

LIST OF PUBLICATIONS / Rastko Zivanovic / July 2015

Impact measure: h-index = 13, i10 index = 16 and 659 citations according to the Google scholar.

Research Theses (2)

1. R.Zivanovic, “Artificial Neural Networks for State Estimation of Electric Power Systems”, Ph.D. at the University of Cape Town, South Africa, June 1997
2. R.Zivanovic, “Development of the Method for Analysing Electromechanical Mid-term Dynamic Processes in Power Systems”, Master thesis at the University of Belgrade, Yugoslavia, January 1991

Research reports to industry (9)

1. Rastko Zivanovic, “Controlled Autoreclosing on Shunt Reactor Compensated Transmission Lines”, report to ESKOM (South African Power Utility), 2005
2. Rastko Zivanovic and Phineas Tlhatlhetji, “Realistic Signal Decomposition for Application in Analysis of Recorded Power System Disturbances”, report to ESKOM (South African Power Utility), Report No.RES/RR/04/24846, 23 December 2004
3. Rastko Zivanovic and Phineas Tlhatlhetji, “Estimation of Transmission Line Parameters by Evaluating Fault Data Records”, report to ESKOM, Report No.RES/RR/04/24842, 23 December 2004
4. Rastko Zivanovic and Phineas Tlhatlhetji, “Evaluation and Development of Transmission Line Fault-Locating Techniques (part 1)”, report to ESKOM, Report No. RES/SC/02/18572, 28 Jun 2002
5. Rastko Zivanovic and Phineas Tlhatlhetji, “Evaluation and Development of Transmission Line Fault-Locating Techniques (part 2)”, report to ESKOM, Report No. RES/RR/02/16645, 15 November 2002
6. Rastko Zivanovic and Phineas Tlhatlhetji, “Evaluation and Development of Transmission Line Fault-Locating Techniques (part 3)”, report to ESKOM, Report No. RES/RR/03/20473, 10 October 2003
7. Rastko Zivanovic, “Nonparametric Forecasting Methods for NamPower”, report to Namibian Power Utility (NamPower), 2001
8. Rastko Zivanovic, “Optimal Placement of Synchronous Measurements for Dumping Control using Thyristor Controlled Series Capacitor (TCSC)”, report to ESKOM, 1998
9. Rastko Zivanovic, “Aspects of Implementation the Phasor Measurement Unit (PMU) Technology in Static State Estimation”, report to ESKOM, 1998

Book Articles (1)

1. R.Zivanovic, “High Voltage Measurements”, Chapter 4, topic Electrical Engineering, editor Kit Po Wong, of the Encyclopaedia of Life Support Systems (Physical Sciences, Engineering and Technology Resources), www.eolss.net, EOLSS Publisher Co. Ltd. Oxford, UK, 2003, **Invited contribution**

Journal Papers (31)

1. Y. Liu, R. Zivanovic and S. Al-Sarawi, “A synchronized generic substation events tripping circuit monitor for electric substation applications”, International Transactions on Electrical Energy Systems 2015; 25:1–16
2. F. Duan, R. Zivanovic, "Condition Monitoring of an Induction Motor Stator Windings via Global Optimization based on the Hyperbolic Cross Points", IEEE Transactions on Industrial Electronics, Vol. 62, No. 3, March 2015
3. A. Abdolkhalig, R. Zivanovic, “Simulation and testing of the over-current protection system based on IEC 61850 Process-Buses and dynamic estimator”, Sustainable Energy, Grids and Networks, Vol. 2, June 2015, pp. 41-50

4. A. Abdolkhalig, R. Zivanovic, "Phasor measurement based on IEC 61850-9-2 and Kalman-Filtering", Measurement 50 (2014) 126–134.
5. A. Abdolkhalig, R. Zivanovic, "Performance of Total Vector Error of an Estimated Phasor within Local Area Networks", World Academy of Science, Engineering and Technology: International Journal of Electrical, Robotics, Electronics and Communications Engineering Vol. 8 No. 2, 2014
6. M. N. Ibrahim and R. Zivanovic, "A Novel Global Sensitivity Analysis Approach in Testing Measurement Algorithms used by Protective Relays", International Transactions on Electrical Energy Systems, John Wiley and Sons, 2013; 23: 494–509
7. R. Zivanovic, "Global Sensitivity Analysis of Transmission Line Fault-locating Algorithms using Sparse Grid Regression", Reliability Engineering & System Safety, Vol. 107, November 2012, pp. 132–138
8. R.Schulze, P. Schegner, and R. Zivanovic, "Parameter Identification of Unsymmetrical Transmission Lines Using Fault Records Obtained From Protective Relays", IEEE Transactions on Power Delivery, Vol. 26, No. 2, April 2011
9. M. Musaruddin and R. Zivanovic, "Web services for fault analysis in smart grid applications", Australian Journal of Electrical & Electronics Engineering, Vol 8 No 2, 2011
10. R. Zivanovic and P. Bokov, "Cross-section parameterization of the pebble bed modular reactor using the dimension-wise expansion model", Annals of Nuclear Energy Vol. 37, pages 1763–1773, 2010
11. S. Chen and R. Zivanovic, "Estimation of frequency components in stator current for the detection of broken rotor bars in induction machines", Measurement Vol. 43, Issue 7, August 2010, pages 887-900
12. M. Musaruddin and R. Zivanovic, "Web Services for Automated Fault Analysis in Electrical Power Systems", Advanced in Information Sciences and Service Sciences, Volume 2, Number 3, September 2010
13. Y. Liu, R. Zivanovic, and S. Al-Sarawi, "An IEC 61850 synchronised event logger for substation topology processing", Australian Journal of Electrical & Electronics Engineering Vol. 7 No. 3 2010
14. S. Chen and R. Zivanovic, Modelling and simulation of stator and rotor fault conditions in induction machines for testing fault diagnostic techniques, European Transactions on Electrical Power (International Transactions on Electrical Energy Systems), Volume 20, Issue 5, pages 611-629, July 2010
15. A.Ukil, R.Zivanovic, "Adjusted Haar wavelet for application in the power systems disturbance analysis", Digital Signal Processing, Vol. 18, 2008, pp. 103–115 **in TOP25 quarterly list (articles that have been downloaded the most)**
16. R.Zivanovic, "An Adaptive Differentiation Filter for Tracking Instantaneous Frequency in Power Systems", IEEE Transactions on Power Delivery, Vol.22, No.2, April 2007
17. A.Ukil, R.Zivanovic, "Application of Abrupt Change Detection in Power Systems Disturbance Analysis and Relay Performance Monitoring", IEEE Transactions on Power Delivery, Vol. 22, No.1, January 2007, pp. 59-66
18. A.Ukil, R.Zivanovic, "The Detection of Abrupt Changes using Recursive Identification for Power System Fault Analysis", Electric Power Systems Research, Volume 77, March 2007, pp.259-265
19. A.Ukil, R.Zivanovic, "Abrupt Change Detection in Power System Fault Analysis using Adaptive Whitening Filter and Wavelet Transform", Electric Power Systems Research, Volume 76, June 2006, pp. 815-823 **in TOP25 quarterly list (articles that have been downloaded the most)**
20. J.Jordaán, R.Zivanovic, "Frequency Estimation in Power Systems Using the Dynamic Leapfrog Method", Measurement, Volume 39, June 2006, pp. 451-457
21. R.Zivanovic, A.Ukil, J.Jordaán, "A Novel Approach to the Automatic Analysis of Disturbance Data: Technology and Implementation", WSEAS Transactions on Power Systems, vol. 1, issue 3, March 2006, pp. 619-624

22. R. Zivanovic, "Local Linear Approximation for Tracking Frequency in Power Systems", International Journal of Electrical Power & Energy Systems 27 (2005), pp. 409-416
23. J.A. Jordaan and R. Zivanovic, "Nonparametric Time-Varying Phasor Estimation in Power Systems by using of Non-quadratic Criterion", Transactions of the South African Institute of Electrical Engineers, March 2004, Vol. 95, No. 1, pp.35-41
24. R. Zivanovic, Peter Schegner, Olaf Seifert, and Georg Pilz, "Identification of the Resonant-Grounded System Parameters by Evaluating Fault Measurement Records", IEEE Transactions on Power Delivery, July 2004, Vol. 19, Issue 3, pp.1085-1090
25. R. Zivanovic, "On the Use of Partially Linear Model in Identification of Arcing-Fault Location on Overhead High-Voltage Transmission Lines", International Journal on Bifurcation and Chaos, **invited paper** for special issue on Modelling and Identification of Nonlinear Systems, Vol.14, No.6, June 2004, pp. 1975-1985
26. J.A.Jordaan and R. Zivanovic, "Dynamic leapfrog algorithm for power system state estimation", IEE Proceedings Generation, Transmission and Distribution, Vol.150, No.1, January 2003, pp.28-32
27. R. Zivanovic, "Local Regression based Short-Term Load Forecasting", Journal of Intelligent and Robotic Systems, **invited paper** for special issue on Intelligent Forecasting and Control Methodologies in Industrial Applications, Vol. 31, Nos. 1-3, May-July 2001, pp.115-127
28. R. Zivanovic and D. Popovic, "An Efficient Approach to the Evaluation of Mid-Term Dynamic Processes in Power Systems", International Journal of Electrical Power & Energy Systems, Vol. 15, No.3, 1993, pp.137-143
29. R. Zivanovic and D. Popovic, "Some Improvements in Solving Network Model in Analysis of Short and Mid-Term Dynamic Processes in Power Systems", AMSE Periodical (Modelling, Measurement and Control), A, Vol.45, No.3, 1992, pp.49-60
30. R. Zivanovic and D. Popovic, "Contributions to Methodology of Analysing Mid-Term Dynamic Processes in Power Systems", The Journal of the Union of Yugoslav Power Industry "ELEKTROPRIVREDA", Nos. 1-2, 1992, pp.18-25
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Conference Papers (127)

1. R. Zivanovic, "Modelling Synchronous Generators with Uncertain Parameters and Unknown Inputs in Wide Area Monitoring Systems", XIII Symposium of Specialists in Electric Operational and Expansion Planning (SEPOPE14), 18-21 May 2014, Brazil
2. Y. Liu, R. Zivanovic, S. Al-Sarawi, "Industrial Case Study of an IEC 61850 Standard Compatible and Synchronised Tripping Circuit Monitor for Electric Substations", XIII Symposium of Specialists in Electric Operational and Expansion Planning (SEPOPE14), 18-21 May 2014, Brazil
3. N. Shahabi, R. Zivanovic, N. Iannella, S. Al-Sarawi, "Global sensitivity and uncertainty analysis of transients in the Universal Line Model", 16th International Conference on Harmonics and Quality of Power (ICHQP 2014), Bucharest, Romania, 25-28 May 2014
4. A. Ukil, R. Zivanovic, "Automated Analysis of Power Systems Disturbance Records: Smart Grid Big Data Perspective", IEEE Innovative Smart Grid Technologies (IEEE ISGT Asia 2014), Berjaya Times Square Hotel, Kuala Lumpur, May 20 – 23, 2014.
5. R. Zivanovic, "Modelling DC Offset in Fault Currents Recorded by Intelligent Electronic Devices", Australasian Universities Power Engineering Conference (AUPEC), September 2014, Perth, Australia
6. Q. Fang, R. Zivanovic, "Parameter Identification of a Wind Generator Unit RMS Model Using Sparse Grid Optimization Algorithm", The 6th International Conference on Modelling, Identification and Control (ICMIC2014), Melbourne, December 3-5, 2014
7. A. Abdolkhalig and R. Zivanovic, "Phasor Measurements within Local Area Networks", International Conference on Advances in Computer, Electrical and Electronic Engineering -

Sydney, Australia; Proceeding is published in the International Journal of Information Technology & Computer Science (IJITCS) (<http://www.ijitcs.com>) (ISSN : 2091-1610), Volume : 12 Issue : 2.

8. A. Abdolkhalig and R. Zivanovic, "Performance Evaluation of Phasor Estimator within IEC 61850-9-2 Communication Network", The International Conference on Electrical and Electronics Engineering, Clean Energy and Green Computing (EEECEGC 2013), Islamic Azad University, Dubai, UAE, December 11-13, 2013.
9. A. Abdolkhalig and R. Zivanovic, "Evaluation of IEC 61850-9-2 Samples Loss on Total Vector Error of an Estimated Phasor", IEEE Student Conference on Research & Development (SCOReD 2013), Palm Garden Hotel, Putrajaya, Malaysia, 16-17 December 2013.
10. R. Zivanovic, "Parameter Estimation by Solving Polynomial Eigenproblem: A Synchronous Machine Example", Australasian Universities Power Engineering Conference, AUPEC 2013, Hobart, TAS, Australia, 29 September – 3 October 2013
11. F.Duan and R. Zivanovic, "Induction Motor Stator Faults Diagnosis by Using Parameter Estimation Algorithms", 9th IEEE International Symposium on Diagnostics for Electric Machines, Power Electronics and Drives (IEEE SDEMPED 2013), August 27-30, 2013, Valencia, Spain
12. F.Duan and R. Zivanovic, "Automated Multi-Motor Condition Monitoring Based on IEC 61850", 5th IEEE Annual International Energy Conversion Congress and Exhibition (IEEE ECCE 2013), Melbourne, Australia June 3-6, 2013
13. R. Zivanovic, "Estimating Dynamic Response of a Synchronous Generator with Uncertain Parameters by Applying the Spectral Collocation Method", 12th International Conference on Probabilistic Methods Applied to Power Systems (PMAPS'12), 10-14 June 2012, Istanbul, Turkey
14. R. Zivanovic, "Parameter Estimation by Solving Multivariate Polynomial System: A Synchronous Machine Example", 20th Mediterranean Conference on Control and Automation, July 3-6, 2012, Barcelona, Spain
15. R. Zivanovic, "A Pseudospectral Estimation Method and its Application in Modeling Power System Inter-Area Oscillations", INVITED SPECIAL SESSION: "Distributed Energy Sources and Control of Power Systems", 15th International Power Electronics and Motion Control Conference, EPE-PEMC 2012 ECCE Europe, 4-6 September 2012, Novi Sad, Serbia
16. A. Abdolkhalig and R. Zivanovic, "Towards Dynamic On-Line State Estimator based on IEC 61850-9-2 Process Bus", IEEE Mediterranean Electrotechnical Conference (MELECON'12), 25-28 March 2012, Yasmine Hammamet, Tunisia
17. N. Rohadi and R. Zivanovic, "Sensitivity analysis of a fault impedance measurement algorithm applied in protection of parallel transmission lines", The 9th IET International Conference on Advances in Power System Control, Operation and Management (APSCOM 2012), 18-21 November 2012, Hong Kong
18. N. Rohadi and R. Zivanovic, "Sensitivity Analysis of Fault Impedance Measurement Algorithm Used in Protection of Three-Terminal Lines", Australasian Universities Power Engineering Conference (AUPEC 2012), 26-29 September 2012, Bali – Indonesia
19. F. Duan and R. Zivanovic, "A Model for Induction Motor with Stator Faults", Australasian Universities Power Engineering Conference (AUPEC 2012), 26-29 September 2012, Bali – Indonesia
20. F. Duan and R. Zivanovic, "Diagnosis of induction machine stator faults by parameter estimation technique based on direct search on sparse grid", The 9th IET International Conference on Advances in Power System Control, Operation and Management (APSCOM 2012), 18-21 November 2012, Hong Kong
21. Y. Liu, R. Zivanovic and S. Al-Sarawi, "IEC 61850 Tripping Circuit Monitor with IEEE 1588 Synchronization", Australian Protection Symposium, Sydney, Australia, 21-22 August 2012
22. R. Zivanovic, R. Schulze, and P. Schegner, "An Application of Pseudo-Spectral Discretization in Modelling of Unsymmetrical Transmission Lines", 17th Power Systems Computation Conference (PSCC'2011), 22-26 August 2011, Stockholm, Sweden

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24. M. Musaruddin and R. Zivanovic, "Signal Segmentation of Fault Records based on Empirical Mode Decomposition", IEEE TENCON 2011, Bali, Indonesia November 22-24, 2011
25. N. Rohadi and R. Zivanovic, "Sensitivity Analysis of Impedance Measurement Algorithms Used in Distance Protection", IEEE TENCON 2011, Bali, Indonesia November 22-24, 2011
26. M. N. Ibrahim and R. Zivanovic, "Factor-Space Dimension Reduction for Sensitivity Analysis of Intelligent Electronic Devices", IEEE TENCON 2011, Bali, Indonesia November 22-24, 2011
27. M. N. Ibrahim and R. Zivanovic, "Impact of CT Saturation on Phasor Measurement Algorithms: Uncertainty and Sensitivity Study", International Conference on Probabilistic Methods Applied to Power Systems (PMAPS), Singapore, 14-17 June 2010
28. R. Zivanovic, "High-Accuracy State and Parameter Estimation using Chebyshev Spectral Discretization Method", 18th Mediterranean Conference on Control & Automation, Marrakech, Morocco, June 23-25, 2010
29. R. Zivanovic, "An Application of Global Sensitivity Analysis in Evaluation of Transmission Line Fault-Locating Algorithms", Sixth International Conference on Sensitivity Analysis of Model Output (SAMO), 19-22 July 2010, Università Bocconi Milan (Italy), Proceedings published in Procedia – Social and Behavioral Sciences, Volume 2, Issue 6, 2010
30. Hui-Min Tan, David Vowles and Rastko Zivanovic, Implementation of the Enhanced Binary-SIME method for Finding Transient Stability Limits with PSS/ETM, IEEE Bucharest Power Tech Conference, Bucharest, Romania, 28 June – July 2009
31. Fang Duan and Rastko Zivanovic, Induction Motor Fault Diagnostics using Global Optimization Algorithm, Australasian Universities Power Engineering Conference (AUPEC'09), Adelaide, Australia, 27th to 30th September, 2009
32. Mustarum Musaruddin and Rastko Zivanovic, Automated Fault Analysis in the Indonesian Power Utility: A Case Study of South Sulawesi Transmission System, Australasian Universities Power Engineering Conference (AUPEC'09), Adelaide, Australia, 27th to 30th September, 2009
33. Mohammad Nizam Ibrahim, Nanang Rohadi and Rastko Zivanovic, Methodology for automated testing of transmission line fault locator algorithms, Australasian Universities Power Engineering Conference (AUPEC'09), Adelaide, Australia, 27th to 30th September, 2009
34. Mohammad Nizam Ibrahim and Rastko Zivanovic, An advance method for evaluation of the measurement algorithms used in digital protective relaying, Australasian Universities Power Engineering Conference (AUPEC'09), Adelaide, Australia, 27th to 30th September, 2009
35. Yang Liu, Rastko Zivanovic, Said Al-Sarawi, Cristian Marinescu and Richard Cochran, A Synchronized Event Logger for Substation Topology Processing, Australasian Universities Power Engineering Conference (AUPEC'09), Adelaide, Australia, 27th to 30th September, 2009
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38. Fang Duan and R. Zivanovic, "Estimation of DC Offset Parameters based on Global Optimization", Australasian Universities Power Engineering Conference (AUPEC'08), Sydney, 14th - 17th December, 2008
39. Shuo Chen and Rastko Zivanovic, "Diagnostics of Rotor Faults in Induction Motors Operating under Time-varying Load and Light Load Conditions", 11th International Conference on Electrical Machines and Systems (ICEMS 2008), Shangri-La Hotel, Wuhan, China, October 17-20, 2008

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46. R.Zivanovic and Hoong Boon Ooi, "A Systematic Approach for Testing Transmission Line Fault-Locating Techniques", Electricity 2007 Conference, The Electric Energy Society of Australia (EESA), 15-17 August Melbourne, Australia
47. R.Zivanovic and Shuo Chen, "Fault Diagnostics of Induction Machines using Prony Analysis", paper no. 496, IEEE Power Tech Conference, 1-5 July 2007, Lausanne, Switzerland
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51. R.Zivanovic, "An Algorithm for Arcing-Fault Location on Transmission Lines", Southern African Universities Power Engineering Conference (SAUPEC'07), 25-26 January 2007, University of Cape Town, South Africa
52. R.Zivanovic, "Estimation of Transmission Line Parameters using Fault Records", Australasian Universities Power Engineering Conference (AUPEC'06), 10 – 13 December 2006, Victoria University, Melbourne, Australia
53. A.Ukil and R.Zivanovic, "Automatic Signal Segmentation based on Abrupt Change Detection for Power Systems Applications", IEEE Power India Conference, April 2006
54. R.Marais, R.Zivanovic, and R.Estment, "Developing a model to simulate least economic cost evaluation of transmission expansion investment", The 9th International Conference on Probabilistic Methods Applied to Power Systems (PMAPS2006), 11–15 June 2006, Stockholm, Sweden
55. A.Ukil and R.Zivanovic, "Application of Abrupt Change Detection-based Signal segmentation in Power System Oscillation Analysis", SAUPEC'06, Durban, January 2006
56. J.A.Jordaan and R.Zivanovic, "Signal Parameter Estimation in Power Systems: Semi-parametric Spectral Estimation", SAUPEC'06, Durban, January 2006
57. R. van Heerden, R. Zivanovic and N. Ijumba, "Reclosing on the Alpha-Beta 765kV Line", Southern African Power System Protection Conference, 8-10 November 2006, Johannesburg, South Africa
58. A.Ukil and R.Zivanovic, "Practical Approaches in Application Service Provider: A Comparative Study", Second World Congress on Lateral-Computing, December 2005, Bangalore, India

59. A.Ukil and R.Zivanovic, "Application of Abrupt Change Detection in Relay Performance Monitoring", 40th International Universities Power Engineering Conference (UPEC 2005), University College Cork, Cork, Ireland, September 2005
60. R.D. Matshidza, R.Zivanovic, "Impact of High Resistance Faults on Impedance Protection Performance", 18th International Conference and Exhibition on Electricity Distribution (CIRED'2005), Turin, Italy, 6-9 June 2005
61. R.M. Bukubukwana, R.Zivanovic, "Inrush Current Transients during Energization of an Unloaded Transformer on the ESKOM Network", 18th International Conference and Exhibition on Electricity Distribution (CIRED'2005), Turin, Italy, 6-9 June 2005
62. A.Ukil, R.Zivanovic, "Abrupt Change Detection in Power System Fault Analysis using Wavelet Transform", The 6th International Conference on Power Systems Transients (IPST'2005), Montreal, Canada, June 19-23, 2005
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67. P.Keller, R.Zivanovic and C.Henze, "Support Vector-based Fault Classification on the ESKOM Transmission System", 5th Southern Africa Regional CIGRE Conference, Somerset West, South Africa, October 2005
68. T.Wegner, M.Vogelsang, S.Hesse, W.Lazenby and R.Zivanovic, "Estimation of Transmission Line Parameters by Evaluation of Fault Data Records", Southern African Universities Power Engineering Conference (SAUPEC), University of Witwatersrand, Johannesburg, 27-28 January 2005
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80. J.A.Jordaan, R.Zivanovic, "Nonparametric Time-Varying Phasor Estimation in Power Systems by making use of Non-quadratic Criterion", Proceedings of the IEEE AFRICON'02 Conference, October 2002, South Africa, pp.131-136
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84. R.Zivanovic, A.Damnjanovic and C.H. van Staden "Modelling MOV Protected Series Capacitor in Fault Level Studies", Proceedings of the 5th IASTED International Conference on Power and Energy Systems, November 19-22, 2001, Tampa, Florida, USA, pp.36-39
85. R.Zivanovic, "Nonparametric Frequency Estimation for Power System Applications", Proceedings of the IEEE Porto Power Tech'2001, 10-13 September 2001, Porto, Portugal, paper number 0-7803-7139-9/01, Session QSR1-069
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