



UNIVERSITEIT • STELLENBOSCH • UNIVERSITY

DIPLOMA- EN GRADEPLEGTIGHEDE: DESEMBER 2011

DIPLOMA AND GRADUATION CEREMONIES: DECEMBER 2011

UMSITHO WOTHWESO-ZIDANGA NEEDIPLOMA: DISEMBA 2011



DIE FAKULTEITE AGRIWETENSKAPPE EN INGENIEURSWESE

THE FACULTIES OF AGRISCIENCES AND ENGINEERING

IIFAKHALTHI ZEEAGRISAYENSI NEYOBUNJINELI

Vyfde Plegtigheid/ Fifth Ceremony/ uMsitho Wesihlanu

PROGRAM VIR DIE VYFDE PLEGTIGHEID

DIE FAKULTEITE AGRIWETENSKAPPE EN INGENIEURSWESE

'n Vriendelike beroep word op alle aanwesiges gedoen om selfone af te skakel en nie die saal tydens die plegtigheid te verlaat nie en sodoende te verseker dat die verrigtinge sonder ontwinging verloop.

1. Akademiese prosesie kom die saal binne. U word versoek om te staan terwyl hulle die saal binnekom en te bly staan vir die sing van die Nasionale Lied.
2. Sing van die Nasionale Lied (kyk binneagterblad). Neem asseblief daarna u sitplekke in. Begeleiding: Stellenbosch Simfoniese Blaasensemble onder leiding van Pamela Kierman. Voorsanger: André Howard.
3. Konstituering deur die Viserektor (Navorsing).
4. Gebed deur prof Hendrik Bosman.
5. Verwelkoming deur die Viserektor (Navorsing).
6. Voorstelling van diplomandi en graduandi deur die dekane van die betrokke fakulteite en toekenning van diplomas en grade deur die Viserektor (Navorsing).
7. Sluiting deur die Viserektor (Navorsing).
8. Akademiese prosesie verlaat die verhoog.

Die aanwesiges word versoek om te bly staan totdat die akademiese prosesie uitgestap het.

PROGRAMME FOR THE FIFTH CEREMONY

THE FACULTIES OF AGRISCIENCES AND ENGINEERING

To help ensure that the proceedings run their course without disruption, will all those present kindly keep their cell phones switched off, and refrain from leaving the hall, while the ceremony is in progress.

1. Entrance of academic procession into the hall. You are requested to stand while it enters, and then to remain standing for the singing of the National Anthem.
2. Singing of the National Anthem (see inside back cover). Thereafter, please be seated. Accompaniment: Stellenbosch Symphonic Winds under the baton of Pamela Kierman. Precentor: André Howard.
3. Congregation formally constituted by the Vice-Rector (Research).
4. Prayer by Prof Hendrik Bosman.
5. Welcome by the Vice-Rector (Research).
6. Presentation of diploma and degree candidates by the deans of the respective faculties and conferment of diplomas and degrees by the Vice-rector (Research).
7. Closing by the Vice-Rector (Research).
8. The academic procession leaves the stage.

Those present are requested to remain standing until the entire academic procession has left the hall.

ISICWANGCISO-NKQUBO SOMSITHO WESIHLANU

IIFAKHALTHI ZEEAGRISAYENSI NEYOBUNJINELI

Ukuqinisekisa ukuba umsitho uqala ngaphandle kwesiphazamiso, bonke abakhoyo bayacelwa ukuba bacime iiselfowuni zabo, kwaye bangaphumi eholweni ngeli xesha umsitho uqhubekayo.

1. Kungena umkhosi wemithika eholweni. Niyacelwa ukuba nime ngeenyawo xa ungena, nihlale nime njalo ukuze kuculwe uMhobe weSizwe.
2. Ukuculwa koMhobe weSizwe (Jonga kumphakathi weqweqwe lokugqibela). Emva koko, ningahlala phantsi. Umculo: yi-Stellenbosch Symphonic Winds ngaphantsi kwentonga yombhexeshi kaPamela Kierman. Umbhexeshi: nguAndré Howard.
3. UMsitho uvulwa ngokusesikweni nguSekela-Nqununu (wezoPhando).
4. Umthandazo wenziwa nguNjing Hendrik Bosman.
5. Ulwamkelo lwenziwa nguSekela-Nqununu (wezoPhando).
6. Ukunikezelwa kweediploma nezidanga kubafundi yintloko yefakhalthi (idin) echaphazelekayo nokuthweswa kweediploma nezidanga nguSekela-Nqununu (wezoPhando).
7. Ukuvalwa komsitho nguSekela-Nqununu (wezoPhando)
8. Umkhosi wemithika uyalishiya iqonga.

Bonke abakhoyo bayacelwa ukuba beme ngeenyawo de umkhosi wemithika ube uphume wonke eholweni.

LYS VAN KANDIDATE WAT KWALIFIKASIES ONTVANG

Die sertifikate en grade van kandidate wat nie by die plegtigheid teenwoordig kan wees nie, sal in hulle afwesigheid toegeken word.

Fakulteit Agriwetenskappe

BACCALAUREUS IN DIE NATUURWETENSKAPPE IN LANDBOU (BScAgric)

BACHELOR OF SCIENCE IN AGRICULTURE (BScAgric)

BAILIE, Katie Hester (Wingerd- en Wynkunde)
BESTER, Dirk Wouter (Agronomie en Plantpatologie)
BRAND, Naomi (Veekunde met Agronomie)
BURGER, Edrich (Grondkunde en Hortologie)
BUTLER, Leana (Hortologie en Plantpatologie)
CLARKE, Charlene (Veekunde met Bewaringsekologie)
DE BEER, Petrus Johannes (Wingerd- en Wynkunde)
DE KOKER, Jonathan (Wingerd- en Wynkunde)
DE VILLIERS, Michiel Hendrik Jacobus (Hortologie en Landbou-
ekonomie)
DE VRIES, Christopher John (Wingerd- en Wynkunde)
DERBYSHIRE, Geline (Agronomie en Landbou-ekonomie)
DREYER, Madri (Wingerd- en Wynkunde)
FINNIS, Sasha Lee (Wingerd- en Wynkunde)
GILIOMEE, Jurie Johannes Blom (Veekunde)
LEWIS, Oursula Venoda (Wingerd- en Wynkunde)
MAARMAN, Brenton Christopher (Wingerd- en Wynkunde)
MAINS, Arlene Olive (Wingerd- en Wynkunde)
MARAIS, Elisma (Wynkunde)
MARTENS, Fraser John (Akwakultuur)
MILLER, Gregory Anthony (Akwakultuur)
OCHSE, James Handre (Wingerd- en Wynkunde)
RABIE, Pierre-Andre (Landbou-ekonomie en Bestuur)
ROSSOUW, Cornelis Johannes (Hortologie en Plantpatologie)
RUITERS, Mario-Mark Timothy (Hortologie en Entomologie)
SMIT, Hendrik Petrus Jordaen (Veekunde)
SMITH, Jacques de Villiers (Grondkunde en Chemie)
SMUTS, Andrew John (Wingerd- en Wynkunde)
SONNEKUS, Nastassja (Wingerd- en Wynkunde)
STORM, Johannes Lodewicus (Wingerd- en Wynkunde)
THORNE, Roy Cecil Brittanicus (Wingerd- en Wynkunde)
VAN DER MERWE, Albertus Jacobus Wilhelmus (Veekunde)
VAN DYK, Nelita (Veekunde)
VAN EMMENES, Liesel (Veekunde)
VAN SCHALKWYK, Christiaan Theunis (Akwakultuur en
Bewaringsekologie)
VAN WYK, Jaco (Veekunde)
VAN ZYL, Frederick Jacobus van Eeden (Akwakultuur)
VERMEULEN, Meagan (Genetika en Plantpatologie)
VISSER, Johanna Elizabeth (Hortologie en Entomologie)
VISSER, Neall (Grondkunde en Hortologie)

BACCALAUREUS IN DIE NATUURWETENSKAPPE IN BOSBOU (BScBosb)

BACHELOR OF SCIENCE IN FORESTRY (BScFor)

DAVIDS, Conwill Peter-John (Bosbou- en Hulpbronbestuur)

DU BUISSON, Yvette (Bosbou- en Hulpbronbestuur)
FRONEMAN, Gideon Mauritz (Houtprodukkunde)
MALOY, Dwayne Rance Monray (Bosbou- en Hulpbronbestuur)
MLANGENI, Fakazi Amos (Bosbou- en Hulpbronbestuur)
MSIZA, Nonhlanhla Portia (Bosbou- en Hulpbronbestuur)
NDLOVU, Hlengiwe (Bosbou- en Hulpbronbestuur)
SHONGWE, Sipiwo Thembumenzi (Bosbou- en Hulpbronbestuur)
VAN DER MERWE, Jaco-Pierre (Bosbou- en Hulpbronbestuur)

BACCALAUREUS IN DIE NATUURWETENSKAPPE IN BOSBOU CUM LAUDE (BScBosb CUM LAUDE)

BACHELOR OF SCIENCE IN FORESTRY CUM LAUDE (BScFor CUM LAUDE)

LINDNER, Gerard Eckard (Bosbou- en Hulpbronbestuur)

BACCALAUREUS IN DIE NATUURWETENSKAPPE IN BEWARINGSEKOLOGIE (BScBewEcol)

BACHELOR OF SCIENCE IN CONSERVATION ECOLOGY (BScConsEcol)

BAM, Adrian Jock
BENADE, Pieter Christoffel
BENDLE, Linri
BOTHIA, Philna
CHIPPENDALE, Sarah
CLEGG, Chloe Jae
FREY, Lindy Anne
GRABE, Daniel Johann
HAUPT, Karla
HILL, Laura Pereslenny
JOUBERT, Robyn
KENNY, Jessica
LEAVER, Jessica
MEYER, Corlia
MYBURGH, Aletta Frederika
ODENDAAL, Deidré
POTGIETER, Luke John
POTTER, Cara-Paige
PRIOR, Andrew Frank
RUDMAN, Alexandra
SCHNEIDER, Daniel Jacobus
SCHREUDER, Elsje
TILANUS, Kirsten
VAN DER MERWE, Eberhard Ernest
WESTENSEE, Dirk Karl

BACCALAUREUS IN DIE NATUURWETENSKAPPE IN BEWARINGSEKOLOGIE CUM LAUDE

(BScBewEcol CUM LAUDE)

BACHELOR OF SCIENCE IN CONSERVATION ECOLOGY CUM LAUDE (BScConsEcol CUM LAUDE)

ESTERHUIZEN, Nanike
ORTMANN, Heinz Edgar

**BACCALAUREUS IN DIE NATUURWETENSKAPPE IN
VOEDSELWETENSKAP (BScVoedselwet)**

BACHELOR OF SCIENCE IN FOOD SCIENCE (BSc Food Sc)

BASSON, Lizanne (Voedselwetenskap met Chemie)
BESTER, Anri (Voedselwetenskap met Biochemie)
BESTER, Karo (Voedselwetenskap met Biochemie)
BURGER, Alta (Voedselwetenskap met Chemie)
CLOETE, Helena Elizabeth (Voedselwetenskap met Biochemie)
CRONJE, Barendina (Voedselwetenskap met Chemie)
DE BRUYN, Mari (Voedselwetenskap met Biochemie)
DE KOCK, Ottilie Luise (Voedselwetenskap met Chemie)
HORN, Petri Stefan (Voedselwetenskap met Biochemie)
JONES, Maxine Sylvia (Voedselwetenskap met Biochemie)
KAHINDO, Kasoki (Voedselwetenskap met Biochemie)
KROG, Natasha Lee (Voedselwetenskap met Biochemie)
LÖTTER, Candice Portia (Voedselwetenskap met Chemie)
MOKHORO, Tshepiso Georgina (Voedselwetenskap met Biochemie)
PITOUT, Melanie (Voedselwetenskap met Chemie)
PRODEHL, Helen Michelle (Voedselwetenskap met Chemie)
ROMANIS, Marco (Voedselwetenskap met Biochemie)
SCHULZE, Alexandra Elizabeth (Voedselwetenskap met Chemie)
SIKHAKHANE, Muzomuhle (Voedselwetenskap met Biochemie)
STRACHAN, Nandi (Voedselwetenskap met Chemie)
THEART, Riana (Voedselwetenskap met Chemie)
UYS, Georgina (Voedselwetenskap met Chemie)
WARREN, Roger David (Voedselwetenskap met Biochemie)

BACCALAUREUS IN LANDBOUBESTUUR (BAgricAdmin)

BACHELOR OF AGRICULTURAL MANAGEMENT

(BAgricAdmin)

BADEROEN, Moegamat Rafeeq
BESTER, Lise
DU PLESSIS, Pieter Herman
EARLEY, Hailey Sarah
GROBLER, Phillip
LIGHT, Gareth Neville
LOUW, Matthys Michael
MIDDEL, Jacob Peter
MILLER, James Walker
NOTHARD, Matthew Evan

BACCALAUREUS IN LANDBOU (BAgric)

BACHELOR OF AGRICULTURE (BAgric)

BOTHMA, Niel Basson
COETZEE, Jasper Jacobus Johannes
CRONJE, Jonathan Francis
DE BRUYN, Jovan Hendrik
DENMAN, Warwick Paul
DU TOIT, Johannes Gerhardus
GELDENHUYS, Adriaan Rall
GOEDEMAN, Yolande
HUDSON, Gareth
JACOBS, Sunette
KELLER, Dieter Hein
KERSLAKE, Monty Angus
KOTZE, Emile Gregory
KULSEN, Heinrich Devon Keenen

LEBENYA, Keneuoe Cynthia
LIPSCHITZ, Ryan Harry
LOTZ, Petrus Jacobus
LOUBSER, Gert Johannes Jakobus
MAKAPELA, Vumile
MATTHYS, Niklaas
MBHELE, Sifiso Innocent
MFENGU, Musa
MULLER, Theunis Gerhardus
NEL, Xaviera
NOVEMBER, Brent
OXENHAM, Cedric Clark
RICHTER, Gabriel Jacobus
ROUX, Jo-Ann
SERDYN, Wynand Smit
SHERIFF, Geraldine Audrey
SITHOLE, Neziswa
SMIT, Willem Adriaan
STANDER, Lizette
SYMINGTON, Jan Daniel
THOMAS, Alicia
UYS, Vincent
VAN DER MERWE, Emile
VAN NIEKERK, Willem Louw
VAN ROOYEN, Johan
VAN WYK, Ancu
VAN WYK, Jakobus Marthinus
VENTER, Maria Magdalena Elizabeth
VISSER, Elizabeth Johanna
WITBOOI, Nuugwanga Lucille

BACCALAUREUS IN LANDBOU CUM LAUDE

(BAgric CUM LAUDE)

BACHELOR OF AGRICULTURE CUM LAUDE

(BAgric CUM LAUDE)

BOTHA, Ilze
BOTHA, Petrus Johannes
LUBBE, Ellen Louisa

HONNEURS-BACCALAUREUS IN DIE

NATUURWETENSKAPPE IN LANDBOU (HonsBScAgric)

BACHELOR OF SCIENCE IN AGRICULTURE WITH

HONOURS (BScHonsAgric)

BURGER, Abraham Jacobus (Agronomie)
HLOMENDLINI, Pilile Hamlet (Landbou-ekonomie)
JAFTA, Asanda (Landbou-ekonomie)
LUBOUT, Cornelus Johannes Jacobus (Landbou-ekonomie)
PIENAAR, Cornelis Jacobus (Grondkunde)
PIENAAR, Petrus Louw (Landbou-ekonomie)
THAMAGA, Malapane Kgothatso (Landbou-ekonomie)
TSHONI, Simphiwe (Landbou-ekonomie)
VAN DER MERWE, Martin (Landbou-ekonomie)
VAN DEVENTER, Renier (Wynkunde)
ZETLER, Gabi Lea (Grondkunde)

**HONNEURS-BACCALAUREUS IN DIE
NATUURWETENSKAPPE IN LANDBOU CUM LAUDE
(HonsBScAgric CUM LAUDE)**

**BACHELOR OF SCIENCE IN AGRICULTURE WITH
HONOURS CUM LAUDE (BScHonsAgric CUM LAUDE)**

GREEFF, Antoinette Esme (Wynkonde)

LE RICHE, Christoffel Louis (Wingerdkunde)

**HONNEURS-BACCALAUREUS IN DIE
NATUURWETENSKAPPE IN BOSBOU (HonsBScBosb)
BACHELOR OF SCIENCE IN FORESTRY WITH
HONOURS (BScForHons)**

HAINDUWA, Feliciana Ndapewa (Boskonde)

**HONNEURS-BACCALAUREUS IN DIE
LANDBOUBESTUUR (HonsBAgricAdmin)
BACHELOR OF AGRICULTURAL MANAGEMENT WITH
HONOURS (BAgricAdminHons)**

SENTERY, Kabengele (Landbou-ekonomie)

STEYN, Helgard Meyer (Landbou-ekonomie)

**MAGISTER IN DIE NATUURWETENSKAPPE IN
LANDBOU (MScAgric)
MASTER OF SCIENCE IN AGRICULTURE (MScAgric)**

COETZEE, Kim (Genetika)

LE ROUX, Marize (Veekunde)

MAKEREDZA, Brian (Hortologie)

MÜLLER, Jasper Lodewyk (Hortologie)

NAUDE, Stephanus David (Landbou-ekonomie)

NCEDANA, Chwayita (Agronomie)

NTLADI, Solomon Magwadi (Genetika)

PRINS, Nico (Genetika)

WILSDORF, Robert Ernst (Hortologie)

**MAGISTER IN DIE NATUURWETENSKAPPE IN
LANDBOU CUM LAUDE (MScAgric CUM LAUDE)
MASTER OF SCIENCE IN AGRICULTURE CUM LAUDE
(MScAgric CUM LAUDE)**

FULTON, Craig Mark (Agronomie)

LATEGAN, Eugene Lourens (Grondkunde)

OLIVIER, Charl Francois (Grondkunde)

STANDER, McLachlan du Toit (Grondkunde)

**MAGISTER IN DIE NATUURWETENSKAPPE IN BOSBOU
(MScBosb)**

MASTER OF SCIENCE IN FORESTRY (MScFor)

CHIKUMBU, Vavariro (Boskonde)

**MAGISTER IN DIE NATUURWETENSKAPPE IN
BEWARINGSEKOLOGIE (MScBewEcol)
MASTER OF SCIENCE IN CONSERVATION ECOLOGY
(MScConEcol)**

MALHERBE, Hanlie

PAUW, Marco Johann

**MAGISTER IN DIE NATUURWETENSKAPPE IN
BEWARINGSEKOLOGIE CUM LAUDE
(MScBewEcol CUM LAUDE)
MASTER OF SCIENCE IN CONSERVATION ECOLOGY
CUM LAUDE (MScConEcol CUM LAUDE)**

KLEYNHANS, Elizabeth

VORSTER, Carlien

**MAGISTER IN DIE NATUURWETENSKAPPE IN
VOEDSELWETENSKAP CUM LAUDE
(MScVoedselwet CUM LAUDE)
MASTER OF SCIENCE IN FOOD SCIENCE CUM LAUDE
(MSc Food Sc CUM LAUDE)**

BEELDERS, Theresa

BESTER, Ingrid Muriel

**MAGISTER IN LANDBOUBESTUUR (MAgricAdmin)
MASTER OF AGRICULTURAL MANAGEMENT
(MAgricAdmin)**

BANDAMA, Maureen (Landbou-ekonomie)

MENTANI, Phumlani Sphiwo (Landbou-ekonomie)

**MAGISTER IN DIE WYSBEGEERTE (MPhil)
MASTER OF PHILOSOPHY (MPhil)**
VAN SCHALKWYK, Jacobus Theunissen (Veebedryfsbestuur)

MAGISTER IN BOSBOU (MFor)

MASTER OF FORESTRY (MFor)

KITENGE, Emile Museu (Boskonde)

Fakulteit Ingenieurswese

**BACCALAUREUS IN DIE INGENIEURSWESE (BIng)
BACHELOR OF ENGINEERING (BEng)**

AL SHAALANE, Amir (Bedryfsingenieurswese)

ALBERTS, Andre Matthys (Chemies)

ALBERTS, Stefan Francios (Elektries en Elektronies met
Rekenaarwetenskap)

ANDRAG, Erich Paul (Bedryfsingenieurswese)

AUCAMP, Herman (Siviel)

BARNARD, Christo Cornelius (Meganies)

BARRY, Reginald Murray (Meganies)

BATT, Martin (Elektries en Elektronies)

BECKER, Jolanda (Meganies)

BEECROFT, Bruce John (Meganies)

BEKKER, Hermanus Theodorus (Meganies)

BEUKES, Hendrik Terblanche (Bedryfsingenieurswese)

BEYERS, Analene (Chemies)

BEYERS, Ryno Dawid (Elektries en Elektronies met
Rekenaarwetenskap)

BEZUIDENHOUT, Martin Botha (Bedryfsingenieurswese)

BORMAN, Frikkie van Zyl (Megatronies)

BOSCH, Coenrad Johannes (Meganies)

BOSMAN, Hendrik Ludolph (Meganies)

BOTES, Antoni Willem (Siviel)

BOTHA, Antheun Rossouw (Elektries en Elektronies)
 BOTHA, Johannes Rudolf (Elektries en Elektronies)
 BOTHA, Theunis Christoffel (Megannies)
 BOTHMA, Jacques (Siviel)
 BOUWER, Johannes Stephanus (Bedryfsingenieurswese)
 BRAND, Ivan (Siviel)
 BROWN, Robert Pieter (Chemies)
 BURGER, Anthony (Siviel)
 BURGER, Christiaan Johannes (Megannies)
 BURGER, Riaan (Siviel)
 BURNETT, Sulene (Bedryfsingenieurswese)
 CAMPHER, Cedric (Megannies)
 CAMPHER, Rudolph Petrus (Siviel)
 CAWOOD, Erika (Siviel)
 CAWOOD, Gareth James (Megatronies)
 CILLIE, Sybrand (Bedryfsingenieurswese)
 CILLIERS, Charl Edward (Elektries en Elektronies met Rekenaarwetenskap)
 CLARKE, Kerri Lee (Siviel)
 CLOETE, Daniël Francois (Chemies)
 CLOETE, Gerrit Johannes (Bedryfsingenieurswese)
 COETZEE, Charles Ivan Evans (Elektries en Elektronies)
 CORIN, Chester Edward (Megatronies)
 CRAIG, Robert James (Megannies)
 CRAWLEY, Cassidy Jae (Bedryfsingenieurswese)
 DA SILVA, Laurence Manuel (Siviel)
 DE BEER, Matthys Johannes Adriaan (Elektries en Elektronies)
 DE KLERK, Johannes Jacobus (Megatronies)
 DE LANGE, Vasti (Siviel)
 DE VILLIERS, Byron Wayne (Megatronies)
 DE VILLIERS, Lodewyk Christoffel Barend (Megannies)
 DE VILLIERS, Nico-Ben (Siviel)
 DIENER, George Roelof (Siviel)
 DONALD, Ian Royden (Siviel)
 DREYER, Madelein (Megatronies)
 DU PISANI, Renaldo Murray (Elektries en Elektronies)
 DU PLESSIS, Hercules Gerhardus (Elektries en Elektronies)
 DU PLESSIS, Johanna (Elektries en Elektronies)
 DU PLESSIS, Pieter Jacobus (Bedryfsingenieurswese)
 DU PLESSIS, Ryan Sean (Megannies)
 DU PREEZ, Jacques (Megatronies)
 DU TOIT, Jan-Louis (Megannies)
 DU TOIT, Nina J (Bedryfsingenieurswese)
 DUZE, Aviwe (Elektries en Elektronies)
 EDMAYR, Wolfgang (Megatronies)
 ELLIS, John Boyd (Siviel)
 FENNER, Kylie (Chemies)
 FOURIE, Magdalena Aletta (Chemies)
 FOURIE, Neil (Megannies)
 FRANKEN, Hendrik Hermanus (Chemies)
 FREWEN, Stephen John (Megannies)
 FRIEDRICH, Sonja Stephanie (Bedryfsingenieurswese)
 FROST, Linzi Lee (Megatronies)
 GEDULDT, Fabian Marc (Elektries en Elektronies)
 GELDENHUYS, Armand Stefan (Chemies)
 GELDENHUYS, Jurie Norval (Megatronies)
 GELDENHUYS, Loura Christi (Bedryfsingenieurswese)
 GIBBS, Kelvin Ryan Gordon (Megannies)
 GOOSEN, Elaine Simóne (Siviel)
 GOOSEN, Gert Johannes (Megannies)
 GOOSEN, Henk (Bedryfsingenieurswese)
 GOOSEN, Johannes Gysbert (Megannies)
 GORDON, Roxsanne Alexandria (Megannies)
 GREEFF, Oliver Ivan (Siviel)
 GROBBELAAR, Annelize (Chemies)
 GROBBELAAR, Eben (Megannies)
 GROCH, Matthew (Elektries en Elektronies)
 GROENEWALD, Christoffel Johannes (Elektries en Elektronies met Rekenaarwetenskap)
 HAGER, Louw van Schoor (Megatronies)
 HANSEN, Volker (Megannies)
 HARRISON, Duncan Craig (Megannies)
 HARTSHORNE, Andre (Elektries en Elektronies)
 HECHTER, Zane (Megannies)
 HECTOR, Ryan Kevin Alexander (Elektries en Elektronies)
 HENDRIKS, Albertus (Elektries en Elektronies)
 HOBBS, Kyle (Megannies)
 HODGKINSON, Justin Terrence (Chemies)
 HOLLIS, Peter Graham (Chemies)
 HOLTZHAUSEN, Kurt Thomas (Siviel)
 HORSTHEMKE, Hagen Wolfgang (Siviel)
 HUMAN, Jean (Siviel)
 HUMAN, Odon (Siviel)
 JACOBS, Jacques (Megatronies)
 JACOBS, Petrus Andries (Siviel)
 JACOBSZ, Robert Samuel (Siviel)
 JANSE VAN RENSBURG, Johannes Cornelius (Elektries en Elektronies met Rekenaarwetenskap)
 JANSE VAN RENSBURG, Pierre (Megatronies)
 JANSE VAN VUUREN, Lucas Jacobus (Elektries en Elektronies met Rekenaarwetenskap)
 JARVIS, Wesley James (Siviel)
 JORDAAN, Amorie (Bedryfsingenieurswese)
 JORDAAN, Michael Theunis (Siviel)
 JORDAN, Desmond (Siviel)
 JOUBERT, André Jacobus (Chemies)
 JOUBERT, Matthew James Stuart (Megannies)
 JOUBERT, Pieter Hendrik (Siviel)
 KLINGENBERG, Wolfram Georg (Siviel)
 KOTZE, Henri (Megatronies)
 KOTZE, Jacobus Johannes Robert (Siviel)
 KOTZE, Melandi Magdalena Maria (Bedryfsingenieurswese)
 KRAMER, Wandie (Siviel)
 KRIEL, Jean-Jacques (Siviel)
 LAWRIE, Cherie (Siviel)
 LE CLUS, Jeanne (Bedryfsingenieurswese)
 LE ROUX, Johan David (Siviel)
 LE ROUX, Morne (Megannies)
 LE ROUX, Ruan (Megatronies)
 LIEBENBERG, Cornel (Megannies)
 LIEBENBERG, Ewald (Megannies)
 LINDENBERG, Geoff (Elektries en Elektronies)
 LOMBARD, Hans Jurgens (Megannies)
 LOMBARD, James Edward (Chemies)
 LORENZEN, Ninette (Siviel)
 LOTTERING, Catherine (Chemies)

LOURENS, Wessel Frederik (Siviel)
LOURENS, Wessel Johannes (Siviel)
LOUW, Sonja Etherisia (Bedryfsingenieurswese)
LOUWRENS, Hendrik Douw Lodewyk (Siviel)
MAGERMAN, Robin Shawn (Elektries en Elektronies)
MAJJOOR, Michael Gareth (Siviele Ingenieurswese)
MALAN, Daniël Johannes (Meganies)
MALAN, Ilse (Bedryfsingenieurswese)
MALAN, Willem du Toit (Chemies)
MANTEL, Jessica Kirsten (Bedryfsingenieurswese)
MARAIS, Mark Stephen (Siviel)
MARAIS, Michelle (Chemies)
MARAIS, Willem Johannes (Siviel)
MARCARIO, Robina (Meganies)
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McGILLEWIE, Dane (Siviel)
McLAREN, Suandrie Cornel (Chemies)
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MEIJERS, Jan Pieter (Elektries en Elektronies met Rekenaarwetenskap)
MEYER, Elanie (Chemies)
MEYER, Ronald (Elektries en Elektronies)
MOKOMELE, Thapelo (Chemies)
MÖLLER, Paul Daniel Stefanus (Meganies)
MONTGOMERY, Steven Jacques (Bedryfsingenieurswese)
MOOLMAN, Elleni (Megatronies)
MORELAND, Kenneth Michael-John (Chemies)
MOSES, Royston Kyle (Chemies)
MOSTERT, Nicolaas (Siviel)
MOUTON, Calvyn Wilbur (Megatronies)
MUNNIK, Melissa (Chemies)
MURDOCH, Matthew Patrick (Siviel)
MUTIBURA, Abel (Bedryfsingenieurswese)
MUTONKOLE, Ngoy (Elektries en Elektronies)
MYBURGH, Travis Louis (Chemies)
NELL, Salmon Jacobus Philippus (Siviel)
NEWBORN, Andrew Charles (Bedryfsingenieurswese)
NOLTE, Francois Archibald (Elektries en Elektronies met Rekenaarwetenskap)
O'REILLY, Julian Jules (Siviel)
ODENDAAL, Joseph Benjamin (Meganies)
OOSTHUIZEN, Almero (Megatronies)
OTTO, Dietmar Norman (Chemies)
PATZNER, Sven (Siviel)
PELLEGRINI, Sergio Lucio (Megatronies)
PIENAAR, Reinhardt (Siviel)
POTGIETER, Melissa (Siviel)
PRENTER, Robin Michael Patrick (Meganies)
PRETORIUS, Christian (Bedryfsingenieurswese)
PRETORIUS, Daniëlle (Chemies)
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RADFORD, Charmaine (Siviel)
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RAUTENBACH, Ona (Bedryfsingenieurswese)
READ, Sebastian Earle Aspelling (Megatronies)
RECK, Heiner Harry (Megatronies)
RICHTER, Heinrich Jacques (Chemies)
RISSER, Renzo Adam (Siviel)
ROETS, Adriaan (Siviel)
ROKITA, Piotr (Meganies)
ROOS, Johan (Siviel)
ROTH, Glynn (Chemies)
ROUX, Lucinda Gail (Siviel)
RUST, Albert (Meganies)
SAAYMAN, Joseph Benjamin (Meganies)
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SCHOONEES, Talia (Siviel)
SEHLOHO, Selometsi Bertha (Chemies)
SHARP, Steven Antony (Meganies)
SHEDLOCK, Matthew Peter (Chemies)
SHIRLEY, Kyle George (Siviel)
SINCLAIR, Kennett Albert George (Siviel)
SKUCE, Emile (Bedryfsingenieurswese)
SMIT, Jacobus Petrus Johannes (Siviel)
SMIT, Wynand (Chemies)
SMITH, Cameron Grant (Megatronies)
SMITH, Campbell (Megatronies)
SMITH, Etienne (Megatronies)
SMITH, Jan Harmse (Meganies)
SNYDERS, Tony Fred (Siviel)
SOLOMONS, Wesley John (Siviel)
STANDER, Adriaan Hendrikus (Siviel)
STAPELBERG, Diederick Johannes (Meganies)
STEENKAMP, Casparus Jan (Siviel)
STEHLE, Hermann Theodor (Siviel)
STEYN, Louise Beatrix (Chemies)
STOFBERG, Anneke (Elektries en Elektronies)
STRYDOM, Stephanie (Megatronies)
TAYLOR, Caroline Martina (Megatronies)
TEARE, Bryan John (Siviel)
THERON, Jacques Petrus (Chemies)
THESNAAR, Emile Jacobus (Elektries en Elektronies met Rekenaarwetenskap)
THOMAS, Nicolene (Siviel)
TRUTER, Albertus Willem (Megatronies)
UEBEL, Reinhard (Meganies)
UYS, Dirk Matthysen (Siviele Ingenieurswese)
VAN ASWEGEN, Pieter Daniel Greyling (Meganies)
VAN BAALEN, Sarel Migael (Siviel)
VAN DER KOLF, Thomas (Siviel)
VAN DER MERWE, Izadri (Siviel)
VAN DER MERWE, Jordaan Johan (Elektries en Elektronies)
VAN DYK, Riaan (Siviel)
VAN GRAAN, Hendrik Christoffel (Siviel)
VAN HEERDEN, Lourens (Elektries en Elektronies)
VAN HEERDEN, Morne Jandre (Siviel)
VAN HEERDEN, Timon (Meganies)
VAN NIEKERK, Chris (Megatronies)
VAN ROOYEN, Louw (Meganies)
VAN ROOYEN, Pieter Christiaan (Siviel)
VAN STADEN, Henk (Elektries en Elektronies)
VAN WYK, Andries Pieter (Chemies)

VAN WYK, Gert Rudolph Johannes (Megatronies)
 VAN WYK, Petrus Johannes Jacobus (Bedryfsingenieurswese)
 VAN ZYL, Annelie (Bedryfsingenieurswese)
 VAN ZYL, Eben Barnard (Siviel)
 VAN ZYL, Ilse (Bedryfsingenieurswese)
 VERMEULEN, Bernard (Siviel)
 VISAGIE, Johan Hildebrand (Chemies)
 VISSER, Annejan Frederick (Chemies)
 VISSER, Hendrik Jacobus (Meganies)
 VISSER, Hermanus Johannes (Siviel)
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 VON PETERSDORFF, Hagen Alexander (Bedryfsingenieurswese)
 VORSTER, Christiaan Willem (Megatronies)
 WALKER, Pia Rayne (Bedryfsingenieurswese)
 WALTERS, Marlo (Elektries en Elektronies)
 WASSERMANN, Werner Pierre (Siviel)
 WEHMEYER, Nicolaas Johannes (Meganies)
 WEHR, Tracy Janine (Siviel)
 WESSELS, Jacobus Petrus Theron (Siviel)
 WEYERS, Stefanus Johannes (Meganies)
 WHITE, Henrico Ashley (Meganies)
 WHITTINGTON, Richard (Megatronies)
 WINTERBACH, Hendrik Francois (Bedryfsingenieurswese)
 ZAAIMAN, Ignatius Michael (Siviel)

**BACCALAUREUS IN DIE INGENIEURSWESE
 CUM LAUDE (BIng CUM LAUDE)**

**BACHELOR OF ENGINEERING CUM LAUDE
 (BEng CUM LAUDE)**

ANDERSON, Neil Raymond (Meganies)
 CLOETE, Jan Hendrik (Chemies)
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 GADINGER, Hans-Jurgen (Elektries en Elektronies met Rekenaarwetenskap)
 KIME, Robyn Laura (Siviel)
 LE ROUX, Gideon Daniel (Elektries en Elektronies)
 LOUBSER, Karl Albie (Meganies)
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 VAN NIEKERK, Francois (Elektries en Elektronies met Rekenaarwetenskap)
 VAN VUUREN, Van Zyl (Elektries en Elektronies met Rekenaarwetenskap)

**NAGRAADSE DIPLOMA IN DIE INGENIEURSWESE (NDI)
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 HUMAN, Maria Elizabeth
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**MAGISTER IN DIE INGENIEURSWESE (MIng)
 MASTER OF ENGINEERING (MEng)**

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 DU PLESSIS, Izak David (Siviele Ingenieurswese)
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**MAGISTER IN DIE NATUURWETENSKAPPE IN
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MASTER OF SCIENCE IN ENGINEERING (MScEng)

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 HANEKOM, Rojean (Siviele Ingenieurswese)
 HENNING, Hermanus Lambertus (Meganiese Ingenieurswese)
 HOLM, Ryno (Ingenieursbestuur)
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 KOEN, Devan (Bedryfsingenieurswese)
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 LE ROUX, Jacobus Petrus (Bedryfsingenieurswese)
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 MAAS, Susan (Elektroniese Ingenieurswese)
 MALAN, Frederich Thomas (Elektroniese Ingenieurswese)
 MARITZ, Gert Stephanus Herman (Elektroniese Ingenieurswese)
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 OOSTHUIZEN, Frederik du Toit (Siviele Ingenieurswese)
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 RAUBENHEIMER, Gert Andries (Meganiese Ingenieurswese)
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 SCHUTTE, Jacques (Elektriese Ingenieurswese)
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 SMIT, Albert (Megatroniese Ingenieurswese)
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BOTMA, Pieter Johannes (Elektroniese Ingenieurswese)
DE JAGER, Nicolaas Jacobus (Elektroniese Ingenieurswese)
DE LANGE, Billy (Meganiiese Ingenieurswese)
DE WET, Andrew Louis (Meganiiese Ingenieurswese)
DU TOIT, Daniël Josias (Elektriese Ingenieurswese)
JANSE VAN RENSBURG, Petrus Johannes (Meganiiese
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JARRATT, Robert (Siviele Ingenieurswese)
LEONARD, Trudie (Bedryfsingenieurswese)
MBEWE, Peter Binali Kamowa (Siviele Ingenieurswese)
NORTJE, Hermann (Ingenieursbestuur)
PRINSLOO, David Schalk van der Merwe (Elektroniese
Ingenieurswese)
SCHIETEKAT, Louis Magnus (Elektroniese Ingenieurswese)
SWIEGERS, Pierre Brink (Siviele Ingenieurswese)
URAS, Umit (Chemiese Ingenieurswese)
VAN SCHALKWYK, Rudolph Francois (Ekstraktiewe Metallurgiese
Ingenieurswese)

**DOKTORSGRADE
DOCTORATES**

Fakulteit Agriwetenskappe

PhD

KEHINDE, Temitope Olatayo (Entomology)

Effects of vineyard management and landscape context on taxonomic diversity and interaction networks of flower-visiting insects in the Cape Floristic Region biodiversity hotspot

One of the greatest pressures on maintenance of biodiversity is agricultural conversion of the landscape. An important question then is which agricultural practice is effective in improving the conservation status of biodiversity, especially of the important pollinators, in the region. The results showed that conventionally managed vineyards are not as hard on biodiversity as was previously thought and that organically farmed areas have a wide range of pollinators which interact widely with local flowers. This shows that grape production is not necessarily in conflict with conservation so long as it is done in a way that has minimal impact on biodiversity.

Supervisor: Prof MJ Samways

ROUX, Adelle (Animal Science)

Reproduction of the South African abalone, Haliotis midae

Currently commercial South African aquaculture activities are dominated by the cultivation of *Haliotis midae*, with 934 ton being

exported in 2008, totalling an income of ZAR268 million. Despite the high export rate, hatch-out rates obtained by most South African abalone farms average 80%, with a 50% settlement rate, and a final hatchery output of only 30%. This study reports on various aspects of *H. midae* reproduction that can improve its cultivation, thereby improving the cost-efficiency of commercial operations. Aspects such as onset of sexual maturity, an optimised fertilisation protocol to assess the influence of gamete quality of larval yield, and a method to determine larval quality were developed during this study.

Supervisor: Dr R Roodt-Wilding

Co-supervisor: Dr H Lamprecht

SIMAIKA, John Pascal (Conservation Ecology)

Application of conservation biogeographical methodology and modelling for practical conservation of freshwater faunas

Freshwaters are highly threatened worldwide and urgently need conservation. To do such conservation, we need an effective and reliable indicator of water quality. Dragonflies were found to be such an indicator and were developed here into a practical tool. Using these insect indicators enables assessment of how much streams and rivers are improving or deteriorating. These techniques are already being put into practice, both in South Africa and overseas. They were also used here to assess the effectiveness of nature reserve networks, and to determine the response of freshwaters to global climate change. The results are now being shared internationally.

Supervisor: Prof MJ Samways

PhD (Agric)

DE WAAL, Jeanne Yvonne (Entomology)

Biological and ecological factors contributing to the successful use of entomopathogenic nematodes (Rhabditida: Steinernematidae and Heterorhabditidae) for the control of codling moth, Cydia pomonella (L.) (Lepidoptera: Tortricidae) under South African conditions

The general aim of the study was to find science-based solutions to some of the complex environmental and biological factors impeding the use of local isolates of entomopathogenic nematodes (Rhabditida: Steinernematidae and Heterorhabditidae) for the biological control of diapausing codling moth, *Cydia pomonella* (L.) (Lepidoptera: Tortricidae) in apple and pear orchards in South Africa. The study investigated the potential of local nematode isolates to be used as biological control agents against codling moth infesting wooden fruit bins. The baseline environmental requirements for the successful application of nematodes in orchards and the use of formulations to overcome humidity problems were also addressed.

Supervisor: Dr AP Malan

Co-supervisors: Drs M Addison and P Addison

NYAMUKONDIWA, Casper (Entomology)

Thermal tolerance of Ceratitis rosa and Ceratitis capitata (Diptera: Tephritidae) in South Africa: implications for population dynamics and pest management

This study explored variation in thermal biology at extreme temperatures between two pest fruit fly species (*Ceratitis rosa* and *C. capitata*) in South Africa. The candidate found several novel results showing that *C. capitata* has a distinct thermal advantage, especially at extreme temperatures, over *C. rosa*. Differences in thermal biology therefore likely contribute to the greater invasiveness and broader geographic distribution of *C. capitata* over *C. rosa* and suggest that high and low

temperatures might be limiting features of these species' biogeography. These results are critical to the effective management of these pest species in South Africa and globally.

Supervisor: Dr JS Terblanche

SWIEGERS, Johannes Pieter (Veekunde)

The effect of oat silage replacement with wheat straw in dairy cow diets on animal performance, rumen fermentation and adequacy of CPM Dairy model predictions

Die voeding van hoogproduserende melkkoeie is 'n wetenskap wat ondersteun word deur die gebruik van dinamiese voerformuleringsmodelle. Die kandidaat het die CPM Dairy-model gebruik om lae-ruvoerdiete te formuleer waar hawerkuilvoer met koringstrooi vervang is. Hierdie vervanging het 'n negatiewe invloed op voerinnam, melkproduksie, melksamestelling, voeromset en stikstofbenutting gehad, maar geen invloed op ligaamsmassa- en kondisieverandering nie. 'n Rumenfermentasieproef het getoon dat daar geen aanduiding van subkliniese rumen-asidose was nie en dat ruvoerbron geen invloed op fermentasie-eindprodukte en gemiddelde rumen-pH gehad het nie. Die periode waartydens rumen-pH laer as 5,8 was, was egter korter vir koeie in die kuilvoerbehandeling. Die model was hoogs akkuraat in die voorspelling van melkproduksie in die geval van die kuilvoerbehandeling, maar dit het melkproduksie oorskat in die geval van die koringstrooibehandeling.

Promotor: Prof CW Cruywagen

Medepromotor: Dr MB Hall

PhD (Voedselwet)

CAWTHORN, Donna-Maree (Food Science)

Establishment of a genetic database and molecular methods for the identification of fish species available on the South African market

This doctoral study, the first of its kind, created a comprehensive database of unique DNA profiles for over 50 commercially available fish species in South Africa. The applications of this work are wide-reaching and allow improved fish species identification, enhanced monitoring of fraud and prosecution of illegal activities, while also contributing to the sustainability of South African fisheries. Utilisation of the developed molecular methods and the established genetic database revealed that 9% of the fish supplied by seafood distributors and 31% of those supplied by retail outlets in South Africa were misnamed or mislabelled, the results of which pose significant economic, environmental and health impacts.

Supervisor: Prof RC Witthuhn

Co-supervisor: Dr H Steinman

LEYGONIE, Coleen (Food Science)

Evaluation of packaging and freezing and thawing rates on the shelf-life stability of ostrich meat

The ostrich meat industry exports approximately 90% of all produce. Some of the meat is transported frozen and thawed at the export destination, which leads to quality losses. A model that calculates the rate of freezing and thawing under various conditions was developed. The ice crystal formation at different freezing rates was visualised for the first time in intact muscle. Twenty-five combinations of freezing and thawing were studied to establish a combination that resulted in minimal thaw loss and optimal quality. Modified atmospheric packaging was applied with great success to fresh meat, but resulted in accelerated oxidation in frozen-thawed meat.

Supervisor: Prof LC Hoffman

Co-supervisor: Prof TJ Britz

Fakulteit Ingenieurswese

PhD

DE VILLIERS, Adriaan Jacobus (Chemical Engineering)

Evaluation and improvement of the sPC-SAFT equation of state for complex mixtures

The design of process units frequently rely on equation of state (EOS) models to provide accurate predictions of thermodynamic properties. The applicability of the simplified Perturbed Chain – Statistical Associating Fluids Theory (sPC-SAFT) EOS has been enhanced, firstly, by developing a new association scheme (the 2C scheme) to model alcohols and, secondly, by extending the theory to explicitly account for polar interactions. Significant improvement in the prediction of vapour-liquid-equilibria of several types of binary mixtures has been obtained, most notably for mixtures consisting of water, alcohols, ketones, esters and alkanes. Several other thermodynamic properties can also be predicted more accurately.

Supervisor: Prof AJ Burger

KIBET LANGAT, Philip (Electronic Engineering)

Power line sparking noise characterisation in the Square Kilometre Array (SKA) environment

Africa is rapidly developing the Karoo Array Telescope to bid for the international Square Kilometre Array (SKA). The SKA will be the most sensitive radio telescope ever built. The final site choice in South Africa or Australia will be influenced by the levels of environmental and self-generated radio interference. The candidate's research has shown that sparking on power lines, and not corona, is responsible for broadband interference previously reported by radio astronomers. This has shaped the layout and design of custom power lines to our site. The new pulse description and radiation profile will be invaluable for future power line designs.

Supervisor: Prof HC Reader

TERBLANCHE, Riaan (Mechanical Engineering)

Evaluation of drop break-up after impingement on horizontal slat grids and the effect of drop size on cooling tower rain zone performance

The efficiencies of fossil, nuclear and solar power plants are dependent on the performance of their cooling systems. Natural draught wet-cooling towers are widely used to reject heat from power plants to the atmosphere. The candidate has developed a wet-cooling tower rain zone model, incorporating new theoretical and experimental results from laboratory tests. A parametric study revealed that cooling tower rain zone performance can be enhanced considerably by installing a newly proposed grid in this region. The findings of this study will contribute to the design of environmentally friendlier and more economic power and industrial plants.

Supervisor: Prof HCR Reuter

VAN DEN HEEVER, David Jacobus (Mechatronic Engineering)

Development of patient-specific knee joint prostheses for unicompartmental knee replacement (UKR)

The aim of a knee replacement procedure is to relieve pain and restore normal function. Ideally, the knee replacement prosthesis should have an articulating geometry similar to that of the patient's healthy knee.

Unfortunately, this is often problematic since knee prostheses are supplied in standard sizes. This research resolves the problem by presenting a design methodology for designing and manufacturing patient-specific unicompartmental knee replacements. The design methodology uses mathematical modelling and an artificial neural network to predict the original articulating surfaces. The models are combined with medical images from the patient to create a knee prosthesis that is patient-specific.

Supervisor: Prof C Scheffer

VAN DER SPUY, Sybrand Johannes (Mechanical Engineering)

Perimeter fan performance in forced draught air-cooled steam condensers

The perimeter fans in an air-cooled condenser of a direct dry-cooled power plant may experience a reduction in air throughflow due to distorted inlet conditions. This leads to a reduction in the electricity generated by the power plant. The inlet flow field upstream of a perimeter fan is investigated experimentally, amongst others using particle image laser velocimetry. The experimental results are compared to computational results obtained when modelling the performance of a perimeter fan numerically. The results show the applicability of the computational methods. A computational model is subsequently used to investigate specific possibilities for improving the operation of a large air-cooled condenser.

Supervisor: Prof TW von Backström

Co-supervisor: Prof DG Kröger

MEDALJES (Ter kennisname)

MEDALS (For your information)

Agriwetenskappe

Hofmeyr Van Schaik-medalje:

Me C Smit

Sir William Schlich-medalje:

Mnr GE Lindner

Ingenieurswese

ECSA-medalje:

Mnr H-J Gadinger