

Publications

Book 2008

Publisher: P. Zacharias, ISET e.V. Kassel

„Electronic-Based Power Conversion for Decentralised and Renewable Energy

Sources“ : the following chapter are published under my name:

4.1 Topological development of power converter systems

4.4 Development and basic function of an inverter

10.1 Modeling of power converter systems

The book is published at the occasion of the 20th anniversary of ISET in sept. 2008

Book 2010

Editor: D.N.Gaonkar, 2010

Distributed Generation

Chapter:

E.J. Coster, J.M.A. Myrzik, W.L. Kling: Effect of distributed generation on distribution grid protection,

Published by INTECH 2010, ISBN 978-953-307-046-9

Published publications (journals in bold)

2017

T. Wohlfahrt, C. Waniek, J.M.A. Myrzik: Optimization Measures for Increased Immunity against High Frequency Disturbances and Reduced Emission in the Range of 2 kHz to 150 kHz Realized on Different LED Lamps, ICREPQ 2017, Málaga, Spanien, April 2017

Anne Grevener, Jan Meyer, Sarah Rönnberg, Math Bollen, Johanna Myrzik: Survey of Supraharmonic Emission of Household Appliances, 24th International Conference on Electricity Distribution, Glasgow, UK, 12-15 June 2017

C. Waniek, T. Wohlfahrt, J. M. A. Myrzik, J. Meyer, P. Schegner: Topology Identification of Electronic Mass-Market Equipment for Estimation of Lifetime Reduction by HF Disturbances above 2 kHz, IEEE PowerTech 2017, Manchester, UK, June 2017

J. Hinker, J.M.A. Myrzik: Portfolio Flexibility Plots: Matching thermo-electric demand and supply in planning and dispatch, IEEE Power Tech 2017, Manchester, UK, June 2017

J. Hinker, J.M.A. Myrzik: Evaluation of ensured active power provision from highly flexible thermo-electric supply portfolios integrated by district heating systems, IEEE PES General Meeting 2017, Chicago, IL, USA, July 2017

M. W. Asmah, B. K. Ahunu, R. Baisie, J. M. A. Myrzik: Strengthening the Ghanaian Power System to Accommodate Variable Renewable Energies, IEEE PowerAfrica Conference, Accra, Ghana 27 - 30 June 2017

M. W. Asmah, R. Baisie, B. K. Ahunu, J. M. A. Myrzik: Assessment of the Steady State Voltage Stability of the Ghanaian Transmission System with the Integration of Renewable Energy Sources, 12th International Conference on Power System Transients (IPST) Seoul, South Korea, 26 - 29 June 2017

D. Hidalgo-Rodríguez, J. Myrzik: Economic Model Predictive Control for Optimal Operation of a Home Microgrid with Photovoltaic-Combined Heat and Power Storage Systems, IFAC World Congress 2017, Toulouse, France, July 2017

Andreas Wirtz, Matthias Meißner, Petra Wiederkehr, Johanna Myrzik: Simulation-assisted Investigation of the Electric Power Consumption of Milling Processes and Machine Tools, CIRP ICME 2017, Neapel, Italien, July 2017

J. Hinker, C. Hemkendreis, E. Drewing, S. März, D.I. Hidalgo Rodriguez, J.M.A. Myrzik: A novel conceptual model facilitating the derivation of agent-based models for analyzing socio-technical optimality gaps in the energy domain, Elsevier Energy, Vol. 137, pp. 1219-1230, 2017

Lena Robitzky, Daniel Mayorga-Gonzalez, Chris Kittl, Christoph Strunck, Sven Christian Müller, Ulf Häger, Johanna Myrzik, Christian Rehtanz: Impact of Active Distribution Networks on Voltage Stability of Electric Power Systems, IREP 2017, Portugal, August 2017

Daniel Mayorga Gonzalez, Lena Robitzky, Ulf Häger, Christian Rehtanz, Johanna Myrzik: Dynamic Behaviour of Distribution Networks with TSO-DSO Interconnection Power Flow Control, IREP 2017, Portugal, August 2017

J. Hinker, S. Kippelt, J.M.A. Myrzik, N. Witte, A. Heinzel: Assessment of Available Thermal Capacity of District Heating Systems for Increased Medium- and Short-Term Flexibility of Multi-Modal Power Systems, IEEE ISGT Europe 2017, Turin, Italy, September 2017

T. Wohlfahrt, C. Waniek, J. M. A. Myrzik, J. Meyer, P. Schegner: Design Recommendations for Future Household Devices concerning their High Frequency Emission in the Range between 2 kHz and 150 kHz, IEEE ISGT Europe 2017, Turin, Italien, September 2017

C. Waniek, T. Wohlfahrt, J. M. A. Myrzik, J. Meyer, M. Klatt, P. Schegner: Supraharmonics: Root Causes and Interactions between Multiple Devices and the Low Voltage Grid, IEEE ISGT Europe 2017, Turin, Italien, September 2017

J. Hinker, J.M.A. Myrzik, N. Witte, A. Heinzel: Visualization techniques for the on-line monitoring and provision of available operating reserve from massive distributed co-generation in multi-modal power systems, ETG Kongress 2017, Bonn, Deutschland, November 2017

N. Witte, A. Heinzel, J. Hinker, J.M.A. Myrzik: Unexploited technical and financial potentials and limitations for municipal utilities operating district heating systems as additional short-term thermal storages, ETG Kongress 2017, Bonn, Deutschland, November 2017

D. Hidalgo-Rodríguez, S. Hoffmann, F. Adelt, J. Myrzik, J. Weyer: A socio-technical simulation framework for collaborative management in power distribution grids, ETG Kongress 2017, Bonn, Deutschland, November 2017

S. Sathananthan, P. Hoetker, D. Gamrad, D. Katterbach, J. Myrzik: Realizing digital transformation through a digital business model design process, 13th CTTE and the 10th CMI Conference, Copenhagen, Denmark, November 2017

M. Meißner, A. Wirtz, J. Myrzik: Modeling of Power Profiles of Milling Machines for the Usage in Factory Models to Optimize Energy Efficiency, IEEE IEEM 2017, Singapur

2016

Hidalgo Rodriguez, D. I.; Hinker, J.; Myrzik, J.M.A.: On the Problem Formulation of Model Predictive Control for Demand Response of a Power-to-Heat Home Microgrid, 19th Power Systems Computation Conference (PSCC), Genua, Italy, 20.-24. June, 2016

Hoffmann, S.; Adelt, F.; Hidalgo Rodriguez, D. I.; Myrzik, J.; Weyer, J.: Agent-based modelling of the governance of energy transitions, 7th International Sustainability Transitions (IST) Conference, Wuppertal, Germany, 6-9 September 2016

Hinker, J.; Hildago Rodríguez, D.; Myrzik, J.; Hemkendreis, C.: A framework for the analysis of societal and energy distribution related interactions in future energy system scenarios, 11th Conference on Sustainable Development of Energy, Water and Environment Systems (SDEWES 2016), Lissabon, Portugal, September 2016

Aldejohann, C.; Wohlfahrt, T.; Rehtanz, C.; Myrzik, J.: Current Modulated Messages Generated by PFC Circuits for Allocating Appliances with Management Systems in Smart Grid Applications, IEEE Electric Power and Energy Conference (EPEC), Ottawa, Kanada, Oktober 2016

Aldejohann, C.; Wohlfahrt, T.; Rehtanz, C.; Myrzik, J.: Verbraucheridentifikation zur Kopplung mit Steuerungssystemen VDE-Kongress 2016 "Internet der Dinge", Mannheim, November 2016

Hinker, J.; Myrzik, J.; Witte, N.; Heinzel, A.: Analysis of the interdependencies of the socio-technical parameters of energy supply in urban quarters, VDE-Kongress 2016 "Internet der Dinge", Mannheim, November 2016

Mayorga Gonzalez, D.; Robitzky, L.; Kubis, A.; Böcker, S.; Myrzik, J.; Rehtanz, C.; Wietfeld, C.: ICT-based integration of active distribution networks in the monitoring and control systems of future transmission networks, VDE-Kongress 2016 "Internet der Dinge", Mannheim, November 2016

Hinker, J.; Pohl, O.; Myrzik, J.: Impact assessment of inhabitants on the economic potential of energy efficient refurbishment by means of a novel socio-technical multi-agent simulation, 7th International Conference on Energy and Environment of Residential Buildings (ICEERB 2016), Brisbane, Australien, November 2016

Mayorga Gonzalez, D.; Robitzky, L.; Liemann, S.; Häger, U.; Rehtanz, C.; Myrzik, J.: Distribution Network Control Scheme for Power Flow Regulation at the Interconnection Point between Transmission and Distribution System, IEEE PES Innovative Smart Grid Technologies (ISGT) - Asia 2016, Melbourne, Australia, Nov./Dez. 2016

Hinker, J.; Schädel, M.; Hark, P.; Myrzik, J.: Deriving future building stocks from home owners' real option to defer investments, IEEE Innovative Smart Grid Technologies 2016 (ISGT Asia), Melbourne, Australien, November 2016

2015

Wandelt, F; Gamrad, D; Deis, W; Myrzik, J.M.A.: Herausforderungen und Lösungsansätze bei der Erbringung von Primärregelleistung durch Energiespeicher, Power and Energy Student Summit 2015 (PESS), Dortmund, Deutschland 13. - 14. Januar 2015

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Kubis, A.; Robitzky, L.; Kuech, M.; Muller, S.C.; Jablkowski, B.; Georg, H.; Dorsch, N.; Krey, S.; Langesberg, C.; Surmann, D.; Mayorga, D.; Rehtanz, C.; Hager, U.; Spinczyk, O.; Wietfeld, C.; Weihs, C.; Ligges, U.; Myrzik, J.; Gotze, J.: Validation of ICT-based protection and control applications in electric power systems, IEEE PowerTech 2015, Eindhoven, Niederlande, 29. Juni -2. Juli 2015

Wandelt, F; Gamrad, D; Deis, W; Myrzik J.M.A.: Comparison of Flywheels and Batteries in Combination with Industrial Plants for the Provision of Primary Control Reserve, IEEE PowerTech 2015, Eindhoven, Niederlande, 29. Juni -2. Juli 2015

M. Arnold, W. Friede, J. Myrzik: Comparison of current and future voltage regulation measures on German low voltage grids, IEEE PowerTech 2015, Eindhoven, Niederlande, 29. Juni -2. Juli 2015

Unger, D.; Myrzik, J.M.A.: Agent Based Coordination of Distributed Energy Storage Devices in Future Distribution Grids“,Proceedings of the IEEE PowerTech 2015, Eindhoven, The Netherlands, 29. Juni -2. Juli 2015

M. W. Asmah, B. K. Ahunu, J. M. A. Myrzik: Power System Expansion using Renewable Energy Sources in Ghana, 50th Universities Power Engineering Conference (UPEC) 2015, Stoke-on-Trent, Groß-Britanien, 01 - 04. September 2015

J. Hinker, O. Pohl, J. M. A. Myrzik: How Thermal Comfort affects the Energy-Efficiency Gap in Residential Buildings, 50th Universities Power Engineering Conference (UPEC) 2015, Stoke-on-Trent, Großbritanien, 01 - 04. Spetember 2015

D. Mayorga González, J. M. A. Myrzik: Probabilistic Determination of the Operational Flexibility of Active Distribution Networks with High Penetration of Full-Converter Interfaced Renewable Distributed Generation Units, 50th Universities Power Engineering Conference (UPEC) 2015, Stoke-on-Trent, Großbritanien, 01 - 04. Spetember 2015

T. Wohlfahrt, J. M. A. Myrzik: Synchronized Current Sensing Techniques and Implementation on dSPACE-FPGA-Board Using Delta-Sigma-Modulator, EPE 2015, 17th European Conference on Power Electronics and Applications, Geneva, Schweiz, 08. - 10. September 2015

M. W. Asmah, B. K. Ahunu, J. M. A. Myrzik: Challenges in the Ghanaian power system: the prospects of renewable energy sources, 12th IEEE AFRICON Conference, Addis-Abeba, Äthiopien, 14. - 17. September 2015

2014

F. Wandelt, D. Gamrad, W. Deis, J. Myrzik, „Novel method for classification of stationary storage systems and applications“ (Poster), Kraftwerk Batterie 2014, Münster 25. März 2014

L. Spitalny, J.M.A. Myrzik, „Using residential heating systems for load management applications in smart Cities“, IEEE PES General Meeting, Washington (D.C.), 27. - 31. Juli 2014

A.S. Föltting, J.M.A. Myrzik, T. Wiesner, L. Jendernalik, “Practical Implementation of the Coupled Norton Approach for Nonlinear Harmonic Models”, Power Systems Computation Conference, Wrocław, Poland, 18-22. August 2014

F. Moehrke, J. Myrzik, „Control Methods for Microgrids“, 49th International Universities' Power Engineering Conference, Cluj-Napoca, 2. - 5. September 2014

F. Wandelt, D. Gamrad, W. Deis, J. Myrzik, „Model-Based Development of Novel Solutions for Providing Control Power by Energy Storages in Combination with Industrial Plants“, 49th International Universities' Power Engineering Conference, ISBN: 978-1-4799-6557-1/14, Cluj-Napoca, 2. - 5. September 2014

F. Wandelt, D. Gamrad, W. Deis, J. Myrzik, „Kombination von industriellen Verbrauchsanlagen mit Batteriespeichern zur Regelleistungserbringung“, NEIS Konferenz 2014 für Nachhaltige Energieversorgung und Integration von Speichern, ISBN: 978-3-86818-043-5, Hamburg 18. September 2014

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M. Arnold, W. Friede, J. Myrzik, „Simulation of 2020 scenario of suburban low voltage grid. VDE Kongress 2014, Smart Cities – Intelligente Lösungen für das Leben in der Zukunft, Frankfurt, 20.-21. Oktober 2014

Spitalny, L; Myrzik, J.M.A; Mehlhorn, T.: „Estimation of the economic addressable market of micro-CHP and heat pumps based on the status of the residential building sector in Germany“, Applied Thermal Engineering, Volume 71, Issue 2, Pages 838-846, 2014

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L. Spitalny, J.M.A. Myrzik, T. Mehlhorn: Estimation of the Economic Adressable Market of Micro-CHP and Heat Pumps based on the Status of the Residential Building Sector in Germany, International Conference on Microgeneration and Related Technologies MICROGEN III, Neapel, Italien, 15. - 17. April 2013

L. Spitalny, D. Unger, J. Maasmann, P. Schwerdt, B. Van Reeth, A. Thiemann, J.M.A. Myrzik: Evaluation of Renewable Energy Technologies in a net Zero

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D. Unger, J.M.A. Myrzik: Agent Based Management of Energy Storage Devices within a Virtual Energy Storage, IEEE Energy Tech 2013 Cleveland, USA, 21. - 23. Mai 2013

S. Gördes, J.M.A. Myrzik, H. Preckwinkel: Development and Analysis of a Multiple Phase Bidirectional DC/DC Converter for Ripple Reduction and Inductor Optimization, 15th European Power Electronic Conference EPEC, Lille, France, Sept. 2013

L. Spitalny, D. Unger, J. Teuwsen, V. Liebenau, J.M.A. Myrzik, B. Van Reeth: Effectiveness of a Building Energy Management System for the Integration of net Zero Energy Buildings into the Grid and for Providing Tertiary Control Reserve, Powertech 2013, Grenoble, Frankreich, 16. - 20. Juni 2013

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M. Klatt, J. Meyer, P. Schegner, A.S. Koch, J.M.A. Myrzik, C. Körner, T. Darda, G. Eberl: Emission Levels above 2 kHz - Laboratory Results and Survey Measurements in Public Low Voltage Grids, 22th International Conference on Electricity Distribution (CIRED) Sweden, Stockholm, 10. - 13. Juni 2013

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L. Spitalny, M. Diekerhof, J.M.A. Myrzik: Potential und Effizienzbetrachtung beim Lastmanagement von Wärmepumpen im Sektor der privaten Haushalte, Konferenz für Nachhaltige Energieversorgung und Integration von Speichern, Hamburg, Deutschland, 12. - 13. September 2013

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Peter J.M. Heskes¹, Johanna M.A. Myrzik, and Wil. L. Kling¹ Impact of Distribution System's Non-Linear Loads with Constant Power on Grid Voltage, ETAP Journal (accepted for 2010)

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A.Kechroud, J.M.A.Myrzik, W.L.Kling "A Power System Equivalent Impedance Based Voltage Control ", IEEE PES General Meeting, July 26-30, 2009, Alberta, Canada

J. Frunt, A.Kechroud, J.M.A.Myrzik, W.L.Kling "Participation of Distributed Generation in Balance Management ", IEEE PowerTech 2009, 28 June, 2 July 2009, Bucharest, Romania.

G.M.A. Vanalme, J.M.A. Myrzik, G.J.P. Verbong, R. F.T. Aalbers, J. van Casteren, G.A. Bloemhof, M. Bongaerts, A. ten Cate, "Transition Roadmap for the energy infrastructure in the Netherlands – Development of integrating tools base don a multidisciplinary approach", 20th International Conference and Exhibition on Electricity Distribution (CIRED 2009), Prague, 8-11 June 2009.

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