Curriculum Vitae
Dr. Rufus Stephanus Neethling
Ph.D. (Mech. Eng. – Computational Mechanics – NWU)

(Updated **2016/05/27***)*

12 Nirvana Street, Witfield, Boksburg, 1459, Gauteng, South Africa
(+27)82 552 4063 / (+27)11 026 5040 / Rufus.Neethling@gmail.com

MECHANICAL ENGINEERING PROFESSIONAL

General Mechanical Engineering Calculation, Simulation, Analysis & Design
3D Computer Assisted Design & Parametric Modeling
Vibrating Structures Modal, Structural & Frequency Response Analysis
Thermo-Flow Component & -System Calculation, Simulation & Analysis
Blast & Ballistics Protection & Armoured Vehicle Occupant Safety
Engineering Research & Development / Engineering Testing & Evaluation
Engineering Mathematics, Numerics & Computer Assisted Engineering
Object Oriented Software Component & System Development
Multi-Variable Parametric Studies, Investigations, Analyses & Designs
Engineering Lecturing, Tutoring & Mentoring

Award winning, innovative, versatile, multi-disciplinary, dedicated and driven mechanical engineering professional with Ph.D. and solid experience in interactive mechanics and multi-body- and vehicle dynamics (MBD/MBS) as well as extensive experience in ballistic & blast protection, fluid dynamics (CFD), static & dynamic structural and modal analysis (FEM/FEA), 3D parametric modeling (CAD), engineering R & D project management, thermo-fluid system simulations and general software development (OO C++, C#, Java, VB, VBA). Regarded as an authority on diverse mechanical systems static and dynamic force, -displacement and -stress distribution prediction, analytical calculations and general or specialised numerical computation. Recognised for unique capability and practice to generate and utilise well-parametrised, re-usable, low cost engineering simulation-, analysis- and design tools to reduce repeated design effort time scales as well as unique insight into mathematical modelling and expected mathematical characteristics and behaviour of highly complex multi-parameter mechanical systems simulations. Possessing highly methodical, structured, yet creative, innovative, results-driven and hands-on approach to R & D efforts in any discipline from inception to completion combined with excellent written and verbal communication skills for various forms of reporting and personnel management.

Core Competencies and Skills

Advanced Mechanics of Materials	CAE (CAD, CFD, DEM, FEM, MBD)	Computer Programming (OO C++)
Data Processing & Curve Fitting	Engineering Design & LCM	Engineering Mathematical Modelling
Engineering Mechanics & Dynamics	Engineering R & D	Engineering Simulation
Engineering Statics	Engineering Testing & Evaluation	MBS and Rigid Body Interaction
Structural Design & Optimisation	Structural Acoustics & Modal Analysis	Technical Documentation & Review
Blast Energy Threat Counteraction	Kinetic Energy Threat Counteraction	Hard Crystalline Materials Modeling
PCD Characteristics & Behaviour	Vehicle Dynamics and Mechanics	Vehicle Occupant Safety
Vehicle Structural Analysis	Vibrating Screen Design	Vibrating Screen Simulation

Computer Proficiencies

Siemens NX CAD/FEM/SIM (8.5)	Siemens TeamCenter (10)	ABAQUS (6.12)
MSC.Adams/Car (2011)	MSC.Adams/View (2011)	MSC.Patran & MSC.Dytran (2011)
MSC.Patran & MSC.Nastran (2011)	LibreOffice Calc (4.3)	LibreOffice Write (4.3)
LibreOffice Draw (4.3)	CompPad (0.4.03x) for LibreOffice	MS Excel (2007, 2010)
MS Word (2007, 2010)	MS Project (2010)	MS Access (2010)
MS TeamServer (2010)	Adobe Acrobat Reader DC (2015)	PDF24 Creator (6.9.2)
PDF-XChange Viewer (2.5)	UniPDF (1.2)	PDFCreator (2.3)
MS Visual Studio .NET (2010, 2012)	Basic, OO Basic, VBA & Visual Basic	C++ & Visual C++.NET
Visual C#.NET	Fortran (90, 2003)	Python
SQL	wxDev-C++ (7.4.2)	NetBeans (8.0)
Notepad++ (6.9)	WinMerge (2.14)	Meld (1.8)
Win (95, 98, NT4, 2000, XP, 7, 8, 8.1)	Oracle VM VirtualBox (5.0)	SMath Studio (0.95)
Linux/Unix (Fedora, SuSe, Kubuntu)	IrfanView (4.35)	FTire
EnGauge Graph Digitizer	FreeCAD (0.16)	NetGen (4.9.13)
CAD Exchanger (2.4.0)	GIMP (2.8)	Scandium (5.3)

Language Skills

Read/Write/Speak	**Read/Understand**
Advanced: Afrikaans, English, Medium: Swedish	Medium: Dutch, Novice: Danish, German, Norwegian

Employment Highlights

WEIR MINERALS SOUTH AFRICA (Isando, Kempton Park) 2014/05 to Present
Mining & Minerals Extraction

Engineer – Design Centre of Origin (DCO) Screens

RESPONSIBILITIES:

- ➔ Complete and submit necessary Engineering Drawing Requests (EDRs) for all allocated projects.
- ➔ Compose, check, sign off and final release (manually and via TeamCenter) vibrating screen data packs, including dynamics sheets, associated BOMs and GAs, assembly and part detailed drawings (DWG and NX PRT) for production.
- ➔ Critically evaluate, improve on and generate reports for vibrating screen complete assembly, sub-assembly and component designs for local and global support (sales and Sub-DCO teams and DCO internal) using parametric 3D CAD (NX), FEA (NX Advanced Simulation & Nastran Solver) and other relevant design calculation methods and make recommendations and design decisions.
- ➔ Liaise internally with sales-, project-, configuration- and work shop team members and other colleagues.
- ➔ Liaise with customers and suppliers on technical matters affecting production, operation and maintenance.
- ➔ Handle technical assistance queries from Sub-DCO personnel globally.
- ➔ Improve or develop and maintain various design support calculation sheets (Calc or MS Excel) and documents (Write or MS Word) (e.g. Screen Dynamics Sheet, Heavy Duty Bridge Calculation, Dewatering Deck Load Calculation, Engineering Stud Pre-Tension Calculation, Lifting Sling Tension and Lug Safety Factor Calculation).
- ➔ Improve and maintain various design MS Word data forms (e.g. Functional Specification, Screen Data Sheet, Design Evaluation Report and Design Release Certificate templates).
- ➔ Improve and maintain screen Installation and Operations Manual (IOM) mail merged MS Word document template and source data Excel workbook and generate customer-specific manuals as per and in support of sales requirements.

PROJECTS:

- ➢ Local Sales & Client Support.
  - ◦ DHG37/70.1 – Siguiri, Guinea (Data-pack revision and release for production)
  - ◦ 2 x HG30/70.1 – Impala Platinum (UG2 Plant), Rustenburg (Data-pack revision and release for production)
  - ◦ BHG22/85.5 – Soda Ash, Botswana (Data-pack revision and release for production)
  - ◦ VE15/1460 – Mopani Copper Mine (Data-pack revision and release for production)
  - ◦ VD6/980 – Impala Platinum (UG2 Plant), Rustenburg (Data-pack revision and release for production)
  - ◦ 3 x HG30/70.1 – Tenke Fungurume Mine, SARL, DRC (Data-pack revision and release for production)
  - ◦ SD15/36 – SAMANCOR Chrome (WHIMS Plant), Doornbosch (Data-pack revision and release for production)
  - ◦ VD18 – Goedehoop South Module Upgrade (Data-pack revision and release for production)
  - ◦ WF125/II – Goedehoop South Module Upgrade (Data-pack revision and release for production)
  - ◦ VE15/1460 – South Deep Cold Mine (Stefanutti Stocks MS Mobile Plant)
  - ◦ VD12/30.5/30.3 (2Cr12) – Buffalo Coal, Dundee (Excessive vibration investigation & solution proposal)
  - ◦ 4 x VE9/980 – Kansanshi Mine, Zambia (Data-pack revision and release for production)
  - ◦ VD15/38.1/38.2 – OMV Crushers (Data-pack revision and release for production)
  - ◦ SD18/36 – Petra/Williamson Diamonds, Tanzania (Data-pack revision and release for production, new bridge FEA)
  - ◦ VE9/980 – Stefanutti Stocks (Data-pack revision and release for production)
  - ◦ VD15/38.1/38.2 – Sibanye Gold Mine, Klerksdorp (Data-pack revision and release for production)
  - ◦ SD900x2400 – AngloGold Ashanti (Data-pack revision and release for production)
- ➢ Global Sales & Client Support.
  - ◦ 600x1800 DT (SD6/18) – Porgera, New Guinea
  - ◦ TRIO EF4806 – Philippines (FEA based failure analysis & design improvement, qualification & release)
  - ◦ TRIO EF3606 – D'Gal, Oman (Preliminary FEA based failure analysis for planned increase in vibrating motor size)
- ➢ New Product Introduction (NPI).
  - ◦ VD24/61 HD (TRIO) – Sub-DCO Australia (FEA based design evaluation, improvement, qualification & release)
  - ◦ VD24/61 HD (SA Steel) – Sub-DCO Australia (FEA based design evaluation, improvement, qualification & release)
  - ◦ HG15/36 – Pattison Sand, US (FEA based design evaluation, improvement, qualification & release)
  - ◦ VD30/61 HD (SA Steel) – Sub-DCO Australia (FEA based design evaluation, improvement, qualification & release)
  - ◦ SD24/48 MD (SA Steel) - Sub-DCO Australia (FEA based design evaluation, improvement, qualification & release)
  - ◦ SD24/48 MD (TRIO) – Twin Pines, Canada (FEA based design evaluation, improvement, qualification & release)
  - ◦ SD24/48 MD (TRIO, Jack Pads) – Twin Pines, Canada (Modification request FEA based evaluation and re-release)
- ➢ Design Centre of Origin Internal.
  - ◦ Standard VE-Range VE6, VE9, VE12, VE15, VE18 980 & 1460 rpm Variants (Data-pack correction & release)
  - ◦ Standard VD-Range VD6, VD9, VD12, VD15, VD18 980 & 1460 rpm Variants (Data-pack correction & release)
  - ◦ Large Exciter LTX6, LTX8, LTX10 Test Rig – Alrode, In-House Testing (FEA evaluation, qualification & release)
  - ◦ Heavy Duty Bridge Design Calculation Sheet Development
  - ◦ On-Deck Particle Travel Rate Estimation Calculation Sheet Development
  - ◦ Continuous Vibrating Screens Dynamics Sheet Improvement

ACHIEVEMENTS:

- ✓ N.A. – Still in Skills & Experience Acquisition Period (First 24 Months)

MOTIVATION FOR CHANGE:

Pursuit of alternative engineering related career opportunities utilising more of existing skills and experience.

EXPERIAN SOUTH AFRICA (Bryanston, Johannesburg) 2013/10 to 2014/04
Credit Data Hosting & Enquiry Services Software Provision & Development

Senior Technical Developer

RESPONSIBILITIES:
- ➔ Company proprietary software C++ source code configuration, maintenance, improvement & development (using WinMerge, Notepad++, MS Visual C++ 6.0, MS Visual Studio .NET 2008, 2010, 2012, 2013).
- ➔ Production software suite miscellaneous client error report investigation, response & code maintenance.

PROJECTS:
- ➢ (Experian Internal – Colleague Initiative) Review & Contribute to In-House Coding Standards Document
- ➢ (Experian Internal – Own Initiative) Existing Proprietary C++ Source Code Familiarisation, Consolidation, Clean-Up & Coding Standards Compliance
- ➢ (Experian Internal – Collaborative Initiative) Collaborate on Planning & Re-Developing POCO Library-Based Back-End Application Framework for Improved Performance, Maintainability and Platform-Independence
- ➢ (Experian Internal – Own Initiative) Existing Proprietary C++ Source Code Pre-Emptive Memory Leak Fixes
- ➢ (Experian Internal – Production Support) Batch-Client Application XML2 Parsing Error Related Crash Fix
- ➢ (Experian Internal – Production Support) Web-Based XML2 Query Buffer-Size Related Output Error Fix
- ➢ (Experian Internal – Production Support) Batch-Client Application Debt Restructuring Operation Related Crash Fix
- ➢ (Experian Internal – Production Support) Billing Information Application Error Fix

ACHIEVEMENTS:
- ✓ N.A. – Still in Familiarisation & Acclimatisation Period (First 6 Months).

MOTIVATION FOR CHANGE:

Pursuit of more engineering related career opportunities and skills enhancements in line with formal training & experience.

ELEMENT SIX – DIAMOND RESEARCH LABORATORY (Nuffield, Springs) 2011/10 to 2013/09
Poly-Crystaline Diamond & Other Hard Materials Research, Development & Production for Mining and Oil & Gas Applications

Product Design Engineer: DRL

RESPONSIBILITIES:
- ➔ FEM-based synthetic diamond cutter design related simulation, evaluation, analysis & documentation (using MS Project, ABAQUS Standard with Python scripting, Notepad++, MS Excel with VBA scripting, MS Word & MS Powerpoint).
- ➔ Miscellaneous software tool documentation, maintenance, improvement & development (using Notepad++, MS Visual Studio .NET, VBA in MS Excel & MS Access & Scandium).
- ➔ Support physical testing & evaluation related activities (Prototype Manufacturing & Preparation, Results Reporting).

PROJECTS:
- ➢ (E6) Materials Database Prototype Development, Design & Implementation
- ➢ (E6) Continuous Back-Grinding Measurement Data Processor MS Excel & Supporting VBA Code Development & Maintenance
- ➢ (E6) Scandium Image Analysis C++ Code Module Documentation & Improvement
- ➢ (E6) Vertical Borer MS Excel Workbook & Supporting VBA Code Improvement & Extension
- ➢ (E6) FEM-Based 2D & 3D Denuded Zone Effects Study
- ➢ (E6) FEM-Based 2D & 3D Leached Layer Effects Study
- ➢ (E6) FEM-Based 2D & 3D Back-Grinding Simulation
- ➢ (E6) FEM-Based 3D EDM-Cutting Simulation
- ➢ (E6) Supporting FEA for Cutter Design Domain Patent Related Activities
- ➢ (E6) Field-Failure Investigation Related Comparative Study
- ➢ (E6) Additional Field-Failure Investigation Related Comparative Study
- ➢ (E6) Extensive Basic Cutter Geometry and Material Combination Investigative Parametric Study
- ➢ (E6) General ABAQUS Python Modules & Scripts Updates, Extensions and New Developments

ACHIEVEMENTS:
- ✓ Cutter Material Combination Patent Co-Author

MOTIVATION FOR CHANGE:

Pursuit of alternative, challenging new career opportunities and skills enhancement.

BAE SYSTEMS – LAND SYSTEMS OMC (Industrial Sites, Benoni) 2006/08 to 2011/09
Military Armoured Vehicle Development, Manufacture & Refurbishment

Senior Mechanical Design Engineer: Product Development

RESPONSIBILITIES:
- ➔ Perform FMECA and contribute to reports with respect to general product field failures and Customer Complaints (CUSAI).
- ➔ Perform vehicle mechanical system analyses to determine predicted vehicle ride comfort & handling performance, kinematic, static and dynamic responses, as well as expected suspension and steering system loads for use in Finite Element Analyses (using MS Excel, SMath Studio, MSC.Adams/View & MSC.Adams/Car).
- ➔ Perform Linear Static Finite Element Analyses (FEA) for Structural and Modal response and make subsequent design recommendations (using MSC.Patran and MSC.Nastran).
- ➔ Perform Non-Linear Dynamic Finite Element Analyses (FEA) for Structural response and make subsequent design recommendations (using MSC.Patran and MSC.Dytran).
- ➔ Establish, expand and maintain company wide common and individual vehicle MSC.Adams/Car databases, in particular well parametrised custom company specific subsystem templates (Adams/Car Model Custodian).

- ➔ Establish, expand and maintain company-wide FEA loads calculation and specification database (Loads Custodian).
- ➔ Establish, expand and maintain company-wide engineering software repository (Engineering Software Custodian).
- ➔ Assist in company wide ballistic materials database compilation and maintenance.
- ➔ Perform engineering theory literature searches, assimilation and compilation in technical documentation.
- ➔ Manage and participate in ballistic, land mine, IED protection and vehicle mobility test related activities.
- ➔ Mentor junior engineers in various engineering disciplines and general practical mechanical engineering practices.
- ➔ Attend meetings and make recommendations regarding engineering software presentations and possible acquisitions.
- ➔ Facilitate and participate in protection, mobility, ride dynamics and structural related customer- and supplier liaison meetings, including ballistic and structural materials, occupant restraint and seating suppliers.
- ➔ Originate Engineering Change Proposals (ECPs) based on internal and external client requirements and specifications.
- ➔ Review, sign off and submit CAD-department generated drawings to configuration control.

PROJECTS:

- ➢ (OMC) RG31 UAE Command Vehicle Telescopic Mast Selection
- ➢ (UAE) RG31 AGRAB APU Box Design Recommendation
- ➢ (OMC) RG33 6x6 Wind Shield Wiper Mechanism Design
- ➢ (ARMSCOR) SAMIL 100 (Withings) Recovery Vehicle Transfer Case Mounting Re-Design
- ➢ (FMV Sweden) RG32-M Galten Rear Occupant Restraint Improvement
- ➢ (US Military) RG31 Mk5E Improved Land Mine Protection Capability Occupant Restraint Design
- ➢ (OMC) RG33 6x6 Turning Circle Prediction & Steering Angle Optimisation
- ➢ (OMC) RG31 Mk5E & Mk6 EFP Counteraction Development & Testing
- ➢ (UAE) RG31 AGRAB Mortar Launcher Platform Stability Investigation and Design Recommendation
- ➢ (OMC) RG31 Mk5E Front & Rear Land-Mine Shock Attenuating Seat Design
- ➢ (OMC) RG31 Mk5E Rear Seat Integrated, Light-Weight, Fold-Away Footrest Design
- ➢ (Ireland) RG32-M LTV Front & Rear Land-Mine Shock Attenuating Seat Design
- ➢ (ARMSCOR) Casspir Gun-Mount Attachment Roof Analyses & Improvement
- ➢ (OMC) RG35 6x6 Improved V-Hull Accommodating 4-Link Suspension & Steering System Design
- ➢ (OMC) RG35 4x4 RPU Hull & Suspension Mounding FEM Analysis & Design Recommendation
- ➢ (OMC) RG35 4x4 RPU Hull RWS Mounting Platform FEM Design, Analysis & Recommendation
- ➢ (FMV Sweden) RG32-M Galten Rear Seat Suspension Strap Alternative Adjustment Buckle Validation
- ➢ (ARMSCOR) Wasp Tow-Hook Failure Analysis & Improvement Design Recommendation
- ➢ (US Military) RG31 Mk5E Mortar Cylinder Mounting Bracket Analysis & Design Recommendation
- ➢ (US Military) RG31 Mk5E Ammunition Box Mounting Bracket Analysis & Design Recommendation
- ➢ (ARMSCOR) Mamba MkIII Improved Multi-Role Gun-Mount Attachment Design
- ➢ (OMC) Vehicle Lifting Sling Orientation and Tension Calculation Excel Workbook Repository Establishment, Development & Maintenance
- ➢ (OMC) Vehicle Suspension & Steering System Force Calculation Excel Workbook Repository Establishment, Development & Maintenance
- ➢ (OMC) Vehicle Engine & Transfer Case Mounting Reaction Force Calculation Excel Workbook Repository Establishment, Development & Maintenance
- ➢ (OMC) Full 3D Steering System Linkage Turning Circle Simulation Excel Workbook Repository Establishment, Development & Maintenance
- ➢ (OMC) Full 3D Steering System Joint Phasing Calculation Tool Excel Workbook Repository Establishment, Development & Maintenance
- ➢ (OMC) Engine & Torque Converter Curve Matching Assistance & MSC.Adams/Car Curve Data Table Generator Excel Workbook Repository Establishment, Development & Maintenance
- ➢ (OMC) Tyre Data Processing & MSC.Adams/Car Curve Data Table Generator Excel Workbook Repository Establishment, Development & Maintenance
- ➢ (OMC) Continuous Custom MSC.Adams/Car Vehicle Body, Suspension, Steering, Driveline, Powertrain, Occupant, Wheel & Miscellaneous Auxiliary Templates Development & Maintenance

ACHIEVEMENTS:

- ✓ BAE Systems Chairman's Awards: 2008 Bronze & 2009 Bronze & Silver (Shock Attenuating Seat Design), 2010 Bronze (RG35 6x6 Suspension Design)
- ✓ BAE Systems OMC Internal QID Awards: 2007 (Novel EFP Counteraction Concept Development), 2009 (Turning Circle Calculation Tool)
- ✓ EFP Counteraction Armour Arrangement Patented

MOTIVATION FOR CHANGE:

Pursuit of alternative, challenging new career opportunities and further diversified skills acquisition.

SIMUTRON (Route 21, Pretoria) 2005/02 to 2006/07
Chemical Engineering, Thermodynamics Simulation and Consultation to Power Stations

Thermodynamic Systems Simulation Engineer

RESPONSIBILITIES:

- ➔ P&ID, PFD and other power station related diagram and documentation reading and interpretation.
- ➔ Reading and comprehension of steam power generation unit operation manuals and procedures.
- ➔ Feed- and cooling water subsystem network simulation, including Hot and Cold Condensers, using 3Key-Master.
- ➔ Evaporative cooling tower simulations on Excel using NIST add-ins.
- ➔ Development of custom simulation extensions (Furnace, Burners, Actuators & Sensors) to 3Key-Master using C++.
- ➔ Maintenance of custom and original software provider repository.
- ➔ Management of completed simulation network sub-system integration.
- ➔ Application of PID controllers to simplify 3Key-Master sub-network and fully integrated network parameter tuning.
- ➔ Assist in plant I/O signal tables coordination (using MS Access) and 3Key-Master CS component icon customisation.
- ➔ Handle installation, setup, integration and testing of MMI and complete 3Key-Master thermo-fluid simulator model.

PROJECTS:
- (ESKOM) Tutuka Power Station Unit 4 Operator Training Simulator Development
- (Simutron) Continuous Custom 3Key Master C++ Components Development (Burners, Fire, Actuators & Sensors)
- (PBMR) PBMR Main & Auxiliary CW System Simulation

MOTIVATION FOR CHANGE:

Pursuit of new, more varied and more challenging career opportunity focusing on gaining Mechanical Design experience.

M-TECH INDUSTRIAL (Potchefstroom) 2000/03 to 2003/12
Thermodynamics System Simulation Software Development

C++ Programmer and Software Consultant

RESPONSIBILITIES:
- ➔ Develop and maintain Object Oriented engineering software GUI and solver components using ANSI C++ and Visual C++ .NET 2003.
- ➔ Compile, Review and Maintain GUI and solver component related User Requirement Specification.

PROJECTS:
- (M-Tech/PBMR) Flownex Nuclear Object Oriented Re-Development
- (M-Tech) Continuous Flownex Nuclear Component Library GUI & Database Interface Development & Maintenance
- (M-Tech) Continuous Flownex Nuclear Unit Enabled Custom GUI Control Development & Maintenance
- (M-Tech) Continuous Flownex Nuclear Project File Version Difference Comparator Development & Maintenance

MOTIVATION FOR CHANGE:

Opportunity to complete Ph.D. full time and no vacancy following completion.

NORTH-WEST UNIVERSITY (FORMER PU FOR CHE) (Potchefstroom) 2000/07 to 2001/12
Tertiary Education (Mechanical Engineering)

Part-Time Software Engineering Lecturer (C++)

RESPONSIBILITIES:
- ➔ Plan, document, implement and support mechanical software engineering course curriculum based on ANSI C++ and Visual C++ programming language.
- ➔ Present additional classes to students in need of additional assistance.

PROJECTS:
- (PU for CHE/NWU) Custom C++ Course Guide Compilation

ACHIEVEMENTS:
- ✓ Above 90% Course Student Pass Rate in Both Years

MOTIVATION FOR CHANGE:

Change of departmental curriculum and resource allocation leading to redundancy of part-time lecturers.

SOFTFLO (Potchefstroom) 1996/01 to 1998/12
CFD Software Development, Simulation and Consultation

CFD Consultant

RESPONSIBILITIES:
- ➔ Perform CFD analyses and assist in reporting and recommendation process.
- ➔ Develop custom software components for use in commercial Flo++ CFD software.
- ➔ Develop custom GUI-based software for specialist use.
- ➔ Provide assistance to undergraduate and less experienced CFD software users.
- ➔ Assist in compiling Flo++ help files using Robohelp.
- ➔ Test-evaluate Flo++ by running tutorials and documenting unexpected behaviour.

PROJECTS:
- (ISCOR) DSC CFD Modeling, Analysis & Improvement Recommendation
- (ESKOM TRI/TSI) ESP CFD Modeling, Analysis & Improvement Recommendation
- (ESKOM TRI/TSI) Custom Object Oriented 2D ESP Re-Entrainment Calculator & Standalone GUI Development
- (ESKOM TRI/TSI) ESP CFD Modeling Training to German Visiting Student
- (AEC) Cyclone CFD Modeling, Analysis & Recommendation
- (PU for CHE/NWU) Glider Half-Model Creation, Analysis & Recommendation for Winglet Development
- (ISCOR) Thin Sheet Cold Milling Cooling Water Header CFD Modeling, Analysis & Recommendation
- (Vaal Reefs) Planned Additional Cooling Tower Array Impact CFD Modeling, Analysis & Recommendation
- (Softflo) Continuous C++ Numerical Code Component Development (Heat Conduction)
- (Softflo) Continuous Robohelp-Assisted Help-File Compilation & Maintenance
- (Softflo) Continuous Tutorial Evaluation & Correction

MOTIVATION FOR CHANGE:

Completion of M.Ing. and subsequent pursuit of better career opportunities.

Education and Training

SOUTH AFRICAN ROAD FEDERATION & WITS ENTERPRISE, GAUTENG, ZA — 18 – 21 April, 2011
Course: (UMTRI) Mechanics of Heavy Duty Truck Systems

ESTEQ ENGINEERING (FORMER MSC AFRICA), PRETORIA, ZA — 23 – 27 November, 2009
Course: Introduction to MSC.SimXpert Structures Workspace

BAE SYSTEMS, GLOBAL COMBAT SYSTEMS — 25 June, 2009
Course: Independent Design Review Chair Training Course

ESTEQ ENGINEERING (FORMER MSC AFRICA), PRETORIA, ZA — 1 – 5 September, 2008
Course: ADM741 MSC.Adams/Car with Powertrain and Testrig Training

ESTEQ ENGINEERING (FORMER MSC AFRICA), PRETORIA, ZA — 7 – 11 July, 2008
Course: ADM701 Adams/View Basic

OPTI-NUM SOLUTIONS, HYDE PARK, ZA — 10 – 11 June, 2008
Course: MATLAB Fundamentals and Programming Techniques

CRANFIELD UNIVERSITY, DEFENCE ACADEMY OF THE UK, SHRIVENHAM, UK — 5 – 7 March, 2007
Course: Fundamentals of Armour Protection

ESTEQ ENGINEERING (FORMER MSC AFRICA), PRETORIA, ZA — 18 – 22 September, 2007
Course: Introdution to Lagrangian and Eulerian Analysis Using MSC.Dytran

ESTEQ ENGINEERING (FORMER MSC AFRICA), PRETORIA, ZA — 7 August, 2006
Course: EnSight 8.2 Training: Introduction Class

ESTEQ ENGINEERING (FORMER MSC AFRICA), PRETORIA, ZA — August, 2006
Course: NAS120 Linear Static, Normal Modes and Buckling Analysis Using MSC.Nastran & MSC.Patran

NORTH-WEST UNIVERSITY (FORMER PU FOR CHE) — 1999 to 2004
Philosophiæ Doctor Mechanical Engineering (Computational Mechanics)
Dissertation Title: Numerical Simulation of Systems of Rigid Bodies

NORTH-WEST UNIVERSITY (FORMER PU FOR CHE) — 1996 to 1998
Magister Ingeniare (Mechanical: Computational Mechanics)
Thesis Title: A Numerical Algorithm for the Simulation of Systems of Rigid Bodies
Subjects: (1) Advanced Structural Mechanics, (2) FEM for Structures, (3) CFD I, (4) Advanced Thermo-Systems
Achievements: Distinction (1), (2), Thesis & Aggregate

NORTH-WEST UNIVERSITY (FORMER PU FOR CHE) — 1992 to 1995
Baccalaureus Ingeniare (Mechanical)
Final Year's Thesis Title: The Design of a Cost-Effective Indoor Vehicle Lift
Subjects: General Mechanical Engineering Baccalaureus Degree Curriculum
Achievements: Distinction Linear Algebra (1st & 2nd Semester 2nd Year), C++ Programming

MAFEKING HIGH SCHOOL — 1987 to 1991
High School Education (Cape Province Educational Department Matriculation)
Subjects: Afrikaans, Biology, English, Geography, Mathematics, Physical Science (All on Higher Grade)
Achievements: 4 Academic Achiever Scrolls (1987 to 1990), 1 Academic Honours Scroll (1989), 1 Archimedes Top Science Achiever Prize (1989)

References

Name Mr. S. (Silviu) Mihai
Period 2014/05 to 2016/06
Position Chief Engineer Design Centre of Origin Screens
Company Weir Minerals South Africa
Phone +27 82 801 8721
E-Mail Matei@mweb.co.za

Name Dr. V. (Valentine) Kanyanta
Period 2011/10 to 2013/09
Position Manager Product Modelling & Development
Company Element Six
Phone +44 7824 145151
E-Mail Valentine.Kanyanta@e6.com

Name Mr. C.G. (Neels) van Niekerk
Period 2006/08 to 2011/09
Position Manager (Chief Engineer) Mechanical Design
Company Denel LS (former BAE Systems LS OMC)
Phone +27 82 338 1800
E-Mail N.A.

Name Prof. C.G. de K. (Jat) du Toit
Period 2000/06 to 2001/12
Position Director School of Mechanical Engineering
Company North-West University (Potchefstroom Campus)
Phone +27 82 856 4200
E-Mail Jat.duToit@nwu.ac.za

Name Mr. W.A. (Willie) Landman
Period 2000/05 to 2003/12
Position Director/CFO & Programme Manager Specialised Consultations
Company M-Tech Industrial
Phone +27 83 257 8511
E-Mail N.A.

Name Mr. L.A. (Louis) le Grange
Period 1996/01 to 1998/12
Position Owner/Chief Consultant
Company Softflo CC
Phone +27 82 578 7682
E-Mail N.A.