

CURRICULUM VITAE | WIBKE DE VILLIERS

PERSONAL INFORMATION

NAME Wibke Irmtraut de Villiers (née Dunaiski)
DATE OF BIRTH 31 August 1984
GENDER Female
NATIONALITY South African
LANGUAGES English, Afrikaans & German fluent

CONTACT DETAILS

TEL NUMBER +27 21 808 4072
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QUALIFICATIONS

2003 - 2006 Bachelors Degree in Civil Engineering, University of Stellenbosch
2006.12 degree obtained Cum Laude
2007 - 2008 Masters Degree in Structural Engineering, University of Stellenbosch
2008.12 degree obtained Cum Laude

RESEARCH INTERESTS

Development and regulation of alternative sustainable building materials
Life cycle analysis of building materials

WORK EXPERIENCE

2009.02 - 2010.12 Aurecon – (multidisciplinary engineering consulting firm)
Structural design engineer
2011.01 - present University of Stellenbosch
Lecturer; Co-worker of research group – Unit for Construction Materials

TEACHING EXPERIENCE

2011 Theory of Structures 324 (teaching assistant)
Strength of Materials 143
2012 Theory of Structures 324 (teaching assistant)
Strength of Materials 143 (module coordinator)
2013 Strength of Materials 143 (module coordinator)
2014 Post-Graduate Course on Cement-Based Materials
2015 Strength of Materials 224, Post-Graduate Course on Cement-Based Materials
2016 Strength of Materials 224, Post-Graduate Course on Cement-Based Materials

PUBLICATIONS

THESIS

Investigation into the effective lengths of web compression elements in parallel chord trusses.

CONFERENCE ARTICLES

The Development of a Decision-Making Model to Determine the Appropriateness of Alternative Building Technologies for Application in the Social Housing Industry. WI de Villiers & WP Boshoff. Southern African Housing Foundation International Conference, September 2011, Cape Town, South Africa.

Regulation of Alternative Building Materials and Systems in South Africa. WI de Villiers. Southern African Housing Foundation International Conference, September 2012, Cape Town, South Africa.

Full Life Cycle Analysis of the Environmental Impact of Low-Income Housing in South Africa. WI de Villiers, WP Boshoff, A van Noordwyk, C Brewis & J Brits. Southern African Housing Foundation International Conference, September 2013, Cape Town, South Africa.

Alternative Materials for Masonry Units. WP Boshoff, MD de Klerk, WI de Villiers & RDT Filho. Southern African Housing Foundation International Conference, September 2013, Cape Town, South Africa.

The Influence of Percentage Replacement from Coarse Recycled Concrete Aggregate. DW Immelman & WI de Villiers. SEMC International Conference, September 2013, Cape Town, South Africa.

3D Modelling of Alternative Masonry Walling for South African Low-Cost Housing. WI de Villiers & WP Boshoff. International Masonry Conference, July 2014, Guimarães, Portugal.

Environmental Impact of Residential Building Envelope: A Comparison between Thermal Performance and Occupant Energy Usage. A van Noordwyk, WI de Villiers & WP Boshoff. CONMAT'15, August 2015, Whistler, Canada.

Evaluation of Materials Laboratory Capacity for Promotion of Design-Build Teaching Approach in Architectural Courses. PBK Mbewe & WI de Villiers. Sustainable Futures Conference, September 2016, Nairobi, Kenya.

Environmental Sustainability Evaluation of Low-Cost Buildings: The Case of Buildings under the JENGA Project. PBK Mbewe & WI de Villiers. Sustainable Futures Conference, September 2016, Nairobi, Kenya.

MASTER'S SUPERVISION

Quantifying the Sustainability of the Built Environment: Model for the Determination of the Environmental Impact of the End-of-Life Phase. J Brits, 2012. (co-supervision)

The Influence of Percentage Replacement on Aggregate and Concrete Properties from Commercially Produced Coarse Recycled Concrete Aggregate. DW Immelman, 2013.

Structural, Economic and Environmental Feasibility of Plastic Load-Bearing Walling and Roofing System for Low-Income Housing. F. le Roux, 2014.

Quantifying the Sustainability of the Built Environment: The Development of a Complete Environmental Life Cycle Assessment Tool. A van Noordwyk, 2015.

The Characterisation of Compressed Earth Blocks Stabilised with Cement and Agro-Industrial Residues. D Malherbe, 2016. (co-supervision)

Characterisation and Evaluation of the Mechanical Properties of Alternative Masonry Units. J Fourie, 2017.

BURSARIES

2003 - 2005

South African Institute of Steel Construction Bursary

2006 - 2008

Wilhelm Frank Scholarship

2003 - 2008

University of Stellenbosch Merit Bursary

2004 - 2006

University of Stellenbosch Sports Bursary

AWARDS & ACHIEVEMENTS

2003

Liebenberg & Stander Prize for Best First Year in Civil Engineering

2005

Best Student in Communication in Civil Engineering

2006

Best Student in Structural Steel Design