

Publications

Journal publications (refereed):

- [1] "EMI experiments in high power electronics", M Botha, HJ Beukes, JHR Enslin and JH Cloete, *SAIEE Transactions*, March 1998.
- [2] "Local specifications for small-scale embedded generators", G Botha, C Carter-Brown, *Energize renewable energy supplement Vol. 2*, June 2014.
- [3] "Quality of Supply apportioning for renewable power plants", G Botha, H Mostert, B Peterson, *Energize renewable energy supplement Vol. 2*, June 2014.

Journal publications (invited):

- [4] "Power supply problems: an overview of under- and over-voltage events", G Botha, U Minnaar, *Electricity + Control (Crown Publications)*, April 2011.

Conference publications (refereed):

- [5] "EMI experiments in high power electronics", M Botha, HJ Beukes, JHR Enslin and JH Cloete, *EMC Workshop: from DC to light*, October 2 1996, Electra.
- [6] "Modelling and Prediction of EMI Generated by SVCs", M Botha, JHR Enslin, JH Cloete, AA Burger, *First Southern African Power Quality Conference*, May 11-13 1997, Durban, South Africa.
- [7] "Conducted Electromagnetic Noise Measurements and Predictions for the Muldersvlei SVC", M Botha, AA Burger, AC Britten, *South African Universities Power Engineering Conference*, January 20-21 1998, Stellenbosch.
- [8] "Measurement of EMI in PLC circuits", M Botha, AA Burger, *IEEE/SAIEE conference on APMTTC/EMC*, September 1998, Cape Town.
- [9] "Design of a wideband capacitive voltage sensor for HVDC applications", M Botha, HJ Vermeulen, *Universities Power Engineering Conference*, Belfast, Northern Ireland, September 6-8, 2000.
- [10] "Optically isolated differential capacitive sensor for non-intrusive high voltage measurements", M Botha, HJ Vermeulen, *IASTED Power and Energy Systems Conference*, Marbella, Spain, September 19-22, 2000.
- [11] "Eskom Experience with On-site Field Tests of a Capacitive Coupled Substation", M Schilder, AC Britten, ME Mathebula, AA Singh, *Inaugural IEEE PES Conference and Exposition in Africa*, Durban, South Africa, 11-15 July 2005.
- [12] "Evaluation of a New Three-Phase Dip Definition", M Schilder, RG Koch, *CIGRE 5th Southern Africa Regional Conference*, Somerset West, South Africa, 24-28 October 2005.
- [13] "Basics of Distribution Reliability Assessment for Network Performance Improvement Evaluation", M Schilder, *4th Electric Power Research Conference: Sustainability through Innovation*, Midrand, South Africa, 10 November 2005.
- [14] "Utility Interruption and Dip Performance Management", M Schilder, RG Koch, *Power Quality and Reliability Africa 2007*, Sandton Convention Centre, Johannesburg, South Africa, 17-18 April 2007.
- [15] "QOS aspects of IPPs: Discussion of different approaches", G

Botha, *Eskom Reliability and Power Quality Conference*, Johannesburg, South Africa, 20-22 June 2012.

Conference publications – co-author (refereed):

- [16] “Modelling and Experimental Evaluation of a Three-Phase Open-Air Capacitive Sensor Assembly for Transmission Line Applications”, HJ Vermeulen, S van der Merwe, M Schilder, PJ Pieterse, 15th *International Symposium on High Voltage Engineering (ISH)*, Ljubljana, Slovenia, 27-31 August 2007.

Book:

- [17] “Power Quality in Electrical Power Systems: A Holistic Approach”, Power Series Volume 8, Eskom Holdings SOC Limited, Crown Publications, August 2013, Editorial: S Bisnath, G Botha, AC Britten, F de Villiers, L Pittorino, J van Coller.

Technical Reports (Main author):

- [18] “Modelling of Electromagnetic Interference Generated by Static Var Compensators”, M Botha, Eskom TRI Research report, December 1997.
- [19] “Athene Harmonic Survey”, M Schilder, I Smit, Eskom Technical Report, TSI/EL/03/048, September 2003.
- [20] “Rapid Voltage Changes”, M Schilder, Eskom Research Report, RES/RR/03/21075, September 2003.
- [21] “Evaluation of a 275 kV to 22 kV Capacitor Coupled Substation”, M Schilder, AC Britten, ME Mathebula, Eskom Research Report, RES/RR/03/21954, October 2003.
- [22] “Distribution Power System Simulator Tool Application to PQ”, M Schilder, Eskom Research Report, RES/RR/03/21067, November 2003.
- [23] “Line Reliability Upgrade vs System Backfeed Options”, M Schilder, Eskom Research Report, RES/RR/04/24207, October 2004.
- [24] “Improved Voltage Dip Assessment”, M Schilder, Eskom Research Report, RES/RR/04/23923, December 2004.
- [25] “Analysis of the CCS Laboratory Model Experimental Test Results”, M Schilder, ME Mathebula, Eskom Research Report, RES/RR/04/24784, December 2004.
- [26] “Evaluation of Capacitive Sensors – Simulations and Preliminary Field Testing”, M Schilder, S van der Merwe, Eskom Research Report, RES/RR/04/23440, January 2005.
- [27] “Literature Scan on Customer Classification for Different Reliability Levels”, M Schilder, Eskom Scan report, RES/SC/05/25597, July 2005.
- [28] “Effects of Renewables on the Network”, M Schilder, AJ Otto, Eskom Research Report, RES/RR/05/26477, April 2006.
- [29] “Evaluation of Digsilent Reliability Module”, M Schilder, R Billinton, Eskom Research Report, RES/RR/05/26084, May 2006.
- [30] “International Reliability Test Systems: Literature Scan”, M Schilder, Eskom Scan Report, RES/SC/05/26470, May 2006.
- [31] “Proposal and Evaluation of Interim Methodology to Trade off Costs of VBRP in Distribution Planning”, M Schilder, M van Harte, Eskom

Research Report, RES/RR/05/26837, May 2006.

- [32] "Komatipoort Harmonic Impedance Simulations", M Schilder, Technical Memorandum, QOS0701, February 2007.
- [33] "Bighorn Voltage Transient Measurements" M Schilder, Eskom Technical Report, ERID/PST/07/01, April 2007.
- [34] "OCGT Measurements Harmonic Analysis", M Schilder, Eskom Technical Report, ERID/PST/07/03, August 2007.

Technical Reports (Co-author):

- [35] "Progress on MV Power Quality", RG Koch, M Schilder, Eskom TSI Research report, RES/RR/02/19750, December 2002.
- [36] "Analysis of the Simulation Studies", ME Mathebula, G Moodley, M Schilder, AC Britten, Eskom Interim Report, RES/IR/02/19332, July 2003.
- [37] "Review of Practice of Separating HV and LV Earths on Medium Voltage Pole-Mounted Transformers", K Kohlmeyer, M Schilder, Eskom Research Report, RES/RR/03/20106, July 2003.
- [38] "Detection of Fires – Report Number 3", S Higgins, S Nielson, M Schilder, Eskom Research Report, RES/RR/03/19854, September 2003.
- [39] "Analysis of Test Results for the 275 kV to 22 kV Meru Capacitor Coupled Substation", ME Mathebula, M Schilder, AC Britten, Eskom Research Report, RES/RR/04/23205, March 2004.
- [40] "OCGT Black-Start Analysis", HJ Beukes, M Schilder, Eskom Technical Report, ERID/PST/07/04, August 2007.

Other:

- [41] "Voltage Dip Propagation: The Propagation of Dips Caused by Faults on Adjacent MV Feeders", *Eskom Power Quality Navigator, Brief No. DP001*, December 2002.
- [42] "Voltage Dip Propagation: The Propagation of Dips Caused by Faults Downstream of a Recloser", *Eskom Power Quality Navigator, Brief No. DP002*, December 2002.