GPA 1/3/52 cd,



PROFESSOR L W ROBERTS DEAN FACULTY OF ENGINEERING

UNIVERSITY OF NATAL

GRADUATION/DIPLOMA CEREMONY

1990

SATURDAY 24 MARCH 10h00

DURBAN



PROGRAMME

The Chancellor constitutes the congregation

PRAYER
Professor V J Bredenkamp
BA (Rhodes), MA (Oxon), MA, PhD (Princeton)

WELCOME TO GUESTS
The Vice-Chancellor

PRESENTATION OF FELLOWS OF THE UNIVERSITY OF NATAL
The Deans of Faculties

none for leng

PRESENTATION OF DOCTORAL GRADUANDS
The Deans of Faculties

HONORARY DEGREE
The Orator presents the Honorary Graduand
NOEL DESMOND CLARENCE
for the degree of
DOCTOR OF SCIENCE

ADDRESS Professor N D CLARENCE MSc (SA), MA (Cantab), PhD (Natal)

BRASS ENSEMBLE

Third Symphony Michel Richard de la Lande

Air Henry Purcell

PRESENTATION OF GRADUANDS AND DIPLOMATES
The Deans of Faculties

The Chancellor dissolves the congregation

BRASS ENSEMBLE
Trumpets: Michel Schneuwly (Leader); Ken Cox; Ivan Eggersdorfer
Trombones: Philippe Cousineau; Stuart Scott; Serge Filliatrault

The congregation is requested to stand while the academic procession enters and leaves the hall and to remain seated until the conclusion of the ceremony.

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

Refreshments will be served in the upper gallery at the conclusion of the ceremony.

OFFICERS

Chancellor The Honourable R N Leon OC. BA, LLB (Natal)

Vice-Chancellor and Principal P de V Booysen MScAgric (Natal), PhD (California)

> Chairman of Council G C Cox BCom, LLB (Cape Town)

Deputy Vice-Chancellor and Vice-Principal, Durban

C F Cresswell

BSc(Hons), MSc (Rhodes), PhD (Bristol),
FRSSAf

Deputy Vice-Chancellor and Vice-Principal, Finance and Technical Services

B M Gourley CTA (Witwatersrand), MBL (Unisa), CA (SA)

Deputy Vice-Chancellor and Vice-Principal, Pietermaritzburg

C de B Webb
BA(Hons) (Witwatersrand), HOD (Pret),
MA (Cantab), FRHistS

President of Convocation J M Pet PrEng, BScEng (Natal), MSAACE

Orator P J H Scholtz BA(Hons), HED (Natal)

Registrar B X de Wet MA (Pret), DLitt et Phil (Unisa), HED (Pret)

DEANS OF FACULTIES

Architecture & Allied Disciplines M Kahn
MSc, TRP (Witwatersrand), PhD (Natal),
TRP (SA), MRTPI, MSAITRP, MAPA

Engineering L W Roberts
PrEng, MScEng (Natal), PhD (London), DIC,
MSAIMechE, MASME

Medicine S Kallichurum MB ChB, MD (Natal)

Science D E A Williams-Wynn MSc, PhD (Rhodes), CChem, FRSC

FELLOWS OF THE UNIVERSITY OF NATAL (See page 17)

FACULTY OF MEDICINE

Baker, Lynne Wilford, MB BCh (Witwatersrand), MSc (McGill), FRCS (Edinburgh), FRCS (England)

Awarded for distinguished contributions in surgery.

Seedat, Yackoob Kassim, MD (NU Irel), FRCP (London), FRCP (Irel), FACP, FCP (SA), FAAC, FCCP, FICA
Awarded for distinguished contributions in medicine.

DOCTORAL GRADUANDS

DOCTOR OF MEDICINE

DOCTOR OF PHILOSOPHY IN THE FACULTY OF SCIENCE

Walter Green's Eulogy was given to him

MR CHANCELLOR

With the inevitable depletion of the supply of fossil fuel the search for liquid fuels to be used in internal combustion engines continues. The only way of determining the suitability of such alternatives is by modelling their combustion and heat transfer. Unfortunately existing models are inaccurate in describing the combustion of most alternatives.

Alan Hansen developed some very original sub-models which he combined with existing models to overcome these deficiencies. In addition he devised innovative techniques for verifying and calibrating his model. All his examiners urge him to publish his work so that he can provide future research workers with a sophisticated yet practical microcomputer based method for evaluating alternative fuels for diesel engines.

MR CHANCELLOR

I HAVE THE HONOUR TO PRESENT FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN THE FACULTY OF ENGINEERING

ALAN CHRISTOPHER HANSEN

Combustion stress in engines as in humans often relates to the quality of the fuel. Up to now it has not been possible to determine the suitability of a fuel for use in an engine without long and costly, destructive durability tests.

Andrew Taylor has developed a unique method of predicting durability by means of measuring the relevant engine variables for different fuels. His method involved the use of an engine stress model for comparing the suitability of different fuels and their effect on engine life. This research by wand will be of great benefit to engine manufacturers and the fuels industry, and his examiners anticipate wide spread reactions when his findings are published.

MR CHANCELLOR

I HAVE THE HONOUR TO PRESENT FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN THE FACULTY OF ENGINEERING

ANDREW BRUCE TAYLOR

The reduction of Chromite, an ore of chromium and iron, to the form of the bright silvery metal, is a subject of great scientific and commercial interest.

A rigorous and penetrating analysis of the thermodynamics and kinetics of the reduction reaction and a careful interpretation of the diffusion processes, allowed Nicholas Dawson to present a very valuable description of the mechanism of the reaction. His work was extended to include an assessment of the effect of specially added components and the increased rates of reduction observed have indicated that improvements in the industrial processes may be possible.

This study has major economic implications for the metallurgical industry where ferrochrome and stainless steel are being produced.

MR CHANCELLOR

I HAVE THE HONOUR TO PRESENT FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN THE FACULTY OF ENGINEERING

NICHOLAS FINCH DAWSON

Driving a motor car is an example of a control system which has three inputs, namely steering wheel, accelerator and brake, while direction and speed are its two outputs. The driver acts as the feedback controller by measuring or monitoring the outputs and deciding on what action to take at the inputs. This is an example of what control engineers would call a multi-input-multi-output system.

Many industrial processes have multi-inputs and multi-outputs with some form of electronic circuit or computer acting as the multivariable feedback controller. Edward Boje has extended existing Quantitative Feedback Theory to analyse a multivariable system and design a suitable multivariable controller for a system with uncertainties in the values of the variables. His examiners regarded his work very highly and considered it important in opening up a new research frontier.

MR CHANCELLOR

I HAVE THE HONOUR TO PRESENT FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN THE FACULTY OF ENGINEERING

EDWARD SYDNEY BOJE

The technical quality of our television broadcasting in South Africa rests in no small way on the ability of our Electronic Engineers to detect and reduce picture distortions. The work of Engineers in this task has been materially reduced by Paul Bouwer's invention and development of an instrument capable of fast and accurate measurement of intermodulation distortion in colour television transmissions. This elegant box of electronics replaces a roomful of expensive equipment and is a tribute to the scholarship of this candidate.

MR CHANCELLOR

I HAVE THE HONOUR TO PRESENT FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN THE FACULTY OF ENGINEERING

PAUL FREDERICK BOUWER

	Discipline
Huckett, Barbara Isobel, MSc	Biology
Livingstone, Douglas James, Hon DLitt (Natal),	Biology
Notcutt, Mark, BSc(Hons)	Physics
Watts, Ann Dorothea, BSc(Hons)	Psychology

DOCTOR OF PHILOSOPHY IN THE FACULTY OF ENGINEERING

(Department of Agricultural Engineering)

Hansen, Alan Christopher, MScEng

A diagnostic quasi-dimensional model of heat transfer and

combustion in compression-ignition engines.

Taylor, Andrew Bruce, MScEng

Thesis: Combustion stress in compression-ignition engines

(Department of Chemical Engineering)

Dawson, Nicholas Finch, BScEng Thesis: Solid state reduction of chromite.

(Department of Electrical Engineering)

Boje, Edward Sidney, BScEng(Witwatersrand), MScEng

Quantitative feedback design and construction of a two by two

system with large disturbances.

Green, Walter Battman, MScEng Thesis: Numerical algorithms for PWM modulators.

(Department of Electronic Engineering)

Bouwer, Paul Frederick, BScEng Thesis: A proportional timing generator for measuring intermodulation

distortion on television transposers.

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DOCTOR OF PHILOSOPHY IN THE FACULTY OF MEDICINE

DOCTOR OF PHILOSOPHY IN THE FACULTY OF ARCHITECTURE AND ALLIED DISCIPLINES

Discipline

HONORARY GRADUAND

(See page 16)

Clarence, Noel Desmond, MSc (SA), MA (Cantab), PhD (Natal)

Music

GRADUANDS

MASTER OF SCIENCE

	Discipline
Bickerton, Iain Bruce, BSc(Hons)	Biology
Cazalet, Richard Stephen, BSc(Hons) Thesis: Development of non-linear optical components for a laser system.	Physics
de Bruyn, Warren James, BSc(Hons) Thesis: The photochemistry of Uracil and Cytosine in aqueous solution.	Chemistry
Dempers, Clemens Arnold, BSc(Hons)(Stell)	Physics
Dewar, Janice, BSc(Hons) Thesis: An investigation of the storage bevaviour characteristics of <i>Podocarpus henkelii</i> Stapf seeds.	Biology
* Ford, Lesley, BSc(Hons)	Biology
Gravett, David Michael, BSc(Hons) Thesis: The photochemical kinetics for acetophenone photosensitized photolysis of thymine dinucleotides and oligonucleotides.	Chemistry
* Haines, Christopher Mark, BSc(Hons) Thesis: The simulation of physical phenomena with permanent magnets.	Physics
Ladwig, Julius Mark, BSc(Hons) Thesis: Longitudinal variations in the occurrence of whistlers.	Physics
* Malone, Mark Emmett, BSc(Hons)	Chemistry
McDonald, Gavin John, BSc(Hons) Thesis: The distribution and taxonomy of the orchidaceae in Durban and surrounding areas.	Biology
Ponquet, Ryan Tyson, BSc(Hons) Thesis: Aspects of tocopheral antioxidant activity.	Chemistry
Ramlall, Krishendutt Jewdhun, BSc(Hons) Thesis: Ray paths of VLF waves generated in the vicinity of the equatorial plane.	Physics

^{* =} Degree awarded cum laude

	Discipline
Richardson, Eleanor Judith, BSc(Hons)	Biology
Ripley, Bradford Sherman, BSc(Hons) Thesis: Investigations of the processes involved during the photoinhibition of Zea mays L. seedlings.	Biology
Stegeman, Johanna, BSc(Hons)	Biology
* Thomas, Rosalee Cara, BSc(Hons) Thesis: The kinetics of DNA photochemistry.	Chemistry
van Dyk, Deborah, BSc(Rhodes), BSc(Hons)(UDW) Thesis: Genetic variation within the endemic Murid species, Otomys unisulcatus F. Cuvier, 1829 (Bush Karroo rat)	Biology

I HAVE THE HONOUR TO PRESENT FOR THE DEGREE OF

MASTER OF SCIENCE IN ENGINEERING

Thesis: Modelling inflittation under unferent timed conditions.

Haines, Richard Walter, BScEng

Compression-ignition combustion of synthesised hydrocarbon fuels. Thesis:

Lecler, Neil Louis, BScEng Thesis: A performance-based traction control system.

(Department of Chemical Engineering)

Bachmann, Taaf Reinhardt, BScEng Thesis: A model for wet high-intensity magnetic separation of weaklymagnetic minerals.

	Discipline
Richardson, Eleanor Judith, BSc(Hons)	Biology
Ripley, Bradford Sherman, BSc(Hons)	Biology
Stegeman, Johanna, BSc(Hons)	Biology
* Thomas, Rosalee Cara, BSc(Hons) Thesis: The kinetics of DNA photochemistry.	Chemistry
van Dyk, Deborah, BSc(Rhodes), BSc(Hons)(UDW)	Biology

MASTER OF SCIENCE IN ENGINEERING

(Department of Agricultural Engineering)

* Buitendag, Isak, BScEng
Thesis: Modelling infiltration under different tilled conditions.

Haines, Richard Walter, BScEng

Compression-ignition combustion of synthesised hydrocarbon fuels. Thesis:

Lecler, Neil Louis, BScEng
Thesis: A performance-based traction control system.

(Department of Chemical Engineering)

Bachmann, Taaf Reinhardt, BScEng Thesis: A model for wet high-intensity magnetic separation of weaklymagnetic minerals.

Dalgleish, Gavin Barry, BScEng

Thesis: An investigation into the performance of a three-phase reactor.

* Portsmouth, Robert Lynton, BScEng

Thesis: The kinetics of 2-methyl-3-buten-2-OL dehydration over an

alumina catalyst

Slaghuis, Johan Hendrik, NDH(Chem), Dip Tech(Vaal Tech)

Thesis: Volatile material in coal and the role of inherent mineral matter.

(Department of Electrical Engineering)

* Seaman, Craig, BScEng

Thesis: Transient analysis of a synchronous machine following unsymmetrical shunt faults in unbalanced power systems.

(Department of Electronic Engineering)

Burstein, David Bruce, BSc(Hons)(Bath, England)

Thesis: Linearisation of high frequency transmitters utilising modulation feedback.

Davies, Trevor Rowland, BScEng

Thesis: Implementation of a proprietary CAD graphics subsystem using the GKS standard interface.

* Hensley, Norman Peter, BScEng

Thesis: The construction and testing of an experimental travelling wave tube amplifier.

Hoole, Andrew Charles Frederick, BScEng

Thesis: The design of an integrated circuit for use in a smart RS232 cable using the LIS-VLSI design tool.

Maharaj, Bodhaswar Tikanath Jugpershad, BScEng

Thesis: Characterization of helical slow wave structures in travelling wave tubes.

* McDonald, Stephen Andrew, BScEng

Thesis: Development of network analyser based microwave antenna range and characterisation of 1-12 Ghz antenna standard.

Mhlongo, Aubrey Zithulele, BSc(Hons)

Thesis: Computer aided design and manufacture of coaxial helix transformers for travelling wave tubes.

Pitchers, Richard Charles, BScEng

Thesis: A comparative study of various speech recognition techniques.

Smith, Darren Mark, BScEng

Thesis: The theoretical and practical analysis of low perveance Pierce

electron guns

(Department of Mechanical Engineering)

Bright, Glen, BScEng

Thesis: Automated guided vehicle system for manufacturing operations.

Duffy, Kevin Jan, BSc(Hons)

Thesis: The optimal design of hybrid composite laminates under free

vibrations or buckling loads.

Goolam, Ebrahim, BScEng(UDW)

Thesis: Performance evaluation of mechanical draught counterflow water

cooling towers.

Miglietti, Warren Martin Andre, BScEng

Thesis: The manufacture of a hollow turbine rotor blade.

Morphis, George, BScEng

Thesis: The measurement of axial turbine tip flow phenomena in a moving

wall annular cascade and in a linear cascade.

xan der Steege, Anton Willem, BScEng

Thesis: Experimental investigation of special turbine blade-cooling config-

urations.

MR CHANCELLOR

I HAVE THE HONOUR TO PRESENT FOR THE DEGREE OF

MASTER OF SCIENCE IN LAND SURVEYING

Thesis: A comparison of satellite data types and techniques for mapping

irrigated land

* = Degree awarded cum laude

Roff Lat and setum to zext. Pitchers, Richard Charles, BScEng

Thesis: A comparative study of various speech recognition techniques.

Smith, Darren Mark, BScEng

The theoretical and practical analysis of low perveance Pierce Thesis:

electron guns

(Department of Mechanical Engineering)

Bright, Glen, BScEng

Thesis: Automated guided vehicle system for manufacturing operations.

Duffy, Kevin Jan, BSc(Hons)

Thesis: The optimal design of hybrid composite laminates under free

vibrations or buckling loads.

Goolam, Ebrahim, BScEng(UDW)

Thesis: Performance evaluation of mechanical draught counterflow water

cooling towers.

Miglietti, Warren Martin Andre, BScEng Thesis: The manufacture of a hollow turbine rotor blade.

Morphis, George, BScEng

The measurement of axial turbine tip flow phenomena in a moving

wall annular cascade and in a linear cascade.

× van der Steege, Anton Willem, BScEng
Thesis: Experimental investigation of special turbine blade-cooling config-

urations.

Redo Introdudtion

MASTER OF SCIENCE IN LAND SURVEYING

Discipline

Dinkele, John Malcolm, BScSur Surveying and Mapping

The capture and storage of topographic information in digital format, from analogue stereo plotters.

irrigated land

* = Degree awarded cum laude

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7

MASTER OF MEDICINE

	Discipline
De Bruyn, Colin, MB ChB (UOVS)	Haematology
Hargreaves, John, MB ChB (Cape Town)	Anaesthetics
Klopper, Stefan Marius, MB ChB (Cape Town)	Opthalmology
Kozlowski, Jan Msciwoy Douglas, MB ChB (Warsaw)	Opthalmology
Pillay, Gnanasagren Sathaseevan, MB ChB	Haemotology
Pires, Antonio Jose Aravjo Faria, MB ChB (Oporto)	Opthalmology
Richards, Shireen Patricia, MB ChB (Rhodesia)	Haematology
Tait, Dereck Roy, MB ChB (Pret)	Microbiology
Worner, Ulrike, MB BCh (Witwatersrand)	Anaesthetics

MASTER OF MEDICAL SCIENCE

Discipline

MASTER OF TOWN AND REGIONAL PLANNING

Adam, Asraf Mohamed, BA(UDW)
Bayat, Julieka, BA(UDW)
Day, Tracy, BSocSc
Kabi, Mmantsipo, BA(Transkei)
Mbali, Nonceba, BSocSc(Witwatrsrand)
Naidoo, Mahandra Gunarathanum, BA(UDW)

Naik, Bharti Chotoobhai, BSocSc Schafer, Leigh Zelma Valerie, BA Shaw, Catherine Jane, BA(Hons) Webb, Nicholas Winston, BA Wulfsohn, Terence Orde, BScAgric

BACHELOR OF SCIENCE (HONOURS)

		Discipline
+	Akerman, Leigh-Anne, BSc(Pharm)	
+	Aliwell, Simon Richard, BSc	Chemistry
	Arran, Prayindran Trevor, BSc(UDW)	Geology
+	Rarnett Michelle Ann RSc	Biology
	Barratt, Samantha Anne, BSc	Biology
+	Barshy, Jane, BSc	Geography
	Barsby, Jane, BSc	Geology

^{+ =} Degree awarded in the first class

	Bothma, Martin, BSc	Biology
	Butler, Debra Jean, BSc	Geology
	Chiliza, Simphiwe Ndodayomuzi, BSc(UZ)	Applied Mathematics
	Coady, Moira, BSc	
	Coady, Moira, BSc	Biology
	Dube, Thabile Gloria, BSc(UZ)	Computer Science
	Edwards, Elizabeth Anne, BSc	
	Edwards, Sion Charles, BSc	
+	Godefroy, Susan Jessica, BSc	
	Gouge, Odette Maria, BSc	Economics
	Haines, Jennifer Bronwyn, BSc	Economics
+	Honson Bradley Miles Stouggard RSc	Physics
	Hansraj, Ashikaram, BSc(Unisa) Hoar, Margaret Elizabeth, BSc(Unisa) Isherwood, Peter, BSc Karamoata, Charles Lowrenz, BSc Krista Angela Goula BSc	Mathematics
	Hoar, Margaret Elizabeth, BSc(Unisa)	Biology
	Isherwood, Peter, BSc	Geology
	Karamata, Charles Lowrenz, BSc	
	Kriste, Angela Gayle, BSc	
	Lawler, Ian Alfred, BSc	Geology
	MacFarlaine, Grant Robert James, BSc(Cape Town)	Geology
	Maharaj, Vanitha, BSc(UDW)	
	Mattson, Mark Christian, BSc	Biology
+	Melamed, Pavel, BSc	Computer Science
	Kriste, Angela Gayle, BSc Lawler, Ian Alfred, BSc MacFarlaine, Grant Robert James, BSc(Cape Town) Maharaj, Vanitha, BSc(UDW) Mattson, Mark Christian, BSc Melamed, Pavel, BSc Mhlongo, Mfanafikile Don, BSc(UZ) Monkhe, Thabo Vincent, BSc	
	Monkhe, Thabo Vincent, BSc	
	Moodley, Manikam, BSc(Unisa)	
	Mungunda, Milka Martha Arnoldine, BSc(UNIN)	Psychology
	Naidoo, Ramsamy, BSc(Unisa)	
	Pillay, Ramanie, BSc(UDW)	Geology
	Pillay, Yoganathan Sigamoney, BSc(UDW)	Geology Geology
	Rissik, David, BSc	Biology
+	Sherwin, Heather Wendy, BSc	Biology
	Todd, Colleen Barbara, BSc(Rhodes)	Biology
	Tootal, Kevin Vernon, BSc	Geology
	Truter, Agatha Aloma, BSc	Chemistry
	Wadley, Susan, BSc	Chemistry
+	Woodward, Timothy Ian, BSc	Physics
100		Tayoros

+ = Degree awarded in the first class

BACHELOR OF MEDICINE AND BACHELOR OF SURGERY

Akoo, Mahomed Shiraz
Bhagwandeen, Rohan
Bisnath, Kavitha
Bomela, Dumisani Sizwe
Bux, Mahomed Tharique
Chavda, Dhanesh
Chetty, Devadasa
Daya, Dharmandra
Daya, Mahendra
Dlamini, Stephen Muzikayise Silwane
Dlova, Cordelia Noxolo

Gangan, Ravin
Gobinca, Marshall Ngubekhaya
Gopalan, Pragasan Dean
Gounden, Yogapragasen Poovalingam
Govender, Balasundurum
Govender, Linganathan Munsamy
Govender, Srinivasan Chinsamy
Haribhai, Neeta Chimanlal
Hlekane, Charles Tinyiko
Ismail, Feizal Haroon
Jagot, Mahmood Abdull Rahim

Jairam, Jaiprakash Thakor Javantilal Ramiee, Mira Jogiat, Muhammad Goolam Hoosen Jugoo, Ashilla Juta, Sunil Kgomo, Mpho Klaas Khumalo, Nonhlanhla Patience Madala, Nomandla Daphne Maistry, Mervyn Gerarde Mangera, Immran Mahmood Mayosi, Bongani Mawethu Mokwena, Edward Jimmy Molapisi, Robert Martin Vusumuzi Moodley, Yuben Pathmanathen Moosa, Mahomed Faizal Hassim Moosajee, Mohamed Motaung, Clarence Sello Motloung, Moeti Abel Msibi, Alice Mungal, Urvashi Dhooprajh Myataza, Charles Lwanga Mzileni, Sipetuxolo Witness Naidoo, Mergan Naidoo, Pairinban Naidoo, Uvarasen Kumarswami Naidoo, Yatinraj Narasumulu Naidu, Sachidanandan Nair, Rajendran Nathoo, Narendra Ndlovu, Mohelepi Percy Ndumiso, Losman Benedict Mbuviselo Ngubane, Musa Griffiths Nkohla, Mkululi Victor

Nkosi, Jabulani Abe Patrick William Nteta. Mosomotsi Christopher Nvati. Mabelandile Fundile Palani, Manivasan Pather, Rajakrishna Masilamoney Pather, Selvan Pershad, Santosh Pillay, Devadas Ganesh Pillay, Thillagavathie Ramiee. Asmita Amratlal Ranyane, Ralehlokoa Andrew Reddy. Ramachandra Roopnarian, Indra Purbhoo Nath Royeppen, Edmund Christopher Salig, Surendra Bhimrajh Salig, Vikash Sankar, Naveen Munessar Sewpersad, Selina Shah. Leshni Shaik, Zulfika Mohammed Sheik, Ismail Abdul Kader Shongwe, Keith Ian Mantayi Shunmugam, Ravendren Sibanyoni, Vusmuzi Jonathan Singh, Hansrai Solanki, Anoop Chandrakant Soni, Ellesh Narbharam Suleman, Farhana Ebrahim Tovi. Daluxolo Karl Tune, Michael James Walele, Azeem Hassan Xobololo, Freedom Nkululeko

BACHELOR OF ARCHITECTURE

Allen, Maria Louise Claire
Arthur, Maxine
Avice du Buisson, Patrick Jean-Marie
Boothway, Adam Mark
Choromanski, Rodney Ralph
Foord, Geoffrey Roy
Grego, Rui Manuel Vieira
Hindle, Richard Anthony
Kartsounis, Viviene Theresa
Lee, Chandra Maria Soares
MacKenzie, Janice Ann Marie
Magalhaès, Erika Antunes

Makin, Andrew John
Naidu, Sharendra Pragladhan
Napier, Mark
Reitz, Francis William
Ross, Robert James
Schwerzel, Petrus Johannes
Shiba, Selby Mchele
Smith, Alaric Heath
Stiemens, Gavin Lloyd
Sutton, Kevin Grant
Telford-Smith, Amanda Nell

BACHELOR OF SCIENCE (PHARMACY)

Bechoo, Shireen
Byres, Leanne Susan
Chaboolall, Vishala
Ebrahim, Hajra Hoosen
Govender, Thirumala
Halstead, Michelle
Hoosen, Khatija Bibi
Jacob, Sandra
Jerome, Lisa
Jhajbhai, Fathima Ebrahim
Kriese, Gustav Franz
Lawrenz, Anton Heinrich
Madden, Teresa Elizabeth
Maharaj, Ravi Leelamber
Maher, Clare Lynda

Moggridge, Anne
Moodley, Reggie
Munro, Rosanne Lynn
Naidoo, Neera Brijlal
Naidu, Indirani
Parker, Ian Charles
Ratcliff, Steven Andrew
Smith, Amanda Lynne
Soffiantini, Jeanette Denise
Stainton, Barbara
Stephen, Anita Coral
Theron, Michelle Julianne
Vahed, Yusuf Mahomed
Zervogiannis, Yianoula

MR CHANCELLOR

I HAVE THE HONOUR TO PRESENT FOR THE DEGREE OF

BACHELOR OF SCIENCE IN ENGINEERING

Brooker, Andrew Gordon Pringle Cole, Allen Kevin Downes, David Stuart Trouncer Rudnick, Timothy Simon Wing, David Stuart

(Chemical Engineering)

Ahrens, Graham John
Aldworth, Martin Arthur
Bradford, Brian Richard
Bull, Christopher Michael
Fernandes, Luis Alberto Rosado
Fyfe, Graham Carmichael
Greening, Michael John
Hurt, Quentin Edward
Kendall, Simon George
McCarley, Stephen Paul
Morley, Kevin Thomas
Naicker, Pravindrin

O'Reilly, Brian Clair
Pereira, Rogerio Araujo — a ruse you
Pillay, Bavanethan
Sewsunker, Indrani
Smith, Trevor Raymond
Spada, Angelo Roberto
Stevens, Laurence Colin
Welman, Johan Christiaan Adriaan
Wessels, Wessel Jurie
Yelland, Neil Ross
Yokwe, Armstrong Mbulelo

BACHELOR OF SCIENCE (PHARMACY)

Bechoo, Shireen
Byres, Leanne Susan
Chaboolall, Vishala
Ebrahim, Hajra Hoosen
Govender, Thirumala
Halstead, Michelle
Hoosen, Khatija Bibi
Jacob, Sandra
Jerome, Lisa
Jhajbhai, Fathima Ebrahim
Kriese, Gustav Franz
Lawrenz, Anton Heinrich
Madden, Teresa Elizabeth
Maharaj, Ravi Leelamber
Maher, Clare Lynda

Moggridge, Anne
Moodley, Reggie
Munro, Rosanne Lynn
Naidoo, Neera Brijlal
Naidu, Indirani
Parker, Ian Charles
Ratcliff, Steven Andrew
Smith, Amanda Lynne
Soffiantini, Jeanette Denise
Stainton, Barbara
Stephen, Anita Coral
Theron, Michelle Julianne
Vahed, Yusuf Mahomed
Zervogiannis, Yianoula

BACHELOR OF SCIENCE IN ENGINEERING

(Agricultural Engineering)

Brooker, Andrew Gordon Pringle Cole, Allen Kevin Downes, David Stuart Trouncer

Rudnick, Timothy Simon Wing, David Stuart

(Chemical Engineering)

Ahrens, Graham John
Aldworth, Martin Arthur
Bradford, Brian Richard
Bull, Christopher Michael
Fernandes, Luis Alberto Rosado
Fyfe, Graham Carmichael
Greening, Michael John
Hurt, Quentin Edward
Kendall, Simon George
McCarley, Stephen Paul
Morley, Kevin Thomas
Naicker, Pravindrin

O'Reilly, Brian Clair
Pereira, Rogerio Araujo — A ruse you
Pillay, Bavanethan
Sewsunker, Indrani
Smith, Trevor Raymond
Spada, Angelo Roberto
Stevens, Laurence Colin
Welman, Johan Christiaan Adriaan
Wessels, Wessel Jurie
Yelland, Neil Ross
Yokwe, Armstrong Mbulelo

(Civil Engineering)

Berry, Alan David Booth, Gregory Buccimazza, Domenico Roschimstza Challis, Andrew John Davis, Peter Brittan Dyas, Andrew Elphinstone, Robert Andrew Ethelston, Dervck Michael Förs. Eric Gounder, Sathasivan Haliburton, Peter Don Howard, Mark Lynton Johnson, Daryl Garth Lebea, Mashao Lawrence Lenferna de la Motte. Robert Pierre Lion-Cachet, Shaun McCann, Neil Alexander McIlwraith, Robert Ian Mogolola, Leata Jonas

Moore, Paul Bernard Ngcobo, Fanzethu Philemon - soft click Officer. Andrew Knowles Palmer, Gregory Charles Pearce, Warwick Arnold Peters, Adrian Michael Pillay, Rajendran Robins, Philip Norman Robinson, Alan Michael Royce, Bruno Paul Henry Ru of Ruof. Johannes Guenther Silinga, Mninawe Smith. Mark Alistair Spooner, Paul Vigar, David Carew Visser, Gary George Watkins, Ian Graham Lewis Wright, Gustav John Wylie, David William

(Electrical Engineering)

Aphane, Lambona Ferdinand Begley, Shaun Grant Bettoni, Dario Bruno Bouwer, Arnold Kenrick de Vries, Maarten Leo Dilraj, Rakesh Edwards, Stephen Fairlamb, Ian David Gubula, Morris Robert
Gwamanda, Sibusiso William
Hamalainen, Ari Petteri
MacKenzie, Raynold Aubrey
Rigby, Bruce Spencer
Walker, Glen Dalton
Watson, David Stuart

(Electronic Engineering)

Berry, Michael John
Bhyat, Mohammed Salim
Bipath, Minnesh
Brown, Kenneth Francis
Buccellato, Ricardo Balladon Buffa
Chetty, Chidananda
Chinniah, Vishnu
Fick, Clinton John
Froes, Paulo José
Garach, Jayesh Avanikant
Harrichunder, Rajendra
Hart-Jones, Trevor Norman

Hemme, Alexander Wilhelm Maria
Hill, Darrell Lee
Hurter, Jeremy Craig
Kovacevich, Michael John
Lidgett, Andrew George
Lotter, Neil Ian
Mans, Johannes Jochemus
McCurrach, Richard Robert
Meyer, Benjamin Shane
Michel-Smith, Trevor Michael
Mitchell, Brendan Steven James
Naidoo, Dhanapalan

Naidoo, Kubendra Srinivasan Naidoo, Logan Venketes
Naidoo, Surendra Ramoorthee Northover, Kenneth Charles Nortje, Graham Edward Padayachee, Strinavasen Parbhoo, Harshad Parsot Parle, Timothy Lawrence Paul, Allan Clifford Pennington, Andrew Fawcett Pillay, Indheran Randelhoff. Mark Charles

Ratzlaff, Henry Franz
Ravjee, Chandresh Narsai
Scott, Richard Frank
Singh, Pranesh
Soobben, Deva Rajen
Strode, Jonathan Ronald Francis
Turner, Kevin Richard
Tweedie, Justin Mark
Vassilopoulos, Nicolaos
von Varendorff, Rudiger Victor
Walsh, Martin Eugene

(Mechanical Engineering)

Allison, Colin Bidden
Apostolou, Apostolos
Coetzer, Mathew Charles
Cole, Karen Vanessa
de Kriek, Peter Bernardus
de Wet, Alan Peter McKenzie
Denley, Brian David
Durose, Christopher Robert
Edwards, Robert Claude

Faber, Robert Henry Grey
Ferreira, Jacques Henri
Field, John James
Freeman, Trevor Raymond Ross
Gerrish, Colin John
Gibson, Zane Edwin
Goble, Kevin David
Goosen, Pierre
Govender, Gonasagren
Hawgood, Timothy Edward Jack
Heiner, Sven
Hunt, Peter Guy

Kaiser, Ivan Karlson, Gary Michael Knoesen, Danny Kroutz, Shaun Clinton Joseph Langton, Peter McDougall, Rafferty Bruce Mulock Molaba, Chiloane Alpheus Mornet, Paul Michiel Nienaber, Anton Nimmo. Gavin Frank Pillay, Seelan Reid, Jeremy Mark Sewnarain, Sanjay Stevenson, Grant Hugh Sunika, Bernadette Patricia Taylor, Gregory William

* Taylor, Gregory William

* Thom, Martin Gunther
van Rossum, Dirk
Walker, Mark
Williams, Victor Craig
Wootton, William Spencer Mark

(9) out of (178

P. T.Tal 170

MR CHANCELLOR

I HAVE THE HONDUR TO PRESENT FOR THE DEGREE OF BACHELOR OF SCIENCE IN LAND SURVEYING

* = Degree awarded cum laude # = Degree awarded summa cum laude

Naidoo, Kubendra Sriniyasan Naidoo, Logan Venketes Naidoo, Surendra Ramoorthee Northover, Kenneth Charles Nortie, Graham Edward Padavachee, Strinavasen Parbhoo, Harshad Parsot Parle, Timothy Lawrence Paul, Allan Clifford Pennington, Andrew Fawcett Pillay, Indheran Randelhoff, Mark Charles

Ratzlaff, Henry Franz Ravjee, Chandresh Narsai Scott, Richard Frank Singh, Pranesh Soobben, Deva Raien Strode, Jonathan Ronald Francis Turner, Kevin Richard Tweedie, Justin Mark Vassilopoulos, Nicolaos von Varendorff. Rudiger Victor Walsh, Martin Eugene

(Mechanical Engineering)

Allison, Colin Bidden Apostolou, Apostolos Coetzer, Mathew Charles Cole, Karen Vanessa de Kriek, Peter Bernardus de Wet, Alan Peter McKenzie Denley, Brian David Durose, Christopher Robert Edwards, Robert Claude Faber, Robert Henry Grey Ferreira, Jacques Henri Field, John James Freeman, Trevor Raymond Ross Gerrish, Colin John Gibson, Zane Edwin Goble, Kevin David Goosen, Pierre Govender, Gonasagren Hawgood, Timothy Edward Jack Heiner, Sven

Hunt, Peter Guy

Kaiser, Ivan Karlson, Gary Michael Knoesen, Danny Kroutz, Shaun Clinton Joseph Langton, Peter McDougall, Rafferty Bruce Mulock Molaba, Chiloane Alpheus Mornet, Paul Michiel Nienaber, Anton Nimmo. Gavin Frank Pillay, Seelan Reid, Jeremy Mark Sewnarain, Sanjay Stevenson, Grant Hugh Sunika, Bernadette Patricia Taylor, Gregory William Thom, Martin Gunther van Rossum, Dirk

leng total 170

Walker, Mark
Williams, Victor Craig
Wootton, William Spencer Mark

70

Redo Introduction

BACHELOR OF SCIENCE IN LAND SURVEYING

Walker, Mark

Gosling, Charles Leonard Roy Jenkins, Richard Dennis Matibe, Ntshavheni Patrick Setati, Tlabo Charles

Singh, Ronil Theirai, Sanjay Turnbull, William Ian Mark Warren, Barry Donald

* = Degree awarded cum laude # = Degree awarded summa cum laude

BACHELOR OF SCIENCE IN QUANTITY SURVEYING

Ballim, Suleman Ismail Barnard, Ian Lourens Dhliwayo, Onesimo Gelman, Mark Gabriel Hobden, Alistair Jessop, Craig Anthony Jones, Colin Dennis Joubert, Emil Justin Knowles. Paul Brett Mandindi, Nonyameko McIntyre, Wayne Ian Naidu, Vijayananda O'Grady, Michael John Patel, Junate Mohamed Proctor, Andre Tennant, Alistair William Thompson, Alan James van der Merwe. Lex

BACHELOR OF SCIENCE IN BUILDING MANAGEMENT

Bird, Graeme Michael Greensmith, Stewart John Kitchiner, Brent Edward Kyle, Murray John Larrett, Keith Anthony

Poole, Jonathan Chad Schindler, Jens Friedrich van der Ham, Mark Wright, Roger

BACHELOR OF SCIENCE

Abbott, Belinda Ann
Baise, Paul Anthony
Barbour, Colleen Joy
Bean, Timothy Jackson
Bean, Tracey Mary
Botes, Andre Michael
Botha, Candace Jane
Broomhead, Neal Keith
Bundy, Simon Colin
Burger, Bruce Jonathan
Busse, Joanne (Mathematics, Applied

Mathematics)
Calais, Jean-Paul
Campbell, Jessie Florence
Chapman, Leigh Anne
Clemmett, Susan Joy
Coughlan, Carmen Lee
Coulson, Mornay
de Bruyn, Nicolette Leigh
Dhoda, Hassim Osman
Durham, Ben David

Duys, Karen Lesley Ferreira, Ester Johanna Ferreira, William Basil Forster, Rowan Ian Gokul, Manoj Goosen, Mary-Anne Gordon, Hayley Govender, Suriaganthie Hansen, Valerie Kim Haskins, Craig Ian

Hellberg, Barbara Luise (Applied Mathematics, Geographical & Environmental Sciences) Hendrickse, Shamiem Shareen Hoosen, Soraya (Mathematics, Mathematical Statistics)

Hope, Sean Dion Hornsey, Jacqueline Janet Hutton, Liam Dermot Kearney, Teresa Catherine Kuppen, Mogamberi (Physics) Lester, Michael Gerard

* = Degree awarded cum laude
Major subjects which candidates have passed with distinction are shown in brackets after their names.

Mahomed, Imthiaz McAravey, Shaun Harvey Meadon, Sean Brian Miller, Warwick Richard Moodley, Indrani (Mathematics, Mathematical Statistics) Moodley, Kuben (Chemistry) Moodley, Narainsamy Inben Mortimer, Bruce Mtembu, Langa Zola Muir, David John Murphy, John Edward Naicker, Ninmaalan Naicker, Sadhasivan Naidoo, Priyadarshini Naidoo, Umagasen Chinnasamy Nandkishore, Chandnee Nurrish, Natalie Louise Orchard, Anne-Liese Paetz, Jurgen Siegfried Hans Parthiephal, Bheeran Pearman, Keren Lee Pechel, Christoph Matthias

Pietersen, Kevin John Pillay, Dhanaseelan Loganathan Powell, Alan Roy (Computer Science) Rahiman, Rehana Banu Ramdhani, Jaichand Raubenheimer, Janine Reddy, Visvanathan Subba Roberts, Michael Austin (Biology) Robertson, John Mackinnon Ross-Jones, Bradley Steve Singh, Sudhir Anand Sithole, Christian Msindiseni Linda Smith, Jacqueline Anne Stephens, Nicole Helene Stewart, Gwethlyn Meriel Suchipersadh, Rajesh (Chemistry) Sweby, Deborah Lee Tonkinson, Charles Henry Llewelyn Turner, Audrey Michelle Whelan, Kim Wren. Michael David Yates, Craig Brooke Ziehl, Brett

* = Degree awarded cum laude

Major subjects which candidates have passed with distinction are shown in brackets after their names.

Annuella Wards Legales in absentis

MR VICE CHANCELLOR

I HAVE THE HONOUR TO PRESENT FOR THE

POST-GRADUATE DIPLOMA IN ENGINEERING

Booysen, Therese Marie, BSocSc

Dellis, John Evans

Mahomed, Imthiaz McAravey, Shaun Harvey Meadon, Sean Brian Miller, Warwick Richard

Moodley, Indrani (Mathematics, Mathematical

Statistics) Moodley, Kuben (Chemistry) Moodley, Narainsamy Inben

Mortimer, Bruce Mtembu, Langa Zola Muir, David John Murphy, John Edward Naicker, Ninmaalan Naicker, Sadhasivan Naidoo, Priyadarshini

Naidoo, Umagasen Chinnasamy

Nandkishore, Chandnee Nurrish, Natalie Louise Orchard, Anne-Liese Paetz, Jurgen Siegfried Hans Parthiephal, Bheeran

Pearman, Keren Lee Pechel, Christoph Matthias

Pietersen, Kevin John Pillay, Dhanaseelan Loganathan Powell, Alan Roy (Computer Science) Rahiman, Rehana Banu Ramdhani, Jaichand Raubenheimer, Janine Reddy, Visyanathan Subba Roberts, Michael Austin (Biology) Robertson, John Mackinnon Ross-Jones, Bradley Steve Singh, Sudhir Anand Sithole, Christian Msindiseni Linda Smith, Jacqueline Anne Stephens, Nicole Helene Stewart, Gwethlyn Meriel Suchipersadh, Rajesh (Chemistry) Sweby, Deborah Lee Tonkinson, Charles Henry Llewelvn Turner, Audrey Michelle Whelan, Kim

Wren, Michael David Yates, Craig Brooke Ziehl. Brett

* = Degree awarded cum laude

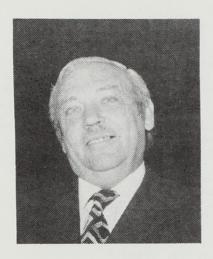
Major subjects which candidates have passed with distinction are shown in brackets after their names. Chancellar dwards degrees in absentis

DIPLOMATES

POSTGRADUATE DIPLOMA IN ENGINEERING

Boovsen, Therese Marie, BSocSc

Dellis, John Evans



CONFERMENT OF THE DEGREE OF DOCTOR OF SCIENCE HONORIS CAUSA, UPON NOEL DESMOND CLARENCE

Noel Desmond Clarence was born and educated in Pietermaritzburg and began his outstanding career at the Natal University College in Pietermaritzburg where he was awarded the BSc and MSc degrees with distinction. In 1947 he was awarded an Elsie Ballot Scholarship and enrolled for the Natural Science Tripos at Selwyn College, Cambridge. After graduating from Cambridge with a BA degree, he returned to Natal to lecture in the Physics Department in Durban. By 1954 he had added to his qualifications the degree of MA (Cantab) and in 1956, the PhD degree from the University of Natal for his research into electrostatic fields in the atmosphere.

Desmond Clarence has devoted his entire working life to the University of Natal, where he progressed from Junior Lecturer to Head of the Department of Physics and Dean of the Faculty of Science. He was appointed Vice-Principal, Durban in 1974 and became Principal of the University in 1977 until his retirement in 1984.

He has served with distinction on a number of National and International Professional bodies, including the Council of the South African Institute of Physics, of which he was Vice-Chairman for four years and which accorded him its highest honour: that of Honorary Membership. At various times he has been a member of the Advisory Councils of the National Institute of Telecommunications Research, the South African Magnetic Observatory and the National Physical Research Laboratory of the CSIR amongst others, and has served as a South African delegate at a number of international conferences and symposia.

His extensive involvement in education has been further witnessed by his membership of the Natal Education Department Examinations Board, the Committee of University Principals, the Council of the University of Zululand, and the Council of Mangosuthu Technikon, of which he is presently Chairman.

After his retirement in 1984, Desmond Clarence was asked to act as Chairman of the Natal Kwa Zulu Indaba, a post he filled with great distinction.

The University of Natal honours Professor Clarence for his long and distinguished service to the University, to the universities of South Africa and to the field of tertiary education generally.

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 these 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.

Lynne Wilford Baker: Lynne Baker headed the Department of Surgery from 1967 to 1988. His tenure has brought the Department from a small unit to one of the largest in the Republic, where developments in such new fields as intensive care, total parental nutrition, ultrasound, vascular diagnosis and microsurgery have kept pace with the international field.

He laid the foundations for the now highly reputable unit of vascular surgery.

His wide travels have brought the best known surgeons of our time to this University and in turn the name of this University and it's Medical School to their doorstep.

Yackoob Kassim Seedat: "YK" Seedat, a native of Durban, is the product of Sastri College and of the National University of Ireland. He is a Fellow of the College of Physicians in South Africa and has been elected to Fellowships of the Royal Colleges of Physicians of London and Ireland, the American College of Physicians and the American College of Cardiology, to name but a few.

He is an excellent teacher and is known and respected nationally and internationally as a clinical researcher. His research has resulted in over 200 publications in internationally recognised journals, and numerous invitations to speak at local and international meetings, universities and congresses.

UNIVERSITY ANTHEM

Natale solum canimus
Cui sol adest faustissismus
Almamque matrem dicimus
Aurorae Stellam colimus.

O vivas, in aeternum, vivas,
Alma mater, quae nos ditas,
Fove serva protege
Stella aurorae signum Natale.
Hic juvenes addiscimus
Ad artes corda ferimus
Qui domus species sumus,
Quocumque nos dividimus.
Hinc etsi nos discedimus
Scottarum rus meminimus
Ad Umsinduzi tendimus
Mentesque saltem vertimus.

GAUDEAMUS IGITUR

Gaudeamus igitur, juvenes dum sumus; (Rep)
Post jucundam juventutem, post molestam senectutem,
Nos habebit humus, nos habebit humus.
Ubi sunt qui ante nos in mundo fuere? (Rep)
Vadite ad superos transite ad inferos,
Ubi jam fuere, ubi jam fuere.
Vita nostra brevis est, brevi finietur; (Rep)
Venit mors velociter, rapit nos atrociter,
Nemini parcetur, nemini parcetur.
Vivat Academia, Vivant Professores, (Rep)
Vivat membrum quodlibet, vivant membra quaelibet,
Semper sint in flore, semper sint in flore.
Vivant omnes virgines, faciles, formosae, (Rep)
Vivant et mulieres, dulces et amabiles,
Bonae, laboriosae, bonae, laboriosae.
Vivat et respublica, et quae illam regit; (Rep)
Vivat nostra civitas, Maecenatum caritas.
Quae nos his protegit, quae nos hie protegit.
Pereat tristitia, pereant osores, (Rep)
Pereat diabolus, quivis antiburschius,
Atque irrisores, atque irrisores.

