

Leo Emil Sokoler - DTU Orbit (07/08/2016)

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Department of Applied Mathematics and Computer Science - PhD Student, Former

Publications:

Application of Economic MPC to Frequency Control in a Single-Area

Sokoler, L. E., Edlund, K. & Jørgensen, J. B. 2016 *Proceedings of the 54th IEEE Conference on Decision and Control (CDC 2015)*. IEEE, p. 2635-2642

Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Methods and Algorithms for Economic MPC in Power Production Planning

Sokoler, L. E., Jørgensen, J. B., Madsen, H. & Poulsen, N. K. 2016 Kgs. Lyngby: Technical University of Denmark (DTU). 249 p. (DTU Compute PHD-2015; No. 377).

Publication: Research › Ph.D. thesis – Annual report year: 2016

A Homogeneous and Self-Dual Interior-Point Linear Programming Algorithm for Economic Model Predictive Control

Sokoler, L. E., Frison, G., Skajaa, A., Halvgaard, R. F. & Jørgensen, J. B. 2015 In : *IEEE Transactions on Automatic Control*. PP, 99, 6 p.

Publication: Research - peer-review › Journal article – Annual report year: 2015

Contingency-Constrained Unit Commitment in Meshed Isolated Power Systems

Sokoler, L. E., Vinter, P., Bærentsen, R., Edlund, K. & Jørgensen, J. B. 2015 In : *IEEE Transactions on Power Systems*. PP, 99, 11 p.

Publication: Research - peer-review › Journal article – Annual report year: 2015

Control of Electricity Loads in Future Electric Energy Systems

Madsen, H., Parvizi, J., Halvgaard, R. F., Sokoler, L. E., Jørgensen, J. B., Hansen, L. H. & Hilger, K. B. 2015 *Handbook of Clean Energy Systems: Intelligent Energy Systems*. Conejo, A. J., Dahlquist, E. & Yan, J. (eds.). Wiley, Vol. 4, Ch. 24

Publication: Research - peer-review › Book chapter – Annual report year: 2015

A Dantzig-Wolfe decomposition algorithm for linear economic model predictive control of dynamically decoupled subsystems

Sokoler, L. E., Standardi, L., Edlund, K., Poulsen, N. K., Madsen, H. & Jørgensen, J. B. 2014 In : *Journal of Process Control*. 24, 8, p. 1225-1236

Publication: Research - peer-review › Journal article – Annual report year: 2014

A Decomposition Algorithm for Mean-Variance Economic Model Predictive Control of Stochastic Linear Systems

Sokoler, L. E., Dammann, B., Madsen, H. & Jørgensen, J. B. 2014 *Proceedings of the IEEE International Symposium on Intelligent Control (ISIC) 2014, Part of 2014 IEEE Multi-conference on Systems and Control*. IEEE, p. 1086-1093

Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

A Family of High-Performance Solvers for Linear Model Predictive Control

Frison, G., Sokoler, L. E. & Jørgensen, J. B. 2014 *Proceedings of the 19th IFAC World Congress 2014*. International Federation of Automatic Control, Vol. 19, p. 3074-3079 (IFAC Workshop Series; No. 1, Vol. 19).

Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

A Mean-Variance Criterion for Economic Model Predictive Control of Stochastic Linear Systems

Sokoler, L. E., Dammann, B., Madsen, H. & Jørgensen, J. B. 2014 *Proceedings of the 53rd IEEE Conference on Decision and Control*. IEEE, p. 5907 - 5914 8 p.

Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

Input-constrained model predictive control via the alternating direction method of multipliers

Sokoler, L. E., Frison, G., Andersen, M. S. & Jørgensen, J. B. 2014 *Proceedings of European Control Conference (ECC) 2014*. IEEE, p. 115-120

Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

A Dantzig-Wolfe Decomposition Algorithm for Economic MPC of Distributed Energy Systems

Sokoler, L. E., Standardi, L., Edlund, K. & Jørgensen, J. B. 2013 *Proceedings of the 18th Nordic Process Control Workshop*. 6 p.

Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

A Decomposition Algorithm for Optimal Control of Distributed Energy System

Sokoler, L. E., Edlund, K., Standardi, L. & Jørgensen, J. B. 2013 *2013 4th IEEE PES Innovative Smart Grid Technologies Europe (ISGT Europe)*. IEEE, 5 p.

Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

A Riccati Based Homogeneous and Self-Dual Interior-Point Method for Linear Economic Model Predictive Control

Sokoler, L. E., Frison, G., Edlund, K., Skajaa, A. & Jørgensen, J. B. 2013 *2013 IEEE Multi-conference on Systems and Control*. IEEE, p. 592-598

Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

A Warm-Started Homogeneous and Self-Dual Interior-Point Method for Linear Economic Model Predictive Control

Sokoler, L. E., Skajaa, A., Frison, G., Halvgaard, R. & Jørgensen, J. B. 2013 *52nd IEEE Conference on Decision and Control*. IEEE, p. 3677-3683

Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Computational Efficiency of Economic MPC for Power Systems Operation

Standardi, L., Poulsen, N. K., Jørgensen, J. B. & Sokoler, L. E. 2013 *Proceedings of the 2013 4th IEEE PES Innovative Smart Grid Technologies Europe*. IEEE, 5 p.

Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Early Termination of Dantzig-Wolfe Algorithm for Economic MPC

Standardi, L., Sokoler, L. E., Poulsen, N. K. & Jørgensen, J. B. 2013 *Proceedings of the 18th Nordic Process Control Workshop*. 6 p.

Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Computational Methods for Model Predictive Control: New Opportunities for Computational Scientists

Jørgensen, J. B., Boiroux, D., Hovgaard, T. G., Halvgaard, R., Skajaa, A., Gade-Nielsen, N. F., Standardi, L., Sokoler, L. E., Völcker, C., Capolei, A., Frison, G., Schmidt, S. & Duun-Henriksen, A. K. 2012

Publication: Research › Sound/Visual production (digital) – Annual report year: 2012

Real-Time Optimization for Economic Model Predictive Control

Sokoler, L. E., Edlund, K., Frison, G., Skajaa, A. & Jørgensen, J. B. 2012 *The 10th European Workshop on Advanced Control and Diagnosis (ACD 2012)*. Technical University of Denmark, 8 p.

Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

A Primal-Dual Interior Point-Linear Programming Algorithm for MPC

Edlund, K., Sokoler, L. E. & Jørgensen, J. B. 2009 *Proceedings of the 48th IEEE Conference on Decision and Control, 2009 held jointly with the 2009 28th Chinese Control Conference. CDC/CCC 2009*. IEEE, p. 351-356

Publication: Research - peer-review › Article in proceedings – Annual report year: 2009

Projects:

Stochastic Model Predictive Control with Applications in Smart Energy Systems

Sokoler, L. E., Jørgensen, J. B., Madsen, H., Poulsen, N. K., Knudsen, J. K. H., Bemporad, A. & Zavala, V. 01/07/2012 → 31/03/2016

Project: PhD