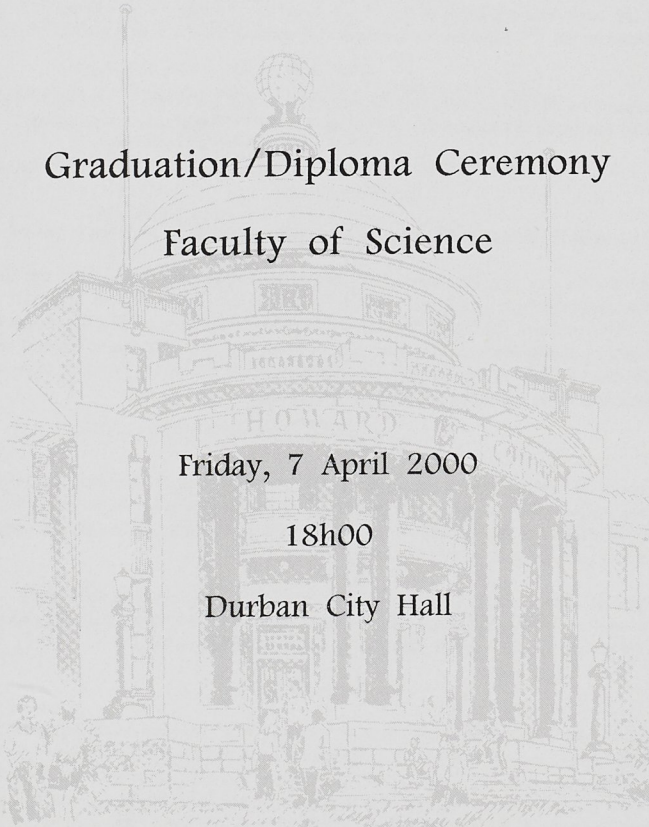
Graduation/Diploma Ceremony

Faculty of Science

Friday, 7 April 2000

18h00

Durban City Hall



## **The Chancellor**

“Chancellor” is an office that goes back to antiquity: the original Chancellor or *cancellarius* (as the office was known) regulated access to the Roman Tribune. In medieval times, the office became associated with the heads of the writing departments of the early kings. Because so few people were literate, a chancellor was necessarily learned. This is why the heads and spokespersons 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 are: 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 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 12<sup>th</sup> 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, but was always round as a reminder of church law forbidding the shedding of blood. 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 13<sup>th</sup> 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. The Mace was made in England, it was first used at the 1970 graduation ceremonies.

## **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 KwaZulu-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.

## **Academic Dress**

The wearing of gowns by judges, ministers, teachers and scholars is an ancient and significant custom. When the graduating students at universities receive their diplomas or degrees, they, too (and for some, only once in their lives) wear the caps and gowns and so participate in this long tradition. By wearing the ancient regalia, they join hands with students past and students present.

In modern academic ceremonies the standard cap and gown are almost universally worn. Of all the components of the costume, the hood conveys the greatest amount of information: it makes clear the level of the degree, the faculty in which it was given, and the institution which awarded it.

## **Convocation**

After being capped by the Chancellor, each graduate moves across the stage and hands the hood to the President of Convocation (or representative). The President places the hood upon the graduate's shoulders. At the end of the ceremony, after the Chancellor's procession has left the stage, the President 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 role in the affairs of the University.



Rec. ± Nov. 2001

## OFFICERS

<b>Chancellor</b>	The Honorable Justice P N Langa Deputy President of the Constitutional Court <i>Bluris, LLB(Unisa), LLD(honoris causa)(UNIZUL)</i>
<b>Vice-Chancellor</b>	B M Gourley <i>CTA(Witwatersrand), MBL(Unisa), HonLLD(Nott)</i>
<b>Chairman of Council</b>	A Rogoff <i>CA(SA)</i>
<b>Senior Deputy Vice-Chancellor</b>	D A Maughan Brown <i>BA(Cape Town), MA(Cantab), DPhil(Sussex)</i>
<b>Deputy Vice-Chancellor (Academic)</b>	A C Bawa <i>BSc(Unisa), BSc(Hons)(Natal), MSc(UDW), PhD(Durham)</i>
<b>Deputy Vice-Chancellor (Research and Development)</b>	E M Preston-Whyte <i>BSocSc(Hons), PhD(Natal)</i>
<b>Deputy Vice-Chancellor (Students and Transformation)</b>	E A Ngara <i>BA(Hons), MPhil, PhD(London)</i>
<b>Pro Vice-Chancellor (Director: Public Affairs and NUDF)</b>	J D Volmink <i>BSc(Hons)(UWC), PhD(Cornell)</i>
<b>Pro Vice-Chancellor</b>	P M Zulu <i>BA(Hons)(Unisa), MSocSc, PhD(Natal)</i>
<b>Pro Vice-Chancellor (Academic)</b>	A M Kaniki <i>BALS(Zambia), MS(Illinois), PhD(Pittsburgh)</i>
<b>Registrar</b>	P M Malgas <i>BA(Hons)(UWC)</i>
<b>President of Convocation</b>	T Zietsman <i>BA(Natal), HED(Stell)</i>
<b>Orator</b>	M J Daymond <i>BA(Hons)(Natal), MA(Cantab), PhD(Natal)</i>

## DEAN OF FACULTY

<b>Science</b>	J J van den Berg <i>MSc(Pret)</i>
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## **PROGRAMME**

The Academic Procession enters the Hall

### **THE VICE-CHANCELLOR CONSTITUTES THE CONGREGATION**

#### **WELCOME TO GUESTS**

The Deputy Vice-Chancellor (Academic)

#### **ADDRESS**

The President of the Students' Representative Council

### **PRESENTATION OF DOCTORAL GRADUANDS**

The Dean

#### **AWARD OF HONORARY DEGREE**

The Orator will present the Honorary Graduant

#### **ADDRESS**

Professor Daphne Osborne

#### **MUSICAL INTERLUDE**

The University of Natal Chorale

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

### **PRESENTATION OF GRADUANDS**

The Dean

### **THE VICE-CHANCELLOR DISSOLVES THE CONGREGATION**

#### **NATIONAL ANTHEM**

The Congregation is invited to join in the singing of the National Anthem

The Academic Procession leaves the hall, followed by the Convocation Procession

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The congregation is requested to stand  
while the procession enters and leaves the Hall

Only officially authorised persons may take photographs and record the ceremony  
Please ensure that cell phones are turned off

## Doctor of Philosophy in the Faculty of Science

	<i>Discipline</i>
<b>Basson, Ian James, BSc(Hons)</b> .....	<i>Geology</i>
Thesis: The structural, metamorphic and tectonic context of the sub-economic veining in the Natal Thrust Front and Natal Nappe Zone, Northern KwaZulu-Natal. (Professor M K Watkeys)	
<b>Govender, Kessie, BScEng(UDW), MScEng</b> .....	<i>Physics</i>
Thesis: Velocity, vorticity and turbulence measurements in the surf zone. (Professor M J Alport)	
<b>Hobden, Paul Anthony, BSc, UED, BEd(Unisa), MEd</b> .....	<i>Physics</i>
Thesis: The context of problem tasks in School Physical Science. (Professor D G Schuster)	
<b>Lionnet, Georges Raoul Edouard, BSc(Unisa), MSc</b> .....	<i>Chemistry</i>
Thesis: The incorporation of impurities into sucrose crystals during the crystallisation process. (Dr B S Martincigh)	
<b>Mahida, Harendrasingh, BSc(UDW), BSc(Hons)(UNITRA), MSc</b> .....	<i>Biology</i>
Thesis: Population genetics of the striped-mouse, <i>Rhabdomys Pumilio</i> (Sparman, 1784). (Dr G K Campbell)	
<b>Nair, Nivandra Nesan, MSc</b> .....	<i>Statistics</i>
Thesis: The term structure of interest rates implied by the market for Eurodollar futures. (Professor M Murray)	
<b>Owen, Rodney Kenneth, MSc</b> .....	<i>Biology</i>
Thesis: Aspects of the ecology and physiology of the burrowing crab <i>Paratyloidiplax blephariskios</i> Stebbing (Brachyura: Ocypodidae) (Professor A T Forbes)	
<b>Pasha, Muhammad Akmal, BSc(Punjab), MSc(Karachi)</b> .....	<i>Mathematics</i>
Thesis: Spherically symmetric charged Einstein-Maxwell solutions. (Professor P G L Leach & Professor S D Maharaj)	
<b>Whitehead, Paul Graham, MSc</b> .....	<i>Chemistry</i>
Thesis: The thermodynamics of liquid mixtures involving polar solvents and solutes. (Professor T M Letcher)	

## Honorary Graduand

**Osborne, Daphne Joan, MA(Cantab), MA(Oxon), MSc, PhD, DSc(London), HonDSc(Open)**



## Master of Science

### Discipline

- + **Cowan, Carryn Lee, BSc(Hons)** ..... *Mathematics*  
 Dissertation: Mathematical modelling of the cellular and population dynamics of HIV and AIDS.  
 (Professor J H Swart)
- + **Croaker, Mawson Richard Douglas, BSc(Hons)(Queensland)** ..... *Geology*  
 Dissertation: Geological constraints on the evolution of the Urfjell Group, southern  
 Kirwanveggan, western Dronning Maud Land, Antarctica.  
 (Dr G Whitmore & Dr R Uken)
- + **Crosby, Christine Mary, BSc(Hons)** ..... *Chemistry*  
 Dissertation: The electrochemical and electrocatalytic behaviour of glassy metal alloys.  
 (Professor H C Brookes)
- Dana, Pelisa, BScEd, BScHons(UNITRA)** ..... *Biology*  
 Dissertation: *Aplexa marmorata* (Guiling, 1828) (Basommatophora:Physidae) – an invasive  
 freshwater snail in South Africa.  
 (Professor C C Appleton)
- Gerber, Rachel Linda, BSc(Hons)** ..... *Geography*  
 Coursework and Dissertation: Investigation of the treatability of leachates from two landfill  
 sites, using biological nitrification and denitrification, to comply with South African  
 nitrogen discharge requirements.  
 (Professor W N Ellery)
- Hatcher, Brendon John, BScHons** ..... *Geography*  
 Dissertation: Open space planning: A case study of the Natal North Coast Margin.  
 (Professor W N Ellery)
- + **Hornsey, Richard Arthur, BSc(Hons)(Newcastle upon Tyne)** ..... *Geology*  
 Dissertation: The genesis and evolution of the Nkomati Mine Ni-Sulphide deposit, Mpumalanga  
 Province, South Africa.  
 (Professor M K Watkeys & Professor A H Wilson)
- Koorbanally, Chantal, BSc(Hons)** ..... *Chemistry*  
 Dissertation: Extractives from the Hyacinthaceae  
 (Professor DA Mulholland)
- Matooane, Leluma Goodwill, BSc(NUL), BSc(Hons)** ..... *Geography*  
 Coursework and Dissertation: Development of Durban International Airport land: Impacts on  
 air quality.  
 (Professor R D Diab)
- McDonald, Zac Elliot, BSc(Hons)** ..... *Biology*  
 Dissertation: The metabolic fate of sucrose in intact sugarcane internodal tissue.  
 (Dr B I Hockett, Professor F C Botha & Professor A M Amory)

+ indicates degree awarded *cum laude*

## Discipline

- McGee, Jennifer Jane, BSc(Hons)**..... *Chemistry*  
 Dissertation: An investigation into the formation and reactions of Diacetyl.  
 (Dr B S Martincigh & Professor T M Letcher)
- Mokhehle, Lipolelo, BSc(NUL), BSc(Hons)**..... *Geography*  
 Coursework and Dissertation: The evolution of Environmental Impact Assessment in  
 Lesotho: A review of case studies from 1980 to 1999.  
 (Professor R D Diab)
- ★ **Mokotedi, Mompe Edward Oscar, BSc(UDW), BSc(Hons)**..... *Biology*  
 Dissertation: The development of *in vitro* rooting systems for cold-tolerant *Eucalyptus grandis x nitens* clones and assessment of the hydraulic efficiency of roots produced  
 by *in vitro* vs. cutting propagation.  
 (Dr M P Watt & Professor N W Pammenter)
- Rothwell, Amanda Fleur, BAHons(Cantab)**..... *Geography*  
 Coursework and Dissertation: The role of indigenous knowledge in sustainable development – a  
 case study of medicinal plant use in the upper Tugela Valley.  
 (Professor W N Ellory)
- ★ **Sudan, Pascal, Diploma(Fribourg)**..... *Geology*  
 Dissertation: Structure and weathering of the northern KwaZulu-Natal coastal dune cordon  
 between Lake Nhlabane and Cape St Lucia, South Africa.  
 (Dr G Whitmore & Dr R Uken)
- Walker, Marianne Julie, BTech(MLST)**..... *Biology*  
 Dissertation: Some investigations of the responses of *Quercus robur* and *Ekebergia capensis*  
 embryonic axes to dehydration and cryopreservation.  
 (Prof P Berjak & Dr M P Watt)
- ★ **White, Christopher, BSc(Hons)**..... *Geography*  
 Dissertation: The vegetation ecology of the Newington region Mpumalanga: A landscape  
 ecology perspective.  
 (Professor W N Ellery)

★ indicates degree awarded *cum laude*

## Bachelor of Science (Honours)

## Discipline

- ★ **Adishesam, Thashé, BSc**..... *Statistics*  
**Baijnath, Aasha, BSc**..... *Biology*  
 ★ **Barnes, Kirsten Barbara, BSc**..... *Chemistry/Biology*  
**Bhoola, Manisha, BSc**..... *Computer Science*  
**Browne, Burt Lionel, BSc**..... *Geology*  
 ★ **Burke, Tarryne Shirley, BSc**..... *Biology*

★ indicates degree awarded *cum laude*



## Discipline

+ Cheetham, Natalie Jane, <i>BSc</i> .....	Biology
+ Clarke, Brendan Morgan, <i>BSc</i> .....	Geology
Cloete, Jacques, <i>BSc</i> .....	Statistics
+ Dorasamy, Rennay, <i>BSc</i> .....	Computer Science
Douglas, Lisa Rae, <i>BSc(CapeTown)</i> .....	Biology
Dovey, Martin Charles, <i>BSc</i> .....	Chemistry
+ Drew, Penelope Joan, <i>BSc</i> .....	Biology
+ Gallagher, Sarah Jane, <i>BSc</i> .....	Biology
Goberdhan, Adithim, <i>BSc</i> .....	Biology
Govender, Devandran, <i>BSc</i> .....	Biology
Govender, Jacinth, <i>BSc</i> .....	Biology/Chemistry
Govender, Navashni, <i>BSc</i> .....	Biology
Govender, Nishlan, <i>BSc</i> .....	Chemistry
Govender, Thavendran, <i>BSc(UDW)</i> .....	Chemistry
+ James, Nicola Caroline, <i>BSc(Rhodes)</i> .....	Geographical & Environmental Science
Koaleli, Mathibela Edian, <i>BAG(NUL)</i> .....	Geographical & Environmental Science
Kota, Mxolisi Wiseman, <i>BSc</i> .....	Geology
Liphoto, Lerato Enoch, <i>BSc(NUL)</i> .....	Geographical & Environmental Science
Mansingh, Dhiren, <i>BSc(CapeTown)</i> .....	Statistics
Matooane, Mamopeli Retsepile, <i>BTech(CAPTEK)</i> .....	Geographical & Environmental Science
Mbambo, Zizamele Smoden, <i>BSc</i> .....	Environmental Geology
McFall, Andrew John, <i>BSc</i> .....	Biology
McPherson, 'Mamosa Eileen, <i>BSc(NUL)</i> .....	Geographical & Environmental Science
+ Mukherjee, Madhupa, <i>BSc(North Bengal)</i> .....	Biology
Naicken, Yoganathan Jugatheesan, <i>BSc</i> .....	Statistics
Naicker, Jaysen, <i>BSc</i> .....	Computer Science
+ Naidu, Nishendren, <i>BSc</i> .....	Computer Science
+ Naidu, Ruvashen Damien, <i>BSc</i> .....	Biology
+ Payn, Kitt Garnet, <i>BSc</i> .....	Biology
Pedersen, Carsten, <i>BSc(Copenhagen)</i> .....	Biology
Pepper, Timothy Bryan, <i>BSc</i> .....	Biology
Pillay, Desirée, <i>BSc</i> .....	Biology/Chemistry
Reddy, Kamil, <i>BSc</i> .....	Computer Science
Redman, Guy Trevor, <i>BSc</i> .....	Biology
Roberts, Michael John, <i>BSc(Stell)</i> .....	Geology
Sewall, Avashnee Shamparkesh, <i>BSc</i> .....	Chemistry
Singh, Ashika, <i>BSc</i> .....	Engineering Geology
Singh, Niraksha Kevel, <i>BSc</i> .....	Geology
Singh, Prebashni, <i>BSc</i> .....	Biology
Singh, Sathvisham, <i>BSc</i> .....	Biology
Thakally Govender, Vinaygum, <i>BSc</i> .....	Chemistry
+ Timler, Dagmar Karin, <i>BSc</i> .....	Computer Science
Wagner, Candice Jean, <i>BSc</i> .....	Biology
Wallace, Michael Gary, <i>BSc</i> .....	Computer Science
Wilde, Charlene Beryl, <i>BSc</i> .....	Geographical & Environmental Science
+ Wiles, Peter Thomas, <i>BSc</i> .....	Computer Science

+ indicates degree awarded *cum laude*



## Bachelor of Science

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| <p> <b>Abdool Gaffoor</b>, Omar Farouk Moosa<br/> <b>Appiadjei</b>, Kwame<br/> <b>Archery</b>, Evelyn<br/> <b>Baccus</b>, Mahomed<br/> <b>Baijnath</b>, Yeshwin<br/> <b>Baloyi</b>, Godfrey Stanley<br/> <b>Bhoola</b>, Nisha<br/> <b>Blaauw</b>, Justin<br/> <b>Black</b>, Andrew James<br/> <b>Bolowana</b>, Nozipho Emmarentia<br/> <b>Burton</b>, Warren Peter<br/> ★ <b>Connellan</b>, Laura Leigh (Computer Science)<br/> <b>Deppe</b>, Rolf Martin<br/> <b>Dookie</b>, Shakthi<br/> <b>Dorsamy</b>, Vinogrin<br/> <b>Dyson</b>, Yvonne Esmé<br/> <b>Eggers</b>, Sharon Kim<br/> <b>Ellis</b>, Sean<br/> <b>Firmstone</b>, Delen Sylvester<br/> ★ <b>Fischer</b>, Duane Lee<br/>             (Chemistry/Environmental Science)<br/> <b>Gama Paulo</b>, Ali<br/> <b>Gangadin</b>, Kajal<br/> <b>Gareeb</b>, Milly<br/> <b>Gielink</b>, Claire<br/> <b>Gobind</b>, Nitasha<br/> <b>Goge</b>, Carol Mbali<br/> <b>Gokal</b>, Naren<br/> <b>Gonsalves</b>, Damian John<br/> <b>Goodall</b>, Robert David (Applied<br/>             Mathematics/Statistics)<br/> <b>Gouws</b>, Ingrid<br/> <b>Govender</b>, Aletta<br/> <b>Govender</b>, Devan<br/> <b>Govender</b>, Gordon<br/> <b>Govender</b>, Kevindran<br/> <b>Govender</b>, Mark Monogran<br/> <b>Govender</b>, Nilenindran Sundra<br/> <b>Govender</b>, Renita<br/> <b>Govender</b>, Shaughnessa<br/> <b>Govender</b>, Vaneshrie<br/> <b>Govender</b>, Visva Perumal<br/> <b>Govender</b>, Yevern<br/> + <b>Green</b>, Andrew Noel (Geography)<br/> <b>Grobbelaar</b>, Johan Samuel </p> | <p> <b>Gumede</b>, Zazi Herbert<br/> <b>Habte</b>, Mussie Mengistu<br/> <b>Hammujuddy</b>, Mohammad Jahvaïd (Applied<br/>             Mathematics )<br/> <b>Harilall</b>, Rikilall<br/> <b>Harrichandparsad</b>, Zeenat<br/> <b>Hassam</b>, Nisaar Ahmed<br/> <b>Hayhurst</b>, Matthew William<br/> <b>Jekot</b>, Marcin Tomasz<br/> <b>John</b>, Anslyn James<br/> <b>Johnston</b>, Bryan John<br/> ★ <b>Jumna</b>, Rivaaj (Mathematics/Computer Science)<br/> <b>Khan</b>, Adhila<br/> <b>Khan</b>, Farida<br/> <b>Kubheka</b>, Romualda Bongiwe Zanele<br/> ★ <b>Kudla</b>, Caroline Jessica (Applied Mathematics<br/>             /Computer Science/Mathematics)<br/> <b>Kuwar</b>, Dinesh<br/> <b>Laljit</b>, Quintin<br/> <b>Lebenya</b>, Mojakisane Clemence<br/> <b>Legopelo</b>, Nteseng Julia<br/> <b>Mackenzie</b>, Jennifer Ann<br/> <b>Mahabeer</b>, Neilkanth Pravin<br/> <b>Maharajh</b>, Amitkumar Ahnlicoomar<br/> + <b>Maharajh</b>, Prenitha (Applied Mathematics)<br/> <b>Mahlobo</b>, Nombulelo<br/> <b>Maingard</b>, Marie Dominique<br/> <b>Makhubedu</b>, Gabriel (Applied Mathematics )<br/> <b>Mastenbroek</b>, Walter Karel (Cell Biology)<br/> <b>Mkhize</b>, Simon Lucky<br/> <b>Mohideen</b>, Fiona<br/> <b>Moodley</b>, Nevashree<br/> <b>Moodley</b>, Nivan<br/> <b>Moodley</b>, Prevandran<br/> <b>Moodley</b>, Terrence<br/> <b>Motlounge</b>, Kalafane Gideon<br/> <b>Mpongose</b>, Artwell Sandile<br/> <b>Msomi</b>, Mondli Griffin<br/> <b>Mthembu</b>, Xolani Sabelo<br/> <b>Munsamy</b>, Kamalan<br/> ★ <b>Murrison</b>, Gavin Arthur Donaldson (Computer<br/>             Science)<br/> ★ <b>Muruvan</b>, Vilenthran (Computer Science)<br/> <b>Muthiyalu</b>, Desiree<br/> <b>Nabee</b>, Yusuf </p> |
|--|---|

★ indicates degree awarded *summa cum laude*

+ indicates degree awarded *cum laude*  
(subject distinctions in brackets)

Nadasan, Devendren Subramoney  
 Naicker, Dhivendran  
 ★ Naicker, Pravendra (Computer Science)  
 Naicker, Shivani  
 Naicker, Theo  
 Naidoo, Dashnie  
 ★ Naidoo, Geeneshan (Applied Mathematics/Statistics)  
 Naidoo, Kevindren  
 Naidoo, Mahendree  
 Naidoo, Michael  
 Naidoo, Nareshini  
 Naidoo, Nirvashnee  
 Naidoo, Pamela  
 Naidoo, Presha  
 Naidoo, Ramola Yamini  
 Naidoo, Rannel Sashnee  
 Naidoo, Thiloshini  
 Naidoo, Thiloshni Keshree (Computer Science)  
 Naidoo, Tyrrell Lester  
 Naidu, Prashanth Dayanandah  
 Nair, Kriebashne Subbiah  
 Nathoo, Meeta Kshitish  
 Nayagar, Kevin  
 Ngcobo, Freedom Nkosikhona  
 Ngubo, Ntokozo Gabriel  
 Nhlengethwa, Nokuthula Nelly  
 Nkabinde, Andile Nokuphiwa

Nkosi, Xolani Martin  
 Ntuli, Sithembeze Benedict  
 Parasram, Wayne Alwyn  
 Peer, Mohamed  
 Pillay, Deena  
 Pillay, Marlon  
 Pillay, Pamisha (Chemistry/Applied Chemistry)  
 Raghavjee, Shayan  
 Ramkaran, Arthi  
 Ramlukhan, Chandrika  
 Ramnath, Vishal  
 Ramoutar, Rakeshnie  
 Reddi, Desigan  
 Roy, Ashriti  
 Sewpaul, Vishen Ishwarduth  
 Singh, Surekha  
 Singh, Vishal  
 Stuart, Katherine Elizabeth  
 Taylor, Christopher Alec  
 ★ Thorulsley, Mahendren (Computer Science)  
 Tlake, Sello Patrick  
 Turner, Gabrielle Marcelle  
 van Kan, Gavin Noel  
 Venter, Robin Wayne  
 Whitaker, Claire Rosalie  
 Wiles, Michael Wilson  
 Williams, Ian Beresford  
 Yesmariam, Jenifer (Computer Science)

★ indicates degree awarded *summa cum laude*  
 + indicates degree awarded *cum laude*  
 (subject distinctions in brackets)





**CONFERMENT OF THE DEGREE OF  
DOCTOR OF SCIENCE  
*HONORIS CAUSA* UPON  
DAPHNE JOAN OSBORNE**

Professor Daphne Osborne has been a major figure in plant physiology since her first published paper, which appeared in 1951 in *Science*. Her early research was into hormones which regulate plant growth and in 1969 she published a monograph on her discovery that the chemical ethylene is one of these plant hormones. In the same year, five other papers in scholarly journals dealt with ethylene as a factor in matters such as the ageing, leaf abscission and defoliation of plants. These papers are also part of Professor Osborne's inquiries into the co-ordination of developmental phenomena in plants and their interactions with their environments. From her work on the interactions of growth-regulating plant hormones with intracellular control mechanisms, such as DNA, RNA and protein synthesis, Professor Osborne's research interests expanded into seeds. She has inquired into their deterioration and their propensity for early repair when germinating.

Professor Osborne has travelled extensively in order to further her research and to bring its implications for practical application to the knowledge of others. Her research has taken her to the California Institute of Technology where she worked with Professor Frits Went and she has also worked with her peers in African countries such as Nigeria and South Africa. She spent a period here during 1994-1995, and again in 1997 as a visiting lecturer in the Department of Biology at this University.

Professor Osborne's concern to enable others to benefit from her research has also taken her to many other countries in South America, the Middle East and Asia. She has published 176 scholarly papers of which no fewer than 20 appeared in *Nature*, the leading scientific journal in the English-speaking world. Most researchers would consider one paper in *Nature* to be the high point of their career. Her home bases during her life as teacher, researcher and travelling scholar have been the University of Oxford, then the University of Cambridge - where she was the first woman Fellow and Tutor at Churchill College - and Oxford again where she is Head of Plant Physiology in the Research Unit of the Open University.

Professor Osborne continues her work in ethylene-regulated target cells in plant development, fruit ripening and abscission, germination and DNA repair mechanisms in plants. As citizens and scholars in this part of Africa, whose eastern regions have recently been so terribly battered by floods which have destroyed both crops and seeds, we have particular reason to admire and be grateful for the work of Professor Daphne Osborne.





A video recording of the entire ceremony is available from the University's Audio-Visual Centre, Level 5, Shepstone Building, telephone 260-2637.

The University has appointed Studio Sydney to photograph each graduand/diplomate as they are being capped. The proofs of these photographs will be posted directly to the students, within 14 days of graduation. Note:- all enquiries regarding photographs should be directed to Studio Sydney, telephone 301-2169/305-1129.





## A Brief History of the University of Natal

Natal University College - The forerunner of the University of Natal - opened its doors in Pietermaritzburg in 1910 with eight professors and 57 students, eight of whom were women. Lectures in Classics, English and Philosophy, Law, Modern Languages, Botany and Geology, Chemistry and Physics, Mathematics and Zoology were spread over various venues, including Maritzburg College, the Natal Museum building and at the City Hall.

It was not until August 1912 that Old Main Building - built on 40 acres of land donated by the Pietermaritzburg Corporation - was opened by the then Minister of Education, F.S. Malan and the core of the present-day Pietermaritzburg campus was established. The following year, Natal University College (NUC) ceased to be a state institution, becoming instead a state-aided body.

In 1923, NUC extended its tuition to Durban with university level courses in Commerce and Engineering at the Technical College, but it was not until 1928 that Durban agreed that NUC take over full responsibility for university classes in Durban, thereby establishing the characteristic dual nature of the University of Natal. A generous donation by T B Davis, whose son, Howard Davis had been killed during the battle of the Somme in World War I, facilitated the building of Howard College on the Berea which formed the core of a separate campus in Durban. Howard College was formally opened in 1931.

Largely through the efforts of Fabian Socialist Dr Mabel Palmer, separate classes for 19 "Non-European" teaching students at NUC were introduced in Durban in 1936. This number, reflecting an obvious need for training of this nature, grew to nearly 900 by 1960. However, like the University's Medical School, founded in 1951 for black students, classes still reflected the segregated nature of South Africa under apartheid. The government's Extension of University Act of 1959 limited new enrolments, other than those at Medical School, to whites and thwarted the University's aspirations to serve the educational needs of broader society. This act also restricted the autonomy achieved when NUC was granted full university status in 1949. It was not until 1983 when the University circumvented the government's racial admission "quotas" by an appeal to the High Court, that the University could fully resume its role of serving the educational needs of the broader community. Today, about 20 000 students, representing all sectors of South African society, are enrolled at the University of Natal.

In 1953, the administrative control for the University was shifted from Pietermaritzburg to Durban. In response to mounting travelling costs, the two centres were academically separated in 1973, with each centre having parallel faculties of Law, Humanities, Commerce, Science, and Social Science. Recent restructuring has meant the merging of some faculties across both campuses, with Faculties of Engineering, and Law being shared by both campuses. Unique to Durban are the Faculties of Community and Development Disciplines, Management Studies, Science and Medicine. Unique to Pietermaritzburg is the Science and Agriculture Faculty. There are separate Faculties of Human Sciences on each campus.

The University of Natal is fortunate to boast among its past vice-chancellors and principals some exceptional leaders. Its first principal, John Bews (1930-38), was a world-renowned botanist while Dr E G Malherbe (1945-65) was known internationally as an educationalist. In 1993, the University of Natal was the first South African University to appoint a woman as its principal. Brenda Gourley is the present incumbent. Chancellors have also been distinguished figures, not least the present Chancellor, Judge Pius Langa, and the recently retired Archbishop Denis Hurley. Students include Alan Paton, Steve Biko and Alec Erwin. Honorary graduates include Nelson Mandela, Roy Campbell and Abdullah Ebrahim.

The University of Natal is committed to service through excellence in teaching and research and is opposed to discrimination on the grounds of race, colour, nationality, religion or gender. It is known as a centre for excellence in Africa, is one of South Africa's top research institutions, and has links with almost 260 international institutions. Alive to the demands of a rapidly changing global environment, the University has embarked on a thorough reform of curricula and university structures and is currently a leader in multi-disciplinary studies and is engaged in significant HIV/Aids research. In recognition of its role in society, the University of Natal is also committed to greater emphasis on community-based education and service learning.

## National Anthem

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  
Setjhaba 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.

## 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.

