

CURRICULUM VITAE - William Peter (Billy) Boshoff

FULL NAMES : William Peter Boshoff

NATIONALITY : South African

DATE OF BIRTH : 6 April 1979

LANGUAGES : English (Excellent)
Afrikaans (Excellent)

QUALIFICATIONS : BEng (Civil) 2001 Stellenbosch University
PhD (Civil Engineering) 2007 Stellenbosch University

RESEARCH INTERESTS : Fibre reinforced cement-based materials
Time-dependant behaviour of cement-based materials
Cracking of early age concrete
Computational mechanics with special interest in numerical modelling of non-linear cement-based materials
Sustainability of Construction (Green Building)
Alkali Activated Materials as a construction material

CURRENT MEMBERSHIPS: Concrete Society of Southern Africa
Active member of *fib*
Active member of RILEM

COMMITTEES: Board member of the Concrete Society of Southern Africa, 2010 to present
President of the Concrete Society of Southern Africa, 2012 to 2014
Deputy of Delegation for the South African National Member Group of *fib*, 2013 to present
Head of Delegation for the South African National Member Group of *fib*, 2012
Chairman of Editorial Board of CSSA Concrete Beton Publication, 2010 to present.
Member of Organising Committee of the 2012 Rilem Week in Cape Town
Member of Scientific Committee of International Conference BEFIB 2012 in Portugal.
Member of Scientific Committee of the Fourth *fib* Congress 2014, Mumbai.
Member of Scientific Committee ICCMATS 2014: International Conference on Construction Materials Engineering, Structural Performance and Durability (ICCMATS).
Chairman of Organising Committee of the International Conference of

Advanced Concrete Materials held Nov 2009 at Stellenbosch.

Member of the Scientific Committee for the 4th international conference on Concrete Repair, Rehabilitation and Retrofitting (ICCRRR) 2015, Leipzig, Germany

ACADEMIC RATING: NRF rating Y2 2011

TEACHING EXPERIENCE :

- 2002 – 2006:** Teaching assistant for the following modules at Stellenbosch University: Informatics 244 (2002), Informatics 314 (2002), Strength of Materials 214 (2003-2004), Strength of Materials 244 (2003), Concrete Construction 344 (2005), Building Materials 254 (2004 - 2006).
- 2005 – 2008:** Structural Engineering Experimental Course, Stellenbosch University: Developing and teaching the course on undergraduate and postgraduate level.
- 2007:** Building Materials 254, Stellenbosch University. Guest Lecturer at Holcim's Concrete Product Manufacturer's Conference.
- 2008:** Theory of Structures 324, Building Materials 254, Stellenbosch University.
- 2009:** Building Materials 254, Stellenbosch University. Guest Lectures, Technical University of Dresden, Germany.
- 2010:** Theory of Structures 324, Building Materials 254, Strength of Materials 143, Stellenbosch University, Guest Lectures at University of Cape Town and Cement and Concrete Institute (ACT Course).
- 2011:** Theory of Structures 324, Building Materials 254, Stellenbosch University.
- 2012:** Building Materials 254, Stellenbosch University.
- 2013:** Building Materials 254, Strength of Materials 143, Stellenbosch University. Guest Lectures at University of Cape Town.
- 2014:** Building Materials 254, Strength of Materials 143, Stellenbosch University, Postgraduate course on Cement-based Materials, Stellenbosch University, Guest Lectures at The Concrete Institute (ACT Course),

WORK EXPERIENCE:

Jan 2014 to present: Professor, Civil Engineering Department, Stellenbosch University.

Undergraduate and Postgraduate teaching and curriculum development.

Postgraduate supervision.

Research in the field of building materials.

Academic, administrative and financial management of research projects.

Academic and departmental administration.

Jul 2011 to Dec 2013: Associate Professor, Civil Engineering Department, Stellenbosch University.

Undergraduate and Postgraduate teaching and curriculum development.

Postgraduate supervision.

Research in the field of building materials.

Academic, administrative and financial management of research projects.

Academic and departmental administration.

Jan 2010 to Dec 2012, August 2013 to present: Head: Division for Structural Engineering, Civil Engineering Department Stellenbosch University.

Manage Division for Structural Engineering.

Member of Civil Engineering Department's executive committee.

Coordinate Postgraduate Studies in the division.

Jan 2008 to June 2011 : Senior Lecturer, Civil Engineering Department, Stellenbosch University.

Undergraduate and Postgraduate teaching and curriculum development.

Postgraduate supervision.

Research in the field of construction materials.

Academic and Departmental administration.

Feb 2007 to Dec 2007 : Post Doctoral Fellow, Civil Engineering Department, Stellenbosch University.

Responsible for the research group with regard to the advancement of cement-based materials, in particular SHCC (Strain Hardening Cement-based composites).

Guidance to Postgraduate students with regard to their research projects.

Responsible for initiating and sustaining international collaboration with regard to SHCC research. International partners are Dresden Technical University, Danish Technical University and Delft Technical University.

Responsible for teaching the concrete, masonry and timber part of the undergraduate Building Materials course.

Responsible for developing and teaching a course on experimental methods.

Feb 2004 to Jan 2006 : Research assistant for the CDSI research group at the Structural Engineering Division, Civil Engineering Department, Stellenbosch University.

Responsible for guidance of undergraduate and postgraduate students, design of test setups for the research group as well as specific research tasks.

Jan 2004 to Dec 2006 : Manager of Structures Laboratory of Civil Engineering Department, Stellenbosch University.

Responsible for the management of personnel, technical support for research, upgrading of instruments and testing equipment as well as performing commercial research.

Responsible for developing and teaching a course on experimental methods.

2002 – BKS Consulting Engineers, Durban Office

300 hour project for Toyota SA.

In depth investigations of the structural integrity of a 12 000 m² warehouse at the Toyota SA Plant in Durban. The findings were detailed in a report.

SCHOLARSHIPS AND AWARDS:

- 2001:** Prize for best project in Civil Engineering Informatics.
- 2002 – 2003:** Stellenbosch University Postgraduate Merit Bursary.
- 2002 – 2006:** Institute of Structural Engineering, Stellenbosch University – Bursary for MSc and PhD studies.
- 2004:** Ia-FraMCoS2004 Student Award of \$1000 to attend the Ia-FraMCoS 2004 conference in Vail, Colorado, USA. Awarded for “your accomplishments and your potential to contribute to the mission of Ia-FraMCoS”.
- 2006:** DAAD scholarship for PhD research in Germany, Technical University of Kaiserslautern.
- 2007:** Post Doctoral Fellowship, Stellenbosch University with title: *The design, characterisation and implementation of advanced cement-based composites in the South African Civil Engineering Industry.*
- 2007:** Grant from Institute of Structural Engineering, Stellenbosch University for travelling to Europe for collaboration meetings with Dresden Technical University, Denmark Technical University and Delft Technical University.
- 2007:** HL Reitz Medal for best postgraduate student in Civil Engineering, Stellenbosch University.
- 2011:** Rectors Award for General Performance.
- 2012:** Rectors Award for General Performance.
- 2013:** Rectors Award for General Performance.
- 2014:** Upcoming Researcher of the Year, Faculty of Engineering, Stellenbosch University

GRANTS AND PROJECT FUNDING

- 2009 - 2012:** South Africa / Germany bi-lateral funding from NRF and BMBF for R300 000 over three years. Topic: *Objective experimental and Numerical Modelling of SHCC.*
- 2009 – 2011:** THRIP research project titled: *Application of Low Volume Fibre Reinforced Concrete.* Project awarded for three years with a total budget of R240 000 per year for three years.
- 2011 – 2015:** NRF Incentive Funding, R20 000 per year for five years.
- 2012 - 2014:** THRIP research project titled: *Structural Use of Synthetic Fibres in Concrete.* Project awarded for three years with a total budget of R320 000 per year.
- 2013 - 2015:** Industry funded research project titled: *Research on development of sustainable infrastructure.* Total funding of R2 550 000 over three years.
- 2013 – 2015:** Collaborator of Edulink project: Joint Development of Courses for Energy Efficient and Sustainable Housing in Africa. Total funding of 440 000 Euro.
- 2014 – 2015:** Industry project on construction materials, R400 000.

PUBLICATIONS :**Dissertation:**

Time-dependant behaviour of Engineered Cement-based Composites. Dissertation, Stellenbosch University, 2007.

Journal Publications:

- WP Boshoff and GPAG Van Zijl, 2006. *Creep and Creep Fracture Engineered Cement-based Composites*, The International Journal of Restoration of Buildings and Monuments. Vol. 12, No. 2, pp 133–141.
- WP Boshoff and GPAG van Zijl, 2007, *Time-dependent response of ECC: Characterisation of creep and rate dependence*, Cement and Concrete Research, Vol 37, pp 725-734.

- WP Boshoff and GPAG van Zijl, 2007, *A computational model for strain-hardening fibre-reinforced cement-based composites*, Journal of the South African Institute of Civil Engineering, Vol. 49 No 2, pp 24–31.
- WP Boshoff, V Mechtcherine and GPAG van Zijl, 2009, *Characterising the time-dependant behaviour on the single fibre level of SHCC: Part 1: Mechanism of fibre pull-out creep*, Cement and Concrete Research, Vol 39, pp. 779–786.
- WP Boshoff, V Mechtcherine and GPAG van Zijl, 2009, *Characterising the time-dependant behaviour on the single fibre level of SHCC: Part 2: The rate effects on fibre pull-out tests*, Cement and Concrete Research, Vol. 39, pp 787–797.
- R Combrinck, WP Boshoff, 2012, *Investigation of Plastic Shrinkage Cracking in Conventional and Low Volume Fibre Reinforced Concrete*. Journal of the Concrete Society of Southern Africa, Concrete Beton, Vol 1.
- WP Boshoff, CJ Adendorff, 2013, *Effect of Sustained Loading on SHCC Crack Widths*, Cement and Concrete Composites, Vol 37, pp 119-125.
- WP Boshoff, R Combrinck, 2013, *Modelling the severity of plastic shrinkage cracking*, Cement and Concrete Research, Vol 48, pp 34-39.
- R Combrinck, WP Boshoff, 2013, *Typical plastic shrinkage cracking behaviour of concrete*, Magazine of Concrete Research, Vol 65 (8), pp 486-493.
- WP Boshoff, *Cracking behavior of SHCC subjected to sustained tensile loading*, 2014, ACI Materials Journal, Vol 111 (5), pp 553 – 560.
- J Vorel, WP Boshoff, 2014, *Numerical Simulation of Ductile Fiber-reinforced Cement-based Composite*, Journal of Computational and Applied Mathematics, Vol 270, pp 433-442.
- AJ Babafemi, WP Boshoff, 2015, *Tensile creep of macro-synthetic fibre reinforced concrete (MSFRC) under uni-axial tensile loading*, Cement and Concrete Composites, Vol 55, pp 62 – 69.
- A du Plessis, BJ Olawuyi, WP Boshoff, SG le Roux, *Simple and fast porosity analysis of concrete using X-ray computed tomography*, Materials and Structures, in press
- J Vorel, WP Boshoff, *Computational modelling of real structures made of strain-hardening cement-based composites*, Applied Mathematics and Computation, in press
- WP Boshoff, F Altmann, CJ Adendorff, V Mechtcherine, *A new approach for modelling the ingress of deleterious materials in cracked strain hardening cement-based composites*, Materials and Structures, in press

Conference Papers:

- WP Boshoff and GPAG Van Zijl, 2003. *Computational strategies for time-dependent behaviour of ECC*, Computational Modelling of Concrete Structures (eds. N Bicanic et al.), Proceedings for EURO-C 2003, pp 59-65.
- WP Boshoff WP and GPAG van Zijl, 2004. *Computational and experimental modelling of creep behaviour of Engineered Cement-based Composites*, Published in the Proceedings of SEMC, Cape Town.
- WP Boshoff and GPAG van Zijl, 2004. *Creep modelling of ductile fibre reinforced composites*, Published in the Proceedings of Fracture Mechanics of Concrete and Concrete Structures (FRAMCOS), Vale, U.S.A.
- WP Boshoff and GPAG van Zijl, 2005. *Time-dependant response of ECC: Characterisation and modelling of creep and creep fracture*, Proceedings of International workshop on HPRCC in structural applications, Honolulu, Hawaii, USA.
- WP Boshoff and GPAG van Zijl 2007, *Mesh-Objectivity of Crack Modelling in SHCC*, International conference on the Nonlocal Modelling of Material's Failure, NMMF, Wuppertal.
- WP Boshoff and GPAG van Zijl 2007, *Tensile Creep of SHCC*, International RILEM conference on High Performance fibre Reinforced Cement Composites, Mainz, Germany.
- WP Boshoff and GPAG van Zijl 2007, *Time-dependant behaviour of SHCC on the single fibre level*, Proceedings of the international conference, SEMC, Cape Town.
- Van Zijl, GPAG, Boshoff, WP 2008, *FRC in South Africa - application fields, new developments and outlook*, Proceedings of the international conference, ICCX 2008, Sun City, South Africa.

- WP Boshoff, CJ Adendorff, GPAG van Zijl, 2008, *Creep of Cracked Strain Hardening Cement-based Composites*, Proceedings of the international conference CONCREEP, Japan.
- GPAG van Zijl and WP Boshoff, 2008, *Mechanisms of creep in fibre-reinforced Strain –Hardening Cement Composites (SHCC)*, Proceedings of the international conference CONCREEP, Japan.
- CJ Adendorff, WP Boshoff, 2009, *Tensile Creep of Notched SHCC*, Proceedings of the International Conference CONMAT 2009, Japan.
- J Vorel, WP Boshoff, 2009, *Numerical Modelling of Strain Hardening Fibre-Reinforced Composites*, Proceedings of the International Conference ACM 2009, Stellenbosch.
- CJ Adendorff, WP Boshoff, GPAG van Zijl, 2009, *Characterisation of crack distribution of Strain-hardening cement composites (SHCC) under imposed strain*, Proceedings of the International Conference ACM 2009, Stellenbosch.
- WP Boshoff, CJ Adendorff, 2010, *Modelling SHCC Cracking for Durability*, Proceedings of the European Conference on Fracture, Dresden, Germany.
- C Brewis, WP Boshoff, 2010, *A holistic approach for measuring the environmental impact of the built environment*, CSE 2010 - Concrete for a Sustainable Environment, Emperor's Place, Kempton Park, South Africa.
- R Combrinck, WP Boshoff, 2010 *Investigation of plastic shrinkage cracking in concrete*, 4th International Conference on Structural Engineering, Mechanics and Computation (SEMC 2010), Social Sciences Complex, University of Cape Town, Cape Town, South Africa.
- R Combrinck, WP Boshoff, 2011 *Investigation of the critical period for plastic shrinkage cracking*, FIB international workshop on performance based specifications for concrete, Leipzig, Germany.
- J Maritz, R Combrinck, WP Boshoff, 2011 *Investigation of the behaviour of low-volume fibre reinforced concrete in the fresh state*, FIB international workshop on performance based specifications for concrete, Leipzig, Germany.
- WP Boshoff, 2011 *Performance based approach for modelling the cracking of SHCC for durability*, FIB international workshop on performance based specifications for concrete, Leipzig, Germany.
- W de Villiers, WP Boshoff, 2011, *The Development of a Decision-Making Model to Determine the Appropriateness of Alternative Building Technologies for Application in the Social Housing Industry*, International Conference, Exhibition and Housing Awards, South African Housing Foundation, Cape Town.
- WP Boshoff, PD Nieuwoudt, 2011, *Tensile Crack Widths of SHCC*, Second International Conference on Strain Hardening Cement-based Materials, SHCC2, Rio de Janeiro, Brazil.
- W.P. Boshoff, R. Combrinck, J. Maritz, 2012 *A model for the prediction of plastic shrinkage cracking in concrete*, Proceedings of the International Conference on Concrete Repair, Rehabilitation and Retrofitting, South Africa.
- PD Nieuwoudt, WP Boshoff, 2012, *The comparison between the cracking behaviour of bending and tension for Strain Hardening Cement-based Composites (SHCC)*, Proceedings of ICCRRR, Cape Town, South Africa.
- CJ Mouton, WP Boshoff, 2012, *Initial Study on the Tensile Creep of Cracked Fibre Reinforced Concrete*, Proceedings of BEFIB, Guimaraes, Portugal.
- R Combrinck, WP Boshoff, 2012, *Influence of restraint on the early age cracking of concrete*, Proceedings of BEFIB, Guimaraes, Portugal.
- R Combrinck, WP Boshoff, 2012, *Theory for the early age plastic cracking behaviour of concrete*, fib PhD Symposium, Karlsruhe, Germany.
- J Vorel, WP Boshoff, 2012, *Numerical Modelling of Engineered Cement-based Composites*. Proceedings of the International Conference of Engineered Mechanics, Svatka, Czech Republic.
- WI de Villiers, WP Boshoff, 2012, *Regulation of Alternative Building Materials and Systems in South Africa*, International Conference, Exhibition and Housing Awards, South African Housing Foundation, Cape Town.

- BJ Olawuyi, WP Boshoff, 2013, *Influence of Particle Size Distribution on Compressive Strength and Elastic Modulus of High-Performance Concrete*, Proceedings of the International Conference ACCTA, Johannesburg, South Africa.
- AJ Babafemi, WP Boshoff, 2013, *Preliminary creep behaviour of polypropylene fibre reinforced concrete (PPFRC) under a high tensile stress*, Proceedings of the International Conference ACCTA, Johannesburg, South Africa.
- AJ Babafemi, WP Boshoff, 2013, *Time-dependent behaviour of pre-cracked polypropylene fibre reinforced concrete (PFRC) under sustained loading*. International Conference on Structural Engineering, Mechanics and Computation (SEMC 2013), Cape Town, South Africa.
- G Coetzee, WP Boshoff, 2013, *Sisal reinforced cement-based masonry units*, . International Conference on Structural Engineering, Mechanics and Computation (SEMC 2013), Cape Town, South Africa.
- BJ Olawuyi, WP Boshoff, 2013, *Compressive Strength of High-Performance Concrete with Absorption Capacity of Super-Absorbing-Polymers (SAP)*, International Conference on Structural Engineering, Mechanics and Computation (SEMC 2013), Cape Town, South Africa.
- R Combrinck, WP Boshoff, 2013, *The origin of plastic settlement cracking and the effect of re-vibration*, International Conference on Structural Engineering, Mechanics and Computation (SEMC 2013), Cape Town, South Africa.
- WP Boshoff, MD de Klerk, G Coetzee, WI de Villiers, RD Tolêdo Filho, 2013, *Alternative Materials for Masonry Units*, International housing conference, Exhibition and housing awards, Cape Town, South Africa
- WI de Villiers, WP Boshoff, A van Noordwyk, C Brewis, J Brits, 2013, *Full Life Cycle Analysis of the Environmental Impact of Low-Cost Housing in South Africa*, International housing conference, Exhibition and housing awards, Cape Town, South Africa
- J Vorel, WP Boshoff, 2014, *Numerical simulation of shear behaviour of SHCC elements*, International Conference on Engineering Mechanics, Svratka, Czech Republic.
- WI de Villiers, WP Boshoff, 2014, *3D modelling of alternative masonry walling for South African low-cost housing*, International Masonry Conference, Guimarães, Portugal.
- BJ Olawuyi, WP Boshoff, 2014, *3D- Void analysis of high performance of concretes containing superabsorbent polymers (SAP)*. International RILEM Conference on Application of superabsorbent polymers and other new admixtures in concrete construction, Dresden, Germany.
- JD Dippenaar, R Combrinck, WP Boshoff, 2014, *Initial Study to Determine the Tensile Material Properties of Fresh Concrete*, International Conference on Construction Materials and Structures, ICCMATS, Johannesburg, South Africa.
- R Combrinck, WP Boshoff, 2014, *Fundamentals of Plastic Settlement Cracking*, International Conference on Construction Materials and Structures, ICCMATS, Johannesburg, South Africa.

Books:

Advances of Cement-Based Materials, proceeding of International Conference on Advanced Concrete Materials, Stellenbosch, South Africa 2010. Editors: WP Boshoff and GPAG van Zijl. Publishers: CRC Press.

POSTGRADUATE SUPERVISION

Masters	<p>Christo Johan Adendorff (MSc 2008 - 2009) The time dependant cracking behaviour of strain hardening cement-based composites.</p> <p>Riaan Combrinck (MSc 2009 - 2010) Plastic shrinkage cracking in conventional and low volume fibre reinforced concrete.</p> <p>Christian Johannes Mouton (MSc 2009-2011) Investigating the tensile creep of steel fibre reinforced concrete.</p> <p>Robert Jarrat (MSc 2010-2011) Construction of insitu cast flat slabs using steel fibre reinforced concrete.</p>
----------------	---

Jaco-Louis Maritz (MSc 2010-2011) An Investigation on the Use of Low Volume - Fibre Reinforced Concrete for Controlling Plastic Shrinkage Cracking.

Arno Mohr (MSc 2010-2011) Moment redistribution behaviour of SFRC members with varying fibre content.

Pieter Nieuwoudt (MSc 2010-2011) Quantifying the cracking behaviour of strain hardening cement-based composites.

Chandre Brewis (MSc 2010 - 2011) Quantifying the environmental dimension of sustainability for the built environment : with a special focus on low cost housing in South Africa.

Derick Wade Immelman (MSc 2011-2012) The influence of percentage replacement on the aggregate and concrete properties from commercially produced coarse recycled concrete aggregate.

Gerrit Coetzee (MSc 2011-2012) The mechanical and volumetric behaviour of sisal fibre reinforced concrete blocks.

Juane Brits (MSc 2011-2012) Quantifying the sustainability of the built environment: Model for the determination for the environmental impact of the end of life phase.

Daniel van der Westhuizen (MSc 2011 - 2013) Using Synthetic Fibres in Concrete to Control Drying Shrinkage Cracking in Concrete Slabs-on-Grade.

Jacques Bothma (MEng 2012 - 2013) The Structural Use of Synthetic Fibres: Thickness Design of Concrete Slabs on Grade.

Courtney Megan Odendaal (MEng 2013 - 2014) The performance of macro synthetic fibre reinforced concrete.

Ryno Barnard (MEng 2013 - 2014) The use of geopolymers in structural applications.

Marthinus Dawid de Klerk (MEng 2013 - 2015) The durability of sisal fibre reinforced concrete.

Diederick Dippenaar (MEng 2013 - 2015) The tensile properties of fresh concrete.

Louise Badenhorst (MEng 2013 - 2015) The effect of macro synthetic fibres on the allowable distance of saw cut joints in concrete floors on grade.

Danielle Malherbe (MEng 2014 -) Cement stabilised earth blocks containing bagasse ash

Nuraan Ebrahim (MEng 2014 -) The use of super absorbent polymers

Jean Oliver Lerch (MEng 2014 -) Development in fibre reinforced concrete

Vital Alexander (MEng 2014 -) The use of volcanic ash as cement extender

JP Louw (MEng 2015 -) The structural use of geopolymers

HL Bester (MEng 2015 -) Fibre reinforced concrete

PhD

AJ Babafemi (PhD 2011 - 2015) Tensile creep of cracked macro synthetic fibre reinforced concrete.

Riaan Combrinck (PhD 2011 -) Modelling the cracking behaviour of fresh concrete using numerical methods.

Pieter Daniel Nieuwoudt (PhD 2012 -) Time-dependant Behaviour of Cracked Steel Fibre Reinforced Concrete.

BJ Olawuyi (PhD 2012 -) Understanding the Mechanical Behaviour of High Performance Concrete with Superabsorbent Polymer (SAP).

Wibke Irmtraut de Villiers (PhD 2012 -) Development of a Decision-Making Model to Determine the Sustainability and Structural Suitability of Alternative Building Technologies for Implementation in the Social Housing Industry.

SELECTED COMMERCIAL RESEARCH PROJECTS :

- 2004: Consani Engineering: Testing of corner posts for freight containers.** A number of corner posts for freight containers were tested with different thicknesses to obtain the most economical design.
- 2004: BKS Consulting Engineers: Testing of masonry walls of new student residence of University of Stellenbosch.** Samples of masonry walls of the new student residence at Stellenbosch University were taken and tested. Results were compared to reference masonry walls to report on quality of masonry units, mortar and building quality.
- 2004 : Photego: Testing of in-situ strain measuring instruments for strain determination in concrete beams.** In-situ strain measuring instruments were cast in position in reinforced concrete beams. The readings were compared to the strain readings of strain gauges glued to the reinforcing while the beam was tested in flexure.
- 2004/5 : Zietsman Lloyd and Hemsted (PTY) LTD: Testing of repair methods for a large concrete channel.** Different repair methods were tested which included glued laminates on concrete beams, laminate material testing and full scale tests of channel sections retrofitted with bonded laminates and Kevlar anchors.
- 2004-2008 : Managing the commercial testing service of Concrete Laboratory, Stellenbosch University.** Managed the testing, reporting, invoicing and client liaison for the commercial service of the Concrete Laboratory, Stellenbosch University. Over 30 clients used this service during the period from 2004 to 2007.
- 2005 : Peri Wiehahn (PTY) LTD : Testing of extensions fitted to props.** Props were tested to find the reduction of capacity due to a fitted extension.
- 2006 : BVi Consulting : Material testing of anchorage bolts.** Tensile testing of the steel quality of anchorage bolts.
- 2007 : Hosaf Fibres : Investigation the effectiveness of Poly-Ester fibres as secondary reinforcing in concrete.** Poly-Ester fibres manufactured by Hosaf Fibres were investigated for the possible application as secondary reinforcing in concrete. Different fibre types were investigated. The effectiveness of the fibres was also compared to fibres available in the South African market.
- 2008 : A Precast Concrete Company : Developing a Fibre Reinforced Concrete for specific applications.** A Fibre Reinforced concrete was developed, optimised and tested for specific applications for a precast concrete company.
- 2008 : Hosaf Fibres : Investigation the effectiveness of Poly-Ester fibres for increasing the impact resistance of concrete.** The effectiveness of Poly-Ester fibres manufactured by Hosaf Fibres for increasing the impact resistance of concrete was investigated.
- 2009 : Hosaf Fibres : Investigation the effectiveness of Poly-Ester fibres for increasing the resistance of plastic shrinkage cracking. A report for Agreement certification** The effectiveness of Poly-Ester fibres manufactured by Hosaf Fibres for increasing the resistance of plastic shrinkage cracking. The report was compiled for the certification of Hosaf Fibres by Agreement.
- 2009 : A Precast Concrete Company : Evaluation of a precast flooring system according to SANS standards.** A precast flooring system was evaluated to determine whether the system complies to SANS standards.
- 2010 : Precast Company : Development of FRC and manufacturing process for precast company.** A high strength fibre reinforced concrete mix was developed for precast concrete units. The mix was adjusted to be compatible with a specific manufacturing process.
- 2012 : Contractor : Investigation into the cracking of concrete pavements.** A concrete pavement showed significant cracking. Causes and prevention methods were investigated.
- 2013 : Manufacturer : Testing of mechanical properties and durability of glass fibre reinforced cement-based material.**
- 2014 : Consulting Engineer : Testing of balustrade.**
- 2014 : Mining Company : Testing of materials to be used as supplementary cementitious materials.**