

ORDER OF PROCEEDINGS

The congregation is requested to stand while the choir sings Gaudeamus Igitur and the procession enters the Auditorium.

The Chancellor will constitute the Congregation.

The Vice-Chancellor will welcome the Congregation.

The Public Orator, Distinguished Professor Paul R Maylam, will present George Ellis for the Degree of Doctor of Laws, *Honoris Causa*.

Professor Emeritus George Ellis will address the Congregation.

The Deans of Faculties will present the candidates for the Degrees of Bachelor, Bachelor with Honours, and Doctor of Philosophy.

The Deputy Vice-Chancellor (Research and Development) will present Professor Brett Pletschke for the Vice-Chancellor's Distinguished Senior Research Award.

The Congregation will stand and sing the National Anthem.

The Chancellor will dissolve the Congregation.

The congregation is requested to stand while the procession leaves the Auditorium.

With the exception of the commencement and the conclusion of the ceremony and the singing of the National Anthem, members of the congregation are requested to remain seated throughout the proceedings.

INKQUBO

Ingqungquthela iyacelwa ukuba iphakame ngexesha iKwayala icula uGaudeamus Igitur, umkhosi wemithika ungena ngaphakathi.

INgqonyela imisela iNgqungquthela.

USekelangqonyela wamkela iNgqungquthela.

ISithethi, uNjingalwazi oBekekileyo uPaul R Maylam unikezela uGeorge Ellis ukuze afumane i*Degree of Doctor of Laws, Honoris Causa*.

UNjingalwazi Emeritus George Ellis wenza intetho kwiNgqungquthela.

IiNtloko zeFakalithi zibiza abaza kuwongwa ukuze kunikezelwe kubo iziDanga ze*Bachelor*, isiDanga se*Honours*, ne*Doctor of Philosophy*.

UMncedisi weSekelangqonyela (uPhandolwazi noPhuhliso) uza kwazisa uNjingalwazi Brett Pletschke oza kuthweswa imbasa yokuba nguMphandilwazi ophezulu nogqwesileyo.

INgqungquthela iphakama ivume uMhobe weSizwe.

INgqonyela ivala iNgqungquthela.

Ingqungquthela iyacelwa ukuba iphakame ngexesha umkhosi wemithika uphuma.

Ngaphandle kwaxa kuqalwa naxa kusongwa uMsitho, naxa kuculwa uMhobe weSizwe, abantu abakwiNgqungquthela kufanele bahlale phantsi ngalo lonke ixesha kuqhutywa inkqubo.

VOLGORDE VAN VERRIGTINGE

Die vergadering word versoek om te staan terwyl die koor Gaudeamus Igitur sing en die prosessie die Ouditorium binnekom.

Die Kanselier sal die vergadering tot orde roep.

Die Vise-Kanselier sal die vergadering verwelkom.

Die Openbare Orator, Uitgelese Professor Paul R Maylam, sal George Ellis voorstel vir die Doktorsgraad in die Lettere, *Honoris Causa*.

Professor Emeritus George Ellis sal die vergadering toespreek.

Die Dekane van die Fakulteite sal die kandidate voorstel vir die toekenning van Baccalaureusgrade, Honneurs-Baccalaureusgrade, en Doktorsgrade in die Wysbegeerte.

Die Adjunk Vise-Kanselier (Navorsing en Ontwikkeling) sal Professor Brett Pletschke voorstel vir die toekenning van Vise-Kanselier se Senior Navorsingstoekenning.

Die vergadering sal staan en die Volkslied sing.

Die Kanselier sal die vergadering verdaag.

Die vergadering word versoek om te staan terwyl die prosessie die ouditorium verlaat.

Met die uitsondering van die aanvang en afsluiting van die seremonie, sowel as met die sing van die Volkslied, word die vergadering versoek om tydens die verrigtinge te bly sit.

FACULTY OF SCIENCE

DEGREE OF BACHELOR OF SCIENCE

ASHERWOOD, Shayna Helen
BABU, Xhasumzi
BALINTULO, Putuma
BALL, Kirsty-Lee
BELL, Emma Catherine
BEN-DAVID, Ilan, **with distinctions in** Economics **and** Environmental Science
BENNETT, Tahnee Tashia
BERRINGTON, Jyson Michael
BRODY, Blake Benjamin
BROWN, Kirsten
CALANA, Phumza
CESLER, Lia
CHANAIWA, Beverly Tendai
CHIFAMBA, Tavonga Delroy
CHINYAMA, Prince
CHIZEMA, Tinashe Roy
CLARK, Darryl Malcolm
CLAY, Siposihle Phiwe
DE BRUYN, Elrico, **with distinction in** Human Kinetics & Ergonomics
DE SOUZA, Sergio-Luke
DELIWE, Siyabulela Thandolwethu
DELPORT, Janais
DES TOMBE, Luke Charles
DEYI, Lungile
DHAYER, Priyashini
DILLON, Patrick Francis
DIXON, Russell Bruce, **with distinction in** Ichthyology
DLAMINI, Nomvuyo
DODGE, Taylor Devan
DOHERTY, Matthew Kieran Frank
DOOLEY, Matthew Thomas, **with distinction in** Ichthyology
DORNONVILLE DE LA COUR, Brendan John, **with distinctions in** Computer
Science **and** Information Systems
DU PLESSIS, Michael Pierre
DU TOIT, Skye Carol
DUBE, Dennis Kuzivakwashe Sanele, **with distinction in** Geology
DUDHA, Nabeelah Adam
FORSTER, Shaan Nance, **with distinctions in** Biochemistry **and** Microbiology
FRANS, Phelokazi

FREEMAN, Amy-Lee, **with distinction in** Geography
FUMBA, Okuhle
GASURA, Joseph Mufaro
GCAKASI, Monis Nolitha
GOBOZI, Sinakho
GUNN, Callan John
HAMLOMO, Sisipho, **with distinctions in** Mathematical Statistics **and**
Mathematics
HAND, Francis Bryan
HARRIS, Jaimee, **with distinctions in** Botany **and** Entomology
HASHE, Lithalethu
HOOSEN, Naadiya, **with distinction in** Geology
IKWEN, Emmanuella Biye, **with distinction in** Geology
ILUNGA, Nathan Nyembo
IYAMBO, Elago Martha
JAFFER, Zakirah
JOHNSTON, Christopher Roy
JOKAZI, Mbulelo
JONAS, Khanya Zimkhitha
KALLA, Hamza
KENYON, Thomas, **with distinctions in** Biochemistry **and** Microbiology
KGOMOESWANA, Mogotladi Letago
KHUMALO, Njabulo Fortune
KINCAID, Robert Daniel, **with distinctions in** Applied Mathematics **and**
Physics
KNOCK, Joshua Desmond Brian, **with distinction in** Biochemistry
KRUGER, Samantha Jayne
LANGLEY, Corbyn Rhys
LITYE, Susan Andiswa
LOBOW, Royston Mario
LOCKINGTON, Kirsten Judy
LUKHAIMANE, Anthony Izzy
LUPHADE, Nonhlanhla Linda, **with distinction in** Applied Mathematics
LWANA, Amanda
MABASO, Vutomi
MABENA, Noxolo Penelope
MAHE, Vuyolwetu
MAHLAULE, Thokozani
MAKUWA, Nicolene Nyarai
MALOPE, Kelebogile Kgomotso
MAMPHEY, Maame Nicole, **with distinction in** Microbiology
MANYATHI, Kanya Kwezi
MAPOKANE, Mahlatse Lucky

MARIMA, Edmore, **with distinctions in** Geology **and** Mathematical Statistics
MAROPE, Thato, **with distinction in** Information Systems
MASHINGAIDZE, Tsungai Vesta, **with distinction in** Biochemistry
MASON, Brooke Shanon
MASUKU, Nkosazane Bha
MATANDIROTYA, Lorraine Tariro, **with distinctions in** Biochemistry **and**
Microbiology
MAZIOFA, Michelle Rumbidzai
MBANE, Nomabhelu
MBUNGE, Mhlali
MCCARTNEY, Daniel
MCQUILLAN, Caitlin Lorraine
MDLULI, Nomonde Chevious
MELA, Thuthula
MELTZER, Liam David
MENELISI, Pontso
MGUDLWA, Sivenathi
MGWEBA, Nikithemba
MHLAULI, Bongo
MILNE, Shannon Dianne
MKHALIPHI, Nonkululeko Amanda
MMATLI, Masego, **with distinction in** Biochemistry
MNCINCI, Zuko
MOFOKENG, Jan Mosebi
MOJAKHOMO, Liteboho Gloria
MOKITIMI, Lerato Catherine
MOKONE, Lesedi Mahlatse
MOODLEY, Janade
MOSAASE, Bokang Maureen
MOSIANE, Kamogelo Oregopotse, **with distinction in** Biochemistry
MOSTERT, Philip Stanley, **with distinctions in** Economics **and** Mathematical
Statistics
MPHATSOE, Rethabile Naledi
MSUTU, Anathi
MTINTSILANA, Zintle
MTIRARA, Dini
MUNTHALI, Margaret Sekanawo
NELL, Rhys
NGWARAI, Joshua Tendekai
NKABINDE, Buhlebukhona Praisegod
NKETSI, Mpoetsi Hilda, **with distinction in** Economics
NKULA, Sesethu Milisa
NOGWINA, Sindisiwe

NOMBANGA, Apiwe Pamela
NUNES, Steven Antonio
O'BEIRNE, David
OYETUNJI, Nicole Armlade
PALISO, Andisiwe
PAMLA, Avela
PARK, Yae Eun
PARK, Yuchan
PILLAY, Andrecia Gracen
POOLE, Louise Carmen, **with distinction in** Computer Science
RALETING, Precious Rethabile
RAMAGOGODI, Ofentse
RAMUKOSI, Boikgantsho
READ, Kimberley Diana
REEVE, Kathryn
SEBAKAMOTSE, Nomfundo Angela
SEBOKO, Tshepiso Collen
SIJAKO, Ndumiso
SIMANGO, Martin Shuko, **with distinctions in** Computer Science **and**
Mathematics
SINGIZI, Ethel Tatenda, **with distinction in** Economics
SKEEN, Jeffrey Duncan
SMIT, Annemie
SOLANI, Dumisani Jonah
SONGCATA, Ntobeko
SOPAPAZA, Yamkelani
SPRINGBOK, Thato
ST QUINTIN, Georgia-Ann Masego
STANDER, Jesse-Clint
STIRK, Emma Jane
STONE, Jamie-Lee, **with distinctions in** Biochemistry **and** Microbiology
STOPFORD, Stuart Hugh
STRELITZ, Benjamin Steenveld, **with distinctions in** Applied Mathematics **and**
Mathematical Statistics
SWANN, Richard Stephen
TAMBWE, Nadine
TRAFFORD, Bronwyn Kate
TRIVELLA, Cara-Marie
TSAOANE, Moipone Elizabeth
TSHAMBO, Lutho
TSOKOLIBANE, Orateng
TWANI, Vuyokazi
VAN DER MERWE, Elizabeth Anne

VAWDA, Saleha
VELE, Rendani
WATKINS, Ariana Heloise Jo, **with distinctions in Biochemistry and**
Microbiology
WAUGH, Cian Jordan
WEISS, Sven-Erick
WELMAN, Brian Allister, **with distinctions in Computer Science and**
Mathematics
WILLEMSSEN, Megan Ashleigh
WOOTTON, Oscar
WORTLEY, Ross Michael
YELL, Liam Dougal
ZABO, Sophakama

DEGREE OF BACHELOR OF SCIENCE
(Information Systems)

CHIYOKA, Jordan Tinodaishe, **with distinction in** Information Systems
HORN, Dane Seymour, **with distinctions in** Computer Science **and** Information
Systems
HUNT, Stephen James, **with distinctions in** Computer Science **and** Information
Systems
KLEINBOOI, Martin Jonathan
MAMBU, Msimelelo
MASAMVU, Natsai
MHIZHA, Kudakwaishe Phillip
MJOLI, Siphamandla
MKANSI, Ndhuvazi Proficient
MOLWENI, Sakhele
MUTOWO, Mwazvita Maurice Junior

DEGREE OF BACHELOR OF SCIENCE WITH HONOURS

AGAR, Sarah Leigh, in Human Kinetics & Ergonomics
ALLEN, Angus Maxwell, in Botany
ANDERSON, Jethro James Moncreith, in Ichthyology & Fisheries Science
BARKER, Cassandra, in Marine Biology
BARWICK, Matthew William, in Biotechnology, **with distinction**
BEAHAN, Shannon Patricia, in Physics & Electronics, **with distinction**
BELLRINGER, Kim Ruth, in Human Kinetics & Ergonomics
BOWERS, Kaylen Delia, in African Vertebrate Biodiversity
BUTHELEZI, Khanyisile Thando Fatima, in Biotechnology

CASH, Devon Russell, in Biochemistry
CAWOOD, Rebecca Ann, in Entomology
CHAMBOKO, Chiratidzo Respina, in Biochemistry
CHARLES, Ntsikelelo, in Physics
CHILI, Asanda Sandra, in Environmental Water Management
CHINDEKA, Vongai Thelma, in Computer Science
CLOETE, Peter Francis, in Geology
COETZER, Benjamin Johannes, in Ichthyology & Fisheries Science
CORDIER, Cameron Fergus, in Biotechnology
DAUB, Chantal Desiree, in Biochemistry, **with distinction**
DES FOUNTAIN, Claudia, in Chemistry, **with distinction**
DIDARALI, Zahra, in Environmental Science, **with distinction**
DINGISWAYO, Somila, in Chemistry
DOMINY, Tayla Rhiannon, in Environmental Water Management, **with distinction**
DUBA, Sfiso Petros, in Microbiology
EGGERS, Jessica Marguerite, in Ichthyology & Fisheries Science, **with distinction**
EPSTEIN, Joshua Benjamin, in Applied Mathematics
FOSTER, Ryan Matthew, in Ichthyology & Fisheries Science
GALLAGHER, Hilton, in Computer Science, **with distinction**
GALVAO, Amy Simone, in Environmental Science, **with distinction**
GENU, Olwethu, in Applied Mathematics
GIBSON, Kirsty, in Geology
GREYLING, Edwin B, in Environmental Water Management
GUPTAR, Kaera, in Biotechnology
HARTLEY, Shaun Neil, in Chemistry, **with distinction**
HAWKINS, Trent, in Biotechnology, **with distinction**
HAYES, Max Nieuwoudt, in Applied Mathematics/Mathematics, **with distinction**
HLALUKANA, Nosipho Pretty, in Biochemistry
HUNTER, Amy Alison, in African Vertebrate Biodiversity
JACKSON, Matthew Nicholas, in Biotechnology, **with distinction**
JAMES, Gwyneth Laura, in Human Kinetics & Ergonomics
JOHNSTONE, Kyle Duncan, in Environmental Science
KHETSI, Diana Keitumetse, in Geology
KHOZA, Marina Rindzani, in Botany
KINSLER, David Louis, in Geography, **with distinction**
KIRIGIN, Elisa, in Biochemistry, **with distinction**
KITCHING, Lana Jeanne, in Geography/Zoology
LABUSCHAGNE, Jarryd Brenton, in Geology
LANCASTER, Tamara Jayne, in Computer Science/Physics
LANGNER, Wiebke, in Environmental Water Management, **with distinction**

LANGSTON, Amy Francis, in Mathematical Statistics, **with distinction**
 LEDWABA, Neo Elias, in Computer Science
 LEDWABA, Refentshe, in Environmental Science
 LEWIS, Gregory Michael, in Computer Science, **with distinction**
 LILFORD, Breandon Mark, in Chemistry
 LOURENS, Damian Daniel James, in Botany
 MAGENGELELE, Mihle, in Biotechnology
 MAHLABA, Bawinile, in Environmental Water Management
 MAHOFA, Cynthia Anna, in Computer Science
 MALOMA, Bonolo, in Human Kinetics & Ergonomics
 MAQOKOLO, Zizipho, in Mathematical Statistics
 MASOABI, Ntseka Thomas, in Geology
 MATIYELA, Nomalunga, in Microbiology
 MBANXA, Siso, in Biotechnology
 MCQUILLAN, Sean Stephen, in Geology
 MDIDIMBA, Nonkazimulo Dorothea, in Zoology
 MDLUDLA, Bukanani Asonela, in Environmental Water Management
 MEYS, Justin, in Ichthyology & Fisheries Science
 MHANGANA, Lebogang Bruce, in Applied Mathematics
 MNGOMEZULU, Innocent Sibusiso, in Economics
 MOKOENA, Kopano Nnono, in Environmental Water Management
 MOORCROFT, Nicholas Volker, in Computer Science
 MOSIKILI, Matseli, in Environmental Water Management
 MOSOLE, Mpho Ellen, in Environmental Science
 MPITI, Nasiphi, in Chemistry, **with distinction**
 MTINI, Onke, in Chemistry
 MUCHATIBAYA, Hilbert Munashe, in Information Systems
 MUCHATIBAYA, Maxeen Chiedza, in Mathematical Statistics
 MULAMU, Murendeni, in Economics
 NANGUE TASSE, Geraud, in Computer Science/Mathematics, **with distinction**
 NDLEVE, Mixo Nicky, in Computer Science
 NHIRA, Kudakwashe, in Information Systems
 NISBET, Laura Jade, in Biochemistry
 NTLAHLA, Mbalentle Apelele Wiseman, in Computer Science
 NZAYO, Luzuko, in Mathematics
 OJO, Dupe Ruth, in Biotechnology
 OOSTHUIZEN, Hanli, in Psychology, **with distinction**
 PALLETT, Nita Christine Marais, in Botany, **with distinction**
 PARK, Trent, in Applied Mathematics, **with distinction**
 PARKER, Kayla, in Environmental Science
 PARKER, Kim Helene, in Environmental Science, **with distinction**
 PHUNGUPHUNGU, Siyolise, in Geology
 PRINGLE, Brett Andrew, in Ichthyology & Fisheries Science, **with distinction**

PRINSLOO, Samantha Lee, in Entomology
RALA, Milisa Cabashe, in Environmental Science
RAMATSABANA, Phatsimo Pearl, in Environmental Water Management
RAMUIMA, Africa Khamusi, in Geology
RANTSEMA, Elexander Sandile, in Human Kinetics & Ergonomics
RAWSON, William Ignatius Snell, in Entomology, **with distinction**
REDDY, Seshnee, in Ichthyology & Fisheries Science
RENNIE, Craig Lawrence, in Ichthyology & Fisheries Science, **with distinction**
RICKETTS, Kiara Elizabeth, in Environmental Science, **with distinction**
ROESTOF, Bruce, in Entomology
ROGERS, Daniel James, in Entomology
SANDENBERGH, Emma, in Botany/Environmental Science, **with distinction**
SCHORMANN, Daniel Rudolf Mark, in Computer Science
SIRBA, Jose Paul, in Computer Science
SITHOLE, Tariro, in Biotechnology
SMUTS, Carmia, in Human Kinetics & Ergonomics
SPENCER, Jason Bradley, in Computer Science
STAMPER, Mbaso, in Biotechnology
STEPHENSON, Rebecca Joy, in Geography
SWAN, Jessica St Clair, in Microbiology
TARR, Grant, in Mathematical Statistics, **with distinction**
TAYLOR, Bianca Rose, in Microbiology, **with distinction**
TAYLOR, David Graham, in Entomology
THEUNISSEN, Kristen Emma, in Information Systems
THOMPSON, Jessica Francis, in Environmental Science
TOWERS, Matthew Richard, in Computer Science
TOWNSEND, Garyn Ross, in Entomology, **with distinction**
TROTTER, Adam William, in Ichthyology & Fisheries Science
TWALA, Ziyanda Vuyelwa, in Economics
VILAKAZI, Cebokuhle Mandisa, in Environmental Science
WILMOT, Sarah Lynne, in Biochemistry, **with distinction**
WOOLF, Alexander Robert, in Biochemistry
XHANTI, Sinxolo, in Applied Mathematics, **with distinction**
YAPP, Duncan Kyle, in Biochemistry, **with distinction**
YELL, Alexandra Jeanne, in Biotechnology, **with distinction**
ZIMMERMANN, Sharnae Vanessa, in Human Kinetics & Ergonomics
ZIPP, Roderich Thomas, in Computer Science
ZOZO, Ekhona, in Entomology

DEGREE OF DOCTOR OF PHILOSOPHY

BOËL, Natasha Marie-Eraïne, MSc (Rhodes), in Biochemistry, in the Department of Biochemistry and Microbiology. Degree by thesis. Thesis: The novobiocin-

induced turnover of fibronectin via low density lipoprotein receptor-related protein 1 alters matrix morphology with physiological consequences on cell growth and migration. Supervisor: Professor AL Edkins.

BOVA, Christopher Scott, MCom (UCT), in Fisheries Science, in the Department of Ichthyology and Fisheries Science. Degree by thesis. Thesis: Towards a norm of compliance in recreational fisheries. Supervisor: Professor WM Potts. Co-supervisor: Professor S Aswani.

CAPUTO, Michelle Anne, BScHons (Carleton), MSc (Newfoundland), in Marine Biology, in the Department of Zoology and Entomology. Degree by thesis. Thesis: Occurrence, feeding ecology and population structure of two dolphin species, *Tursiops aduncus* and *Delphinus delphis*, off the Wild Coast of South Africa. Supervisor: Professor PW Froneman.

CHARTIER FITZGERALD, Veronique, MSc (Rhodes), in Microbiology, in the Department of Biochemistry and Microbiology. Degree by thesis. Thesis: Ectomycorrhizal fungal assessment of South African *Pinus patula* seedlings and their biological control potential to enhance seedling growth. Supervisor: Professor JF Dames. Co-supervisor: Dr G Hawley (CES).

DENISON, Jonathan Anthony Noel, MScEng (UCT), in Geography, in the Department of Geography. Degree by thesis. Thesis: An investigation into the performance of smallholder irrigation schemes in the Limpopo province, South Africa: success factors, typologies and implications for development. Supervisor: Professor KM Rowntree. Co-supervisor: Professor W van Averbeke (TUT).

DIBLEY, James, MSc (Rhodes), in Computer Science, in the Department of Computer Science. Degree by thesis. Thesis: A development method for deriving reusable concurrent programs from verified CSP models. Supervisor: Professor KL Bradshaw.

DUBE, Edith, BScHons (Midlands), MSc (UKZN), in Chemistry, in the Department of Chemistry. Degree by thesis. Thesis: Physicochemical properties and photodynamic therapy activities of indium and zinc phthalocyanine-nanoparticle conjugates. Supervisor: Distinguished Professor T Nyokong.

DUNCAN, Murray Ian, Msc (Rhodes), in Ichthyology, in the Department of Ichthyology and Fisheries Science. Degree by thesis. Thesis: A physiological study of a commercial reef fish to quantify the relationship between exploitation and climate change resilience. Supervisor: Professor WM Potts. Co-supervisors: Dr NC James (SAIAB) and Dr A Bates (Southampton).

EGBON, Ikponmwosa Nathaniel, BScHons (Nigeria), MPhil (Ghana), in Entomology, in the Department of Zoology and Entomology. Degree by thesis. Thesis: The performance and preference of a specialist herbivore, *Catorhintha schaffneri* (Coreidae), on its polytypic host plant, *Pereskia aculeata* (Cactaceae). Supervisor: Dr ID Paterson. Co-supervisor: Professor S Compton (Leeds).

ELSTON, Chantel, BScHons (UCT), MSc (Rhodes), in Ichthyology, in the Department of Ichthyology and Fisheries Science. Degree by thesis. Thesis: The trophic and spatial ecology of a sympatric dasyatid community at a remote atoll, Seychelles. Supervisor: Professor PD Cowley (SAIAB). Co-supervisor: Dr RG von Brandis (SOSF).

FERNANDEZ MUNIZ, Carlota, BSc (Spain), in Marine Biology, in the Department of Zoology and Entomology. Degree by thesis. Thesis: Large scale spatio-temporal forcing of pelagic-coastal coupling: Disentangling the effects of environmental change on intertidal invertebrate recruitment. Supervisor: Distinguished Professor CD McQuaid. Co-supervisor: Dr N Weidberg (Arctic University, Norway).

FRIESLAAR, Ibraheem, MSc (UWC), in Computer Science, in the Department of Computer Science. Degree by thesis. Thesis: A multi-threading software counter-measure to mitigate side channel analysis in the time domain. Supervisor: Professor BVW Irwin.

GUSHA, Bukho, MScAgric (Fort Hare), in Environmental Science, in the Department of Environmental Science. Degree by thesis. Thesis: Livestock water productivity: towards improving rural livelihoods from livestock in semi-arid rangelands. Supervisor: Dr AR Palmer. Co-supervisor: Dr E Mwendera (ARC).

HERBERT, Alan, MSc (Rhodes), in Computer Science, in the Department of Computer Science. Degree by thesis. Thesis: Bolvedere: a scalable network flow threat analysis system. Supervisor: Professor BVW Irwin.

KANKUZI, Charles Frienderson, BEd, MSc (Malawi), MSc (Rhodes), in Geology, in the Department of Geology. Degree by thesis. Thesis: Gem-bearing granitic pegmatites in Malawi: their mineralogy, geochemistry, age and fluid compositional variations. Supervisor: Professor SH Büttner. Co-supervisor: Professor Y Yao (IRL).

KENYON, Jonathan Simon, MSc (Rhodes), in Physics, in the Department of Physics and Electronics. Degree by thesis. Thesis: CubiCal: a fast radio interferometric calibration suite exploiting complex optimisation. Supervisor: Professor OM Smirnov. Co-supervisor: Dr T Grobler (Stellenbosch).

LIBALA, Notiswa, MScAgric (Fort Hare), in Water Resource Science, in the Institute for Water Research. Degree by thesis. Thesis: Using a social-ecological systems approach to investigate hillslope seep wetlands ecosystem structure and functionality in the Tsitsa river catchment, Eastern Cape, South Africa. Supervisor: Dr ON Odume. Co-supervisor: Professor CG Palmer.

MAFA, Mpho Stephen, MSc (UFS), in Biochemistry, in the Department of Biochemistry and Microbiology. Degree by thesis. Thesis: Characterization of termite *Trinervitermes trinervoides* metagenome-derived glycoside hydrolases, the formulation of synergistic core enzyme sets for effective sweet sorghum and corncob saccharification, and their potential industrial applications. Supervisor: Professor BI Pletschke. Co-supervisor: Dr K Rashamuse (CSIR).

MANAGA, Muthumuni Elizabeth, MSc (Rhodes), in Chemistry, in the Department of Chemistry. Degree by thesis. Thesis: Photophysical properties and photodynamic therapy activities of symmetrical and asymmetrical porphyrins embedded into Pluronic polymer micelles and non-linear optical properties of an asymmetrical phthalocyanine. Supervisor: Distinguished Professor T Nyokong.

MSANE, Gugu Florence, BSc, PGCE (Swaziland), MSc (UJ), in Chemistry, in the Department of Chemistry. Degree by thesis. Thesis: Design and fabrication of components of dye sensitised solar cells. Supervisor: Professor RWM Krause.

MTAMBANENGWE, Kudzai Tapiwanashe Esau, MSc (Rhodes), in Microbiology, in the Department of Biochemistry and Microbiology. Degree by thesis. Thesis: Genetic characterisation of a range of geographically district *Helicoverpa armigera* nucleopolyhedrovirus (HearNPV) isolates and evaluation of biological activity against South African populations of the African bollworm, *Helicoverpa armigera* (Hübner) (Lepidoptera: Noctuidae). Supervisor: Professor C Knox. Co-supervisors: Distinguished Professor MP Hill and Dr S Moore (CRI).

NGOEPE, Mpho Phehello, MSc (Med) (Wits), in Chemistry, in the Department of Chemistry. Degree by thesis. Thesis: Synthesis of pH responsive carriers for pulmonary drug delivery of anti-tuberculosis therapeutics: mesoporous silica nanoparticles and gelatin nanoparticles. Supervisor: Professor RWM Krause.

NKANGA ISALOMBOTO, Christian, BPharm (Kinshasa), MSc (Rhodes), in Chemistry, in the Department of Chemistry. Degree by thesis. Thesis: pH-responsive liposomal systems for site-specific pulmonary delivery of anti-tubercular drugs. Supervisor: Professor RWM Krause.

NWAJI, Njemuwa Njoku, BTech (Nigeria), in Chemistry, in the Department of Chemistry. Degree by thesis. Thesis: Nonlinear optical responses of targeted phthalocyanines when conjugated with nanomaterials or fabricated into polymer thin films. Supervisor: Distinguished Professor T Nyokong. Co-supervisor: Dr J Britton.

ODERINLO, Ogunyemi Olajide, MSc (Ibadan), in Chemistry, in the Department of Chemistry. Degree by thesis. Thesis: Synthesis, characterisation and biological evaluation of novel anti-infective compounds bearing ferrocene, arylpyrrole, thiazolidinedione, quinoline and triazole moieties. Supervisor: Dr SD Khanye. Co-supervisor: Dr M Tukulula (UKZN).

PENKLER, David Lawrence, MSc (Rhodes), in Bioinformatics, in the Department of Biochemistry and Microbiology. Degree by thesis. Thesis: A dynamics based analysis of allosteric modulation in heat shock proteins. Supervisor: Professor O Tastan Bishop.

ROSS, Caroline Jane, MSc (Rhodes), in Bioinformatics, in the Department of Biochemistry and Microbiology. Degree by thesis. Thesis: A computational analysis to decipher the pathways of stability, uncoating and antigenicity of human enterovirus capsids. Supervisor: Professor O Tastan Bishop. Co-supervisors: Professor C Atilgan (Sabanci) and Professor C Knox.

SIGAUKE, Lester Takunda, MSc (Rhodes), in Chemistry, in the Department of Chemistry. Degree by thesis. Thesis: Enumeration, conformation sampling and population of libraries of peptide macrocycles for the search of chemotherapeutic cardio-protection agents. Supervisor: Professor KA Lobb. Co-supervisor Dr SD Khanye.

SWART, Carin, MSc (Rhodes), in Botany, in the Department of Botany. Degree by thesis. Thesis: The conservation, ecology and distribution of the critically endangered *Encephalartos latifrons* Lehm. Supervisor: Professor S Vetter. Co-supervisors: Professor NP Barker (Pretoria) and Professor J Donaldson (SANBI).

THORNTON, Roxanne, MSc (Med) (Wits), in Biochemistry, in the Department of Biochemistry and Microbiology. Degree by thesis. Thesis: Towards a biological profile for South African perinatal remains: Osteological and Genetic perspectives. Supervisor: Professor AL Edkins. Co-supervisor: Dr E Hutchinson (Wits).

TSHIWAWA, Tendamudzimu, MSc (Venda), in Chemistry, in the Department of Chemistry. Degree by thesis. Thesis: Application of computational methods in

elucidating the isomerization step in the biosynthesis of coumarins. Supervisor: Professor KA Lobb. Co-supervisor: Professor PT Kaye.

UWAMAHORO, Jean Claude, BScHons (UCT), MSc (Rhodes), in Physics, in the Department of Physics and Electronics. Degree by thesis. Thesis: Modelling storm-time TEC changes using linear and non-linear techniques. Supervisor: Dr JB Habarulema (SANSA).

VAN WIJK, Yvette Ethne, BFA (Rhodes), in Botany, in the Department of Botany. Degree by thesis. Thesis: Plants, people and place: complex, mutualistic and co-evolving global patterns through time. Supervisor: Professor NP Barker (Pretoria). Co-supervisor: Professor M Cocks.

WEAVER, Matthew James Thanduxolo, BSc (Stell), in Water Resource Science, in the Institute for Water Research. Degree by thesis. Thesis: Civil society engagement with water governance at a local government scale in South Africa. Supervisor: Professor CG Palmer. Co-supervisor: Professor J O'Keeffe.

WINKLER, Alexander Claus, MSc (Rhodes), in Fisheries Science, in the Department of Ichthyology and Fisheries Science. Degree by thesis. Thesis: Using a multi-method approach to understand the movement patterns and the associated environmental correlates of an iconic West African recreational fish. Supervisor: Professor WM Potts. Co-supervisor: Dr A Childs.

What is graduation?

Graduation is a time of enormous celebration for students and their families. It is a time to revel in a sense of achievement, to take photographs and store memories, to applaud and, of course, to dress up with the dignity that the ceremony deserves.

Graduating students traditionally wear an academic gown that marks them as ‘special’ and different to others attending the ceremonies. They walk across the stage, kneel before the Chancellor, who then taps them on the head with a ceremonial hat, before proceeding to the Registrar who ‘hoods’ them according to the degree they have earned.

For many attending the graduation ceremonies, a key question is what all this ceremony and procedure, much of which originated in Europe hundreds of years ago, actually mean in contemporary South Africa. One way to answer this question is to focus on the graduates themselves. As students walk across the stage today, they are not the same people they were who enrolled in the University three, four or more years ago. If the University has done its job well, they are completely different people.

The graduate looks at the world with an entirely different set of eyes. They now look for evidence for what is stated and to contest anything that does not appear to them to be valid or fair on the basis of the evidence presented.

At a university like Rhodes, graduates have also been trained to look through the lenses of theory. Theory is exactly like the lenses in a pair of spectacles. It allows us to see things we would not see without the spectacles, or to see things differently. Because theory allows us to see things we would not normally see, it allows us to imagine a world which does not yet exist, a world transformed from the one we currently inhabit. These are valuable attributes in the workplace and this is why graduates are highly sought after. They are especially important, however, in a fledgling democracy like ours.

As graduates walk across the stage today and participate in rituals which do not have their roots in African soil, one way to understand the proceedings is to see them as signifying an identity shift. Much as the way young men in some cultures, for example, may wear new clothes after an initiation ceremony, the wearing of an academic gown symbolises a shift in who the graduates have become. This shift is recognised by the Chancellor who taps them on the head and by the Registrar who places the hood over their shoulders. The Deans, academics, together with the entire University community, look on - celebrating and acknowledging our students’ achievements.

Enjoy the ceremony today, but, more importantly, remember its significance in the lives of our young graduates and, indeed, in the history of our country.

Amended: A contribution by Dr Chrissie Boughey – Deputy Vice Chancellor Academic and Student Affairs - Rhodes University.