

List of Publications*

Bart De Schutter

June 20, 2010

Contents

1	Books	1
2	International journal papers	1
3	National journal papers	5
4	Contributions to books	6
5	International conference papers	7
6	National conference papers	21
7	PhD thesis	23
8	Project reports	23
9	Abstracts	24
10	Lecture notes	27
11	Published reviews	27
12	Technical reports	30
13	Other publications	32

1 Books

- [B1] L. Buşoniu, R. Babuška, B. De Schutter, and D. Ernst, *Reinforcement Learning and Dynamic Programming Using Function Approximators*. Boca Raton, Florida: CRC Press, ISBN 978-1-4398-2108-4, 270 pp., 2010.

2 International journal papers (published or accepted)

- [J1] Zs. Lendek, J. Lauber, T.M. Guerra, R. Babuška, and B. De Schutter, “Adaptive observers for TS fuzzy systems with unknown polynomial inputs,” *Fuzzy Sets and Systems*, vol. 161, no. 15, pp. 2043–2065, Aug. 2010.
- [J2] M. Houwing, R.R. Negenborn, and B. De Schutter, “Demand response with micro-CHP systems,” Tech. rep. 10-040, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 13 pp., July 2010. Accepted for *Proceedings of the IEEE*.
- [J3] L. Buşoniu, D. Ernst, B. De Schutter, and R. Babuška, “Approximate dynamic programming with a fuzzy parameterization,” *Automatica*, vol. 46, no. 5, pp. 804–814, May 2010.
- [J4] L. Buşoniu, D. Ernst, B. De Schutter, and R. Babuška, “Cross-entropy optimization of control policies with adaptive basis functions,” Tech. rep. 10-004, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 30 pp., May 2010. Accepted for publication in *IEEE Systems, Man and Cybernetics – Part B*.

*See <http://pub.deschutter.info/> for the most up-to-date list of my publications.

- [J5] W.P.M.H. Heemels, B. De Schutter, J. Lunze, and M. Lazar, “Stability analysis and controller synthesis for hybrid dynamical systems,” Tech. rep. 10-030, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 25 pp., May 2010. Accepted for publication in *Philosophical Transactions of the Royal Society A*.
- [J6] A.N. Tarău, B. De Schutter, and H. Hellendoorn, “Model-based control for route choice in automated baggage handling systems,” Tech. rep. 09-048, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 10 pp., Nov. 2009. Accepted for publication in *IEEE Transactions on Systems, Man, and Cybernetics, Part C: Applications and Reviews*.
- [J7] O.J. Gietelink, J. Ploeg, B. De Schutter, and M. Verhaegen, “Development of a driver information and warning system with vehicle hardware-in-the-loop simulations,” *Mechatronics*, Special Issue on Hardware-in-the-Loop Simulation, vol. 19, no. 7, pp. 1091–1104, Oct. 2009.
- [J8] L.D. Baskar, B. De Schutter, Z. Papp, and J. Hellendoorn, “Traffic control and intelligent vehicle highway systems: A survey,” Tech. rep. 09-043, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 37 pp., Aug. 2009. Accepted for publication in *IET Intelligent Transport Systems*.
- [J9] R.R. Negenborn, S. Leirens, B. De Schutter, and J. Hellendoorn, “Supervisory nonlinear MPC for emergency voltage control using pattern search,” *Control Engineering Practice*, vol. 7, no. 7, pp. 841–848, July 2009.
- [J10] Zs. Lendek, R. Babuška, and B. De Schutter, “Stability of cascaded fuzzy systems and observers,” *IEEE Transactions on Fuzzy Systems*, vol. 17, no. 3, pp. 641–653, June 2009.
- [J11] R.R. Negenborn, P.-J. van Overloop, T. Keviczky, and B. De Schutter, “Distributed model predictive control of irrigation canals,” *Networks and Heterogeneous Media*, vol. 4, no. 2, pp. 359–380, June 2009.
- [J12] A.N. Tarău, B. De Schutter, and J. Hellendoorn, “Model-based control for throughput optimization of automated flats sorting machines,” *Control Engineering Practice*, vol. 17, no. 6, pp. 733–739, June 2009.
- [J13] A.N. Tarău, B. De Schutter, and J. Hellendoorn, “Predictive route choice control for automated baggage handling systems using mixed integer linear programming,” Tech. rep. 10-020, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 23 pp., June 2009. Conditionally accepted for *Transportation Research Part C*.
- [J14] M. Gerard, B. De Schutter, and M. Verhaegen, “A hybrid steepest descent method for constrained convex optimization,” *Automatica*, vol. 45, no. 2, pp. 525–531, Feb. 2009.
- [J15] I. Necoara, B. De Schutter, T.J.J. van den Boom, and H. Hellendoorn, “Robust control of constrained max-plus-linear systems,” *International Journal of Robust and Nonlinear Control*, vol. 19, no. 2, pp. 218–242, Jan. 2009.
- [J16] Z. Lukszo, M.P.C. Weijnen, R.R. Negenborn, and B. De Schutter, “Tackling challenges in infrastructure operation and control: Cross-sectoral learning for process and infrastructure engineers,” *International Journal of Critical Infrastructures*, vol. 5, no. 4, pp. 308–322, 2009.
- [J17] A.N. Tarău, B. De Schutter, and J. Hellendoorn, “Route choice control of automated baggage handling systems,” *Transportation Research Record*, no. 2106, pp. 76–82, 2009.
- [J18] J.M. van Ast, R. Babuška, and B. De Schutter, “Novel ant colony optimization approach to optimal control,” *International Journal of Intelligent Computing and Cybernetics*, vol. 2, no. 3, pp. 414–434, 2009.
- [J19] I. Necoara, B. De Schutter, T. van den Boom, and H. Hellendoorn, “Model predictive control for uncertain max-min-plus-scaling systems,” *International Journal of Control*, vol. 81, no. 5, pp. 701–713, May 2008.
- [J20] Zs. Lendek, R. Babuška, and B. De Schutter, “Distributed Kalman filtering for cascaded systems,” *Engineering Applications of Artificial Intelligence*, vol. 21, no. 3, pp. 457–469, Apr. 2008.

- [J21] I. Necoara, T.J.J. van den Boom, B. De Schutter, and H. Hellendoorn, “Stabilization of max-plus-linear systems using model predictive control: The unconstrained case,” *Automatica*, vol. 44, no. 4, pp. 971–981, Apr. 2008.
- [J22] R.R. Negenborn, B. De Schutter, and J. Hellendoorn, “Multi-agent model predictive control for transportation networks: Serial versus parallel schemes,” *Engineering Applications of Artificial Intelligence*, vol. 21, no. 3, pp. 353–366, Apr. 2008.
- [J23] L. Buşoniu, R. Babuška, and B. De Schutter, “A comprehensive survey of multi-agent reinforcement learning¹,” *IEEE Transactions on Systems, Man, and Cybernetics, Part C: Applications and Reviews*, vol. 38, no. 2, pp. 156–172, Mar. 2008.
- [J24] D. Corona and B. De Schutter, “Adaptive cruise control for a SMART car: A comparison benchmark for MPC-PWA control methods,” *IEEE Transactions on Control Systems Technology*, vol. 16, no. 2, pp. 365–372, Mar. 2008.
- [J25] I. Necoara, B. De Schutter, T.J.J. van den Boom, and H. Hellendoorn, “Stable model predictive control for constrained max-plus-linear systems,” *Discrete Event Dynamic Systems: Theory and Applications*, vol. 17, no. 3, pp. 329–354, Sept. 2007.
- [J26] M. van den Berg, A. Hegyi, B. De Schutter, and J. Hellendoorn, “Integrated traffic control for mixed urban and freeway networks: A model predictive control approach,” *European Journal of Transport and Infrastructure Research*, vol. 7, no. 3, pp. 223–250, Sept. 2007.
- [J27] I. Necoara, E.C. Kerrigan, B. De Schutter, and T.J.J. van den Boom, “Finite-horizon min-max control of max-plus-linear systems,” *IEEE Transactions on Automatic Control*, vol. 52, no. 6, pp. 1088–1093, June 2007.
- [J28] T.J.J. van den Boom, B. Heidergott, and B. De Schutter, “Complexity reduction in MPC for stochastic max-plus-linear discrete event systems by variability expansion,” *Automatica*, vol. 43, no. 6, pp. 1058–1063, June 2007.
- [J29] T.J.J. van den Boom and B. De Schutter, “Modelling and control of discrete event systems using switching max-plus-linear systems,” *Control Engineering Practice*, vol. 14, no. 10, pp. 1199–1211, Oct. 2006.
- [J30] T. Bellemans, B. De Schutter, and B. De Moor, “Model predictive control for ramp metering of motorway traffic: A case study,” *Control Engineering Practice*, vol. 14, no. 7, pp. 757–767, July 2006.
- [J31] O. Gietelink, J. Ploeg, B. De Schutter, and M. Verhaegen, “Development of advanced driver assistance systems with vehicle hardware-in-the-loop simulations,” *Vehicle System Dynamics*, vol. 44, no. 7, pp. 569–590, July 2006.
- [J32] G. Schullerus, V. Krebs, B. De Schutter, and T. van den Boom, “Input signal design for identification of max-plus-linear systems,” *Automatica*, vol. 42, no. 6, pp. 937–943, June 2006.
- [J33] A. Hegyi, B. De Schutter, and H. Hellendoorn, “Model predictive control for optimal coordination of ramp metering and variable speed limits,” *Transportation Research Part C*, vol. 13, no. 3, pp. 185–209, June 2005.
- [J34] A. Hegyi, B. De Schutter, and J. Hellendoorn, “Optimal coordination of variable speed limits to suppress shock waves,” *IEEE Transactions on Intelligent Transportation Systems*, vol. 6, no. 1, pp. 102–112, Mar. 2005.
- [J35] O.J. Gietelink, B. De Schutter, and M. Verhaegen, “Probabilistic approach for validation of advanced driver assistance systems,” *Transportation Research Record*, no. 1910, pp. 20–28, 2005.
- [J36] A. Hegyi, B. De Schutter, and J. Hellendoorn, “Optimal control of freeway networks with bottlenecks and static demand,” *Transportation Research Record*, no. 1925, pp. 29–37, 2005.
- [J37] R.T. van Katwijk, P. van Koningsbruggen, B. De Schutter, and J. Hellendoorn, “Test bed for multi-agent control systems in road traffic management,” *Transportation Research Record*, no. 1910, pp. 108–115, 2005.

¹For this paper we have been awarded the 2009 Andrew P. Sage Best Transactions Paper Award.

- [J38] B. De Schutter and T.J.J. van den Boom, “MPC for continuous piecewise-affine systems,” *Systems & Control Letters*, vol. 52, no. 3–4, pp. 179–192, July 2004.
- [J39] S. Kanev, C. Scherer, M. Verhaegen, and B. De Schutter, “Robust output-feedback controller design via local BMI optimization,” *Automatica*, vol. 40, no. 7, pp. 1115–1127, July 2004.
- [J40] T.J.J. van den Boom, B. De Schutter, G. Schullerus, and V. Krebs, “Adaptive model predictive control for max-plus-linear discrete event input-output systems,” *IEE Proceedings – Control Theory and Applications*, vol. 151, no. 3, pp. 339–346, May 2004.
- [J41] T.J.J. van den Boom and B. De Schutter, “Model predictive control for perturbed max-plus-linear systems: A stochastic approach,” *International Journal of Control*, vol. 77, no. 3, pp. 302–309, Feb. 2004.
- [J42] I. Necoara, B. De Schutter, and J. Hellendoorn, “Structural properties of Helbing’s traffic flow model,” *Transportation Research Record*, no. 1883, pp. 21–30, 2004.
- [J43] S. Kanev, B. De Schutter, and M. Verhaegen, “An ellipsoid algorithm for probabilistic robust controller design,” *Systems & Control Letters*, vol. 49, no. 5, pp. 365–375, Aug. 2003.
- [J44] B. De Schutter and T.J.J. van den Boom, “MPC for discrete-event systems with soft and hard synchronisation constraints,” *International Journal of Control*, vol. 76, no. 1, pp. 82–94, Jan. 2003.
- [J45] A. Hegyi, B. De Schutter, and J. Hellendoorn, “Optimal coordination of variable speed limits to suppress shock waves,” *Transportation Research Record*, no. 1852, pp. 167–174, 2003.
- [J46] S.P. Hoogendoorn, B. De Schutter, and H. Schuurman, “Decision support in dynamic traffic management. Real-time scenario evaluation,” *European Journal of Transport and Infrastructure Research*, vol. 3, no. 1, pp. 21–38, 2003.
- [J47] B. De Schutter, W.P.M.H. Heemels, and A. Bemporad, “On the equivalence of linear complementarity problems,” *Operations Research Letters*, vol. 30, no. 4, pp. 211–222, Aug. 2002.
- [J48] B. De Schutter, “Optimizing acyclic traffic signal switching sequences through an extended linear complementarity problem formulation,” *European Journal of Operational Research*, vol. 139, no. 2, pp. 400–415, June 2002.
- [J49] A. Bemporad, W.P.M.H. Heemels, and B. De Schutter, “On hybrid systems and closed-loop MPC systems,” *IEEE Transactions on Automatic Control*, vol. 47, no. 5, pp. 863–869, May 2002.
- [J50] T.J.J. van den Boom and B. De Schutter, “Model predictive control for perturbed max-plus-linear systems,” *Systems & Control Letters*, vol. 45, no. 1, pp. 21–33, Jan. 2002.
- [J51] B. De Schutter and B. De Moor, “The QR decomposition and the singular value decomposition in the symmetrized max-plus algebra revisited,” *SIAM Review*, vol. 44, no. 3, pp. 417–454, 2002.
- [J52] B. De Schutter, T. van den Boom, and A. Hegyi, “A model predictive control approach for recovery from delays in railway systems,” *Transportation Research Record*, no. 1793, pp. 15–20, 2002.
- [J53] T. van den Boom and B. De Schutter, “Properties of MPC for max-plus-linear systems,” *European Journal of Control*, vol. 8, no. 5, pp. 453–462, 2002.
- [J54] B. De Schutter and T. van den Boom, “Model predictive control for max-plus-linear discrete event systems,” *Automatica*, vol. 37, no. 7, pp. 1049–1056, July 2001.
- [J55] W.P.M.H. Heemels, B. De Schutter, and A. Bemporad, “Equivalence of hybrid dynamical models,” *Automatica*, vol. 37, no. 7, pp. 1085–1091, July 2001.
- [J56] B. De Schutter, “Minimal state-space realization in linear system theory: An overview,” *Journal of Computational and Applied Mathematics*, Special Issue on Numerical Analysis in the 20th Century – Vol. I: Approximation Theory, vol. 121, no. 1–2, pp. 331–354, Sept. 2000.
- [J57] B. De Schutter, “On the ultimate behavior of the sequence of consecutive powers of a matrix in the max-plus algebra,” *Linear Algebra and Its Applications*, vol. 307, no. 1–3, pp. 103–117, Mar. 2000.
- [J58] B. De Schutter, “Optimal control of a class of linear hybrid systems with saturation,” *SIAM Journal on Control and Optimization*, vol. 39, no. 3, pp. 835–851, 2000.
- [J59] B. De Schutter and B. De Moor, “On the sequence of consecutive powers of a matrix in a Boolean algebra,” *SIAM Journal on Matrix Analysis and Applications*, vol. 21, no. 1, pp. 328–354, 1999.

- [J60] B. De Schutter, V. Blondel, R. de Vries, and B. De Moor, “On the boolean minimal realization problem in the max-plus algebra,” *Systems & Control Letters*, vol. 35, no. 2, pp. 69–78, Sept. 1998.
- [J61] B. De Schutter and B. De Moor, “The Linear Dynamic Complementarity Problem is a special case of the Extended Linear Complementarity Problem,” *Systems & Control Letters*, vol. 34, no. 1–2, pp. 63–75, May 1998.
- [J62] B. De Schutter and B. De Moor, “The QR decomposition and the singular value decomposition in the symmetrized max-plus algebra,” *SIAM Journal on Matrix Analysis and Applications*, vol. 19, no. 2, pp. 378–406, Apr. 1998.
- [J63] B. De Schutter and B. De Moor, “Optimal traffic light control for a single intersection,” *European Journal of Control*, vol. 4, no. 3, pp. 260–276, 1998.
- [J64] B. De Schutter and B. De Moor, “A note on the characteristic equation in the max-plus algebra,” *Linear Algebra and Its Applications*, vol. 261, no. 1–3, pp. 237–250, Aug. 1997.
- [J65] B. De Schutter and B. De Moor, “The singular value decomposition in the extended max algebra,” *Linear Algebra and Its Applications*, vol. 250, pp. 143–176, Jan. 1997.
- [J66] B. De Schutter and B. De Moor, “A method to find all solutions of a system of multivariate polynomial equalities and inequalities in the max algebra,” *Discrete Event Dynamic Systems: Theory and Applications*, vol. 6, no. 2, pp. 115–138, Mar. 1996.
- [J67] B. De Schutter and B. De Moor, “The extended linear complementarity problem,” *Mathematical Programming*, vol. 71, no. 3, pp. 289–325, Dec. 1995.
- [J68] B. De Schutter and B. De Moor, “Minimal realization in the max algebra is an extended linear complementarity problem,” *Systems & Control Letters*, vol. 25, no. 2, pp. 103–111, May 1995.

3 National journal papers (published or accepted)

- [N1] H. Hellendoorn, S.K. Zegeye, B. De Schutter, and E. Breunese, “Schoon en vlot snelwegverkeer,” *Verkeerskunde*, no. 7, p. 47, Nov. 2009. Summary. In Dutch. The full article can be found at <http://www.verkeerskunde.nl/milieuvriendelijkverkeersmanagement>.
- [N2] D. Doan, T. Keviczky, I. Necoara, M. Diehl, and B. De Schutter, “A distributed version of Han’s method for DMPC using local communications only,” *Journal of Control Engineering and Applied Informatics*, Special Issue on Distributed Control in Networked Systems, vol. 11, no. 3, pp. 6–15, 2009.
- [N3] A.N. Tarău, B. De Schutter, and J. Hellendoorn, “Centralized, decentralized, and distributed model predictive control for route choice in automated baggage handling systems,” *Journal of Control Engineering and Applied Informatics*, Special Issue on Distributed Control in Networked Systems, vol. 11, no. 3, pp. 24–31, 2009.
- [N4] H. Taale, S. Hoogendoorn, M. van den Berg, and B. De Schutter, “Anticiperende netwerkregelingen,” *NM Magazine*, vol. 1, no. 4, pp. 22–27, Dec. 2006. In Dutch.
- [N5] A. Hegyi, B. De Schutter, and H. Hellendoorn, “DVM nog onvoldoende benut,” *Verkeerskunde*, Special Issue on Dynamic Traffic Management, vol. 56, no. 3, pp. 40–45, Apr. 2005. In Dutch.
- [N6] A. Karimi, A. Hegyi, B. De Schutter, J. Hellendoorn, and F. Middelham, “Modelgebaseerde voorspellende regeling voor geïntegreerde optimale routegeleiding en toeritdosering,” *Tijdschrift Vervoerswetenschap*, vol. 40, no. 2, pp. 8–14, July 2004. In Dutch.
- [N7] T. Bellemans, B. De Schutter, and B. De Moor, “Models for traffic control,” *Journal A*, vol. 43, no. 3–4, pp. 13–22, 2002.
- [N8] A. Hegyi, B. De Schutter, J. Hellendoorn, S.P. Hoogendoorn, and C. Tampère, “Kiezen voor golven, stromen of beweging,” *Verkeerskunde*, vol. 52, no. 4, pp. 32–36, 2001. In Dutch.
- [N9] R.K. Boel, B. De Schutter, G. Nijssse, J.M. Schumacher, and J.H. van Schuppen, “Approaches to modelling, analysis, and control of hybrid systems,” *Journal A*, vol. 40, no. 4, pp. 16–27, Dec. 1999.

- [N10] B. De Schutter, T. Bellemans, S. Logghe, J. Stada, B. De Moor, and B. Immers, “Advanced traffic control on highways,” *Journal A*, vol. 40, no. 4, pp. 42–51, Dec. 1999.
- [N11] B. De Moor, P. De Gersem, B. De Schutter, and W. Favoreel, “DAISY: A database for identification of systems,” *Journal A*, vol. 38, no. 3, pp. 4–5, Sept. 1997.
- [N12] L. Ben-Naoum, R. Boel, L. Bongaerts, B. De Schutter, Y. Peng, P. Valckenaers, J. Vandewalle, and V. Wertz, “Methodologies for discrete event dynamic systems: A survey,” *Journal A*, vol. 36, no. 4, pp. 3–14, Dec. 1995.

4 Contributions to books (published or accepted)

- [K1] M. Arnold, R.R. Negenborn, G. Andersson, and B. De Schutter, “Distributed predictive control for energy hub coordination in coupled electricity and gas networks,” Chapter 10 in *Intelligent Infrastructures* (R.R. Negenborn, Z. Lukszo, and H. Hellendoorn, eds.), vol. 42 of *Intelligent Systems, Control and Automation: Science and Engineering*, Dordrecht, The Netherlands: Springer, ISBN 978-90-481-3598-1, pp. 235–273, 2010.
- [K2] L. Buşoniu, R. Babuška, and B. De Schutter, “Multi-agent reinforcement learning: An overview,” in *Innovations in Multi-Agent Systems and Applications* (D. Srinivasan and L. Jain, eds.), Springer, 37 pp., 2010. To appear.
- [K3] L. Buşoniu, B. De Schutter, and R. Babuška, “Approximate dynamic programming and reinforcement learning,” in *Interactive Collaborative Information Systems* (R. Babuška and F.C.A. Groen, eds.), vol. 281 of *Studies in Computational Intelligence*, Berlin, Germany: Springer, ISBN 978-3-642-11687-2, pp. 3–44, 2010.
- [K4] B. De Schutter, H. Hellendoorn, A. Hegyi, M. van den Berg, and S.K. Zegeye, “Model-based control of intelligent traffic networks,” Chapter 11 in *Intelligent Infrastructures* (R.R. Negenborn, Z. Lukszo, and H. Hellendoorn, eds.), vol. 42 of *Intelligent Systems, Control and Automation: Science and Engineering*, Dordrecht, The Netherlands: Springer, ISBN 978-90-481-3598-1, pp. 277–310, 2010.
- [K5] J.M. van Ast, R. Babuška, and B. De Schutter, “Ant colony learning algorithm for optimal control,” in *Interactive Collaborative Information Systems* (R. Babuška and F.C.A. Groen, eds.), vol. 281 of *Studies in Computational Intelligence*, Berlin, Germany: Springer, ISBN 978-3-642-11687-2, pp. 155–182, 2010.
- [K6] P.-J. van Overloop, R.R. Negenborn, B. De Schutter, and N.C. van de Giesen, “Predictive control for national water flow optimization in The Netherlands,” Chapter 17 in *Intelligent Infrastructures* (R.R. Negenborn, Z. Lukszo, and H. Hellendoorn, eds.), vol. 42 of *Intelligent Systems, Control and Automation: Science and Engineering*, Dordrecht, The Netherlands: Springer, ISBN 978-90-481-3598-1, pp. 439–461, 2010.
- [K7] R.R. Negenborn, G. Hug-Glanzmann, B. De Schutter, and G. Andersson, “A novel coordination strategy for multi-agent control using overlapping subnetworks with application to power systems,” Tech. rep. 09-021, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, June 2009. To appear in *Efficient Modeling and Control of Large-Scale Systems* (J. Mohammadpour and K. Grigoriadis, eds.), Springer, Norwell, Massachusetts, 2010.
- [K8] A. Bemporad, M.K. Çamlıbel, W.P.M.H. Heemels, A.J. van der Schaft, J.M. Schumacher, and B. De Schutter, “Further switched systems,” Chapter 5 in *Handbook of Hybrid Systems Control – Theory, Tools, Applications* (J. Lunze and F. Lamnabhi-Lagarigue, eds.), Cambridge, UK: Cambridge University Press, ISBN 978-0-521-76505-3, pp. 139–192, 2009.
- [K9] W.P.M.H. Heemels, D. Lehmann, J. Lunze, and B. De Schutter, “Introduction to hybrid systems,” Chapter 1 in *Handbook of Hybrid Systems Control – Theory, Tools, Applications* (J. Lunze and F. Lamnabhi-Lagarigue, eds.), Cambridge, UK: Cambridge University Press, ISBN 978-0-521-76505-3, pp. 3–30, 2009.
- [K10] A. Hegyi, T. Bellemans, and B. De Schutter, “Freeway traffic management and control,” in *Encyclopedia of Complexity and Systems Science* (R.A. Meyers, ed.), New York, New York: Springer, ISBN 978-0-387-30440-3, pp. 3943–3964, 2009.

- [K11] B. De Schutter, W.P.M.H. Heemels, J. Lunze, and C. Prieur, “Survey of modeling, analysis, and control of hybrid systems,” Chapter 2 in *Handbook of Hybrid Systems Control – Theory, Tools, Applications* (J. Lunze and F. Lamnabhi-Lagarrigue, eds.), Cambridge, UK: Cambridge University Press, ISBN 978-0-521-76505-3, pp. 31–55, 2009.
- [K12] L. Buşoniu, D. Ernst, B. De Schutter, and R. Babuška, “Continuous-state reinforcement learning with fuzzy approximation,” in *Adaptive Agents and Multi-Agent Systems III. Adaptation and Multi-Agent Learning* (K. Tuyls, A. Nowé, Z. Guessoum, and D. Kudenko, eds.), vol. 4865 of *Lecture Notes in Computer Science*, Berlin, Germany: Springer, ISBN 978-3-540-77947-6, pp. 27–43, 2008.
- [K13] B. De Schutter, “The extended linear complementarity problem and its applications in analysis and control of discrete-event systems,” in *Pareto Optimality, Game Theory and Equilibria* (A. Chinchuluun, P.M. Pardalos, A. Migdalas, and L. Pitsoulis, eds.), vol. 17 of *Springer Optimization and Its Applications*, New York, New York: Springer, ISBN 978-0-387-77246-2, pp. 541–570, 2008.
- [K14] G. Jiroveanu, B. De Schutter, and R.K. Boel, “The on-line diagnosis of time Petri nets based on partial orders,” Chapter 21 in *Taming Heterogeneity and Complexity of Embedded Control* (F. Lamnabhi-Lagarrigue, S. Laghrouche, A. Loria, and E. Panteley, eds.), London, UK: ISTE, ISBN 978-1-905209-65-1, pp. 363–392, Jan. 2007.
- [K15] R.T. van Katwijk, P. van Koningsbruggen, B. De Schutter, and J. Hellendoorn, “A test bed for multi-agent control systems in road traffic management,” in *Applications of Agent Technology in Traffic and Transportation* (F. Klügl, A. Bazzan, and S. Ossowski, eds.), *Whitestein Series in Software Agent Technologies*, Basel, Switzerland: Birkhäuser Verlag, ISBN 3-7643-7258-3, pp. 113–131, 2005.
- [K16] G.J. Olsder and B. De Schutter, “The minimal realization problem in the max-plus algebra,” Chapter 32 in *Open Problems in Mathematical Systems and Control Theory* (V.D. Blondel, E.D. Sontag, M. Vidyasagar, and J.C. Willems, eds.), London, UK: Springer-Verlag, ISBN 1-85233-044-9, pp. 157–162, 1999.
- [K17] B. De Schutter and B. De Moor, “The extended linear complementarity problem and its applications in the max-plus algebra,” in *Complementarity and Variational Problems: State of the Art* (M.C. Ferris and J.S. Pang, eds.), Philadelphia, Pennsylvania: SIAM, ISBN 0-89871-391-9, pp. 22–39, 1997.

5 International conference papers (published or accepted)

- [C1] G. Bajracharya, T. Koltunowicz, R.R. Negenborn, D. Djairam, B. De Schutter, and J.J. Smit, “Optimization of transformer loading based on hot-spot temperature using a predictive health model,” Tech. rep. 10-037, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 4 pp., June 2010. Accepted for the *International Conference on Condition Monitoring and Diagnosis 2010 (CMD 2010)*, Tokyo, Japan, Sept. 2010.
- [C2] S. Farahani, T. van den Boom, H. van der Weide, and B. De Schutter, “An approximation approach for model predictive control of stochastic max-plus linear systems,” Tech. rep. 10-039, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 6 pp., June 2010. Accepted for the *10th International Workshop on Discrete Event Systems (WODES 2010)*, Berlin, Germany, Aug.–Sept. 2010.
- [C3] G.A.D. Lopes, T.J.J. van den Boom, B. De Schutter, and R. Babuška, “Modeling and control of legged locomotion via switching max-plus systems,” Tech. rep. 10-038, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 6 pp., June 2010. Accepted for the *10th International Workshop on Discrete Event Systems (WODES 2010)*, Berlin, Germany, Aug.–Sept. 2010.
- [C4] K. Staňková and B. De Schutter, “First steps towards finding a solution of a dynamic investor-bank game,” Tech. rep. 10-036, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 6 pp., June 2010. Accepted for the *19th IEEE International Conference on Control Applications (CCA 2010)*, Yokohama, Japan, Sept. 2010.

- [C5] A. Tarău, B. De Schutter, and H. Hellendoorn, “Predictive control for baggage handling systems using mixed integer linear programming,” Tech. rep. 10-041, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 6 pp., June 2010. Accepted for the *5th International Conference on Management and Control of Production Logistics (MCPL 2010)*, Coimbra, Portugal, Sept. 2010.
- [C6] P.-J. van Overloop, R.R. Negenborn, S. Weijs, W. Malda, M. Bruggers, and B. De Schutter, “Linking water and energy objectives in lowland areas through the application of model predictive control,” Tech. rep. 10-031, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 5 pp., May 2010. Accepted for the *19th IEEE International Conference on Control Applications (CCA 2010)*, Yokohama, Japan, Sept. 2010.
- [C7] R.R. Negenborn, P.-J. van Overloop, and B. De Schutter, “Coordination of local controllers in large-scale water systems,” Tech. rep. 10-027, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 8 pp., Apr. 2010. Accepted for the *9th International Conference on Hydroinformatics (HIC 2010)*, Tianjin, China, Sept. 2010.
- [C8] A.N. Tarău, B. De Schutter, and J. Hellendoorn, “DCV route control in baggage handling systems using a hierarchical control architecture and mixed integer linear programming,” *Proceedings of the 3rd International Conference on Information Systems, Logistics and Supply Chain (ILS 2010)*, Casablanca, Morocco, 12 pp., Apr. 2010.
- [C9] Y. Li and B. De Schutter, “Offtake feedforward compensator design for an irrigation channel with distributed control,” Tech. rep. 10-017, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 6 pp., Mar. 2010. Accepted for the *2010 American Control Conference*, Baltimore, Maryland, June 30–July 2, 2010.
- [C10] J. van Ast, R. Babuška, and B. De Schutter, “Generalized pheromone update for ant colony learning in continuous state spaces,” Tech. rep. 10-019, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 6 pp., Mar. 2010. Accepted for the *2010 IEEE Congress on Evolutionary Computation*, Barcelona, Spain, July 2010.
- [C11] M.D. Doan, T. Keviczky, and B. De Schutter, “An improved distributed version of Han’s method for DMPC of canal systems,” Tech. rep. 10-013, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 6 pp., Feb. 2010. Accepted for the *12th IFAC Symposium on Large Scale Systems: Theory and Applications*, Villeneuve d’Ascq, France, July 2010.
- [C12] S. Leirens, J.M. Giraldo, R.R. Negenborn, and B. De Schutter, “A pattern search method for improving the operation of sewer systems,” Tech. rep. 10-014, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 6 pp., Feb. 2010. Accepted for the *12th IFAC Symposium on Large Scale Systems: Theory and Applications*, Villeneuve d’Ascq, France, July 2010.
- [C13] Y. Li, J. Alende, M. Cantoni, and B. De Schutter, “Decomposition of a fixed-profile load scheduling method for large-scale irrigation channels,” Tech. rep. 10-033, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 6 pp., Feb. 2010. Accepted for the *19th IEEE International Conference on Control Applications (CCA 2010)*, Yokohama, Japan, Sept. 2010.
- [C14] Y. Li and B. De Schutter, “Performance analysis of irrigation channels with distributed control,” Tech. rep. 10-032, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 6 pp., Feb. 2010. Accepted for the *19th IEEE International Conference on Control Applications (CCA 2010)*, Yokohama, Japan, Sept. 2010.
- [C15] L. Buşoniu, D. Ernst, B. De Schutter, and R. Babuška, “Online least-squares policy iteration for reinforcement learning control,” Tech. rep. 10-009, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 6 pp., Jan. 2010. Accepted for the *2010 American Control Conference*, Baltimore, Maryland, June 30–July 2, 2010.
- [C16] S. Leirens, C. Zamora, R.R. Negenborn, and B. De Schutter, “Coordination in urban water supply networks using distributed model predictive control,” Tech. rep. 10-005, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 6 pp., Jan. 2010. Accepted for the *2010 American Control Conference*, Baltimore, Maryland, June 30–July 2, 2010.

- [C17] Zs. Lendek, R. Babuška, and B. De Schutter, “Fuzzy models and observers for freeway traffic state tracking,” Tech. rep. 10-008, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 6 pp., Jan. 2010. Accepted for the *2010 American Control Conference*, Baltimore, Maryland, June 30–July 2, 2010.
- [C18] S. Lin, B. De Schutter, Y. Xi, and H. Hellendoorn, “An efficient model-based method for coordinated control of urban traffic networks,” Tech. rep. 10-011, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 6 pp., Jan. 2010. Accepted for the *2010 IEEE International Conference on Networking, Sensing and Control*, Chicago, Illinois, Apr. 2010.
- [C19] S. Lin, B. De Schutter, Y. Xi, and H. Hellendoorn, “Model predictive control for urban traffic networks via MILP,” Tech. rep. 10-007, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 6 pp., Jan. 2010. Accepted for the *2010 American Control Conference*, Baltimore, Maryland, June 30–July 2, 2010.
- [C20] S.K. Zegeye, B. De Schutter, and J. Hellendoorn, “Model predictive traffic control to reduce vehicular emissions – An LPV-based approach,” Tech. rep. 10-006, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 6 pp., Jan. 2010. Accepted for the *2010 American Control Conference*, Baltimore, Maryland, June 30–July 2, 2010.
- [C21] S.K. Zegeye, B. De Schutter, J. Hellendoorn, and E.A. Breunese, “Integrated macroscopic traffic flow and emission model based on METANET and VT-micro,” in *Models and Technologies for Intelligent Transportation Systems* (Proceedings of the International Conference on Models and Technologies for Intelligent Transportation Systems, Rome, Italy, June 2009) (G. Fusco, ed.), Rome, Italy: Aracne Editrice, ISBN 978-88-548-3025-7, pp. 86–89, 2010.
- [C22] G.A.D. Lopes, R. Babuška, B. De Schutter, and A.J.J. van den Boom, “Switching max-plus models for legged locomotion,” *Proceedings of the 2009 IEEE International Conference on Robotics and Biomimetics (ROBIO 2009)*, Guilin, China, pp. 221–226, Dec. 2009.
- [C23] T.J.J. van den Boom and B. De Schutter, “MPC for max-plus-linear systems with an output cost criterion: Steady-state behavior and guaranteed stability,” *Proceedings of the Joint 48th IEEE Conference on Decision and Control and 28th Chinese Control Conference*, Shanghai, China, pp. 2286–2291, Dec. 2009.
- [C24] L.D. Baskar, B. De Schutter, and J. Hellendoorn, “Optimal routing for intelligent vehicle highway systems using a macroscopic traffic flow model,” *Proceedings of the 12th International IEEE Conference on Intelligent Transportation Systems (ITSC 2009)*, St. Louis, Missouri, pp. 576–581, Oct. 2009.
- [C25] S. Lin, B. De Schutter, Y. Xi, and H. Hellendoorn, “Study on fast model predictive controllers for large urban traffic networks,” *Proceedings of the 12th International IEEE Conference on Intelligent Transportation Systems (ITSC 2009)*, St. Louis, Missouri, pp. 691–696, Oct. 2009.
- [C26] R.R. Negenborn, A. Sahin, Z. Lukszo, B. De Schutter, and M. Morari, “A non-iterative cascaded predictive control approach for control of irrigation canals,” *Proceedings of the 2009 IEEE International Conference on Systems, Man, and Cybernetics*, San Antonio, Texas, pp. 3652–3657, Oct. 2009.
- [C27] A.N. Tarău, B. De Schutter, and H. Hellendoorn, “Hierarchical route choice control for baggage handling systems,” *Proceedings of the 12th International IEEE Conference on Intelligent Transportation Systems (ITSC 2009)*, St. Louis, Missouri, pp. 679–684, Oct. 2009.
- [C28] R.T. van Katwijk, B. De Schutter, and J. Hellendoorn, “Multi-agent control of traffic networks: Algorithm and case study,” *Proceedings of the 12th International IEEE Conference on Intelligent Transportation Systems (ITSC 2009)*, St. Louis, Missouri, pp. 316–321, Oct. 2009.
- [C29] L.D. Baskar, B. De Schutter, and H. Hellendoorn, “Optimal routing for intelligent vehicle highway systems using mixed integer linear programming,” *Proceedings of the 12th IFAC Symposium on Transportation Systems*, Redondo Beach, California, pp. 569–575, Sept. 2009.
- [C30] P. Deo, B. De Schutter, and A. Hegyi, “Model predictive control for multi-class traffic flows,” *Proceedings of the 12th IFAC Symposium on Transportation Systems*, Redondo Beach, California, pp. 25–30, Sept. 2009.

- [C31] D. Doan, T. Keviczky, I. Necoara, M. Diehl, and B. De Schutter, “A distributed version of Han’s method for DMPC of dynamically coupled systems with coupled constraints,” *Proceedings of the 1st IFAC Workshop on Estimation and Control of Networked Systems (NecSys 2009)*, Venice, Italy, pp. 240–245, Sept. 2009.
- [C32] S. Lin, B. De Schutter, Y. Xi, and J. Hellendoorn, “A simplified macroscopic urban traffic network model for model-based predictive control,” *Proceedings of the 12th IFAC Symposium on Transportation Systems*, Redondo Beach, California, pp. 286–291, Sept. 2009.
- [C33] A.N. Tarău, B. De Schutter, and J. Hellendoorn, “Decentralized route choice control of automated baggage handling systems,” *Proceedings of the 12th IFAC Symposium on Transportation Systems*, Redondo Beach, California, pp. 70–75, Sept. 2009.
- [C34] A.N. Tarău, B. De Schutter, and J. Hellendoorn, “Predictive route choice control of destination coded vehicles with mixed integer linear programming optimization,” *Proceedings of the 12th IFAC Symposium on Transportation Systems*, Redondo Beach, California, pp. 64–69, Sept. 2009.
- [C35] M. van den Berg, B. De Schutter, H. Hellendoorn, and A. Hegyi, “Control of day-to-day route choice in traffic networks with overlapping routes,” *Proceedings of the 12th IFAC Symposium on Transportation Systems*, Redondo Beach, California, pp. 556–561, Sept. 2009.
- [C36] R.T. van Katwijk and B. De Schutter, “Multi-agent control of traffic networks: Algorithm and case study,” *Proceedings of the 16th ITS World Congress*, Stockholm, Sweden, Sept. 2009. Paper 3017.
- [C37] S.K. Zegeye, B. De Schutter, H. Hellendoorn, and E. Breunese, “Model-based traffic control for balanced reduction of fuel consumption, emissions, and travel time,” *Proceedings of the 12th IFAC Symposium on Transportation Systems*, Redondo Beach, California, pp. 149–154, Sept. 2009.
- [C38] M. Arnold, R.R. Negenborn, G. Andersson, and B. De Schutter, “Multi-area predictive control for combined electricity and natural gas systems,” *Proceedings of the European Control Conference 2009*, Budapest, Hungary, pp. 1408–1413, Aug. 2009.
- [C39] G. Bajracharya, T. Koltunowicz, R.R. Negenborn, Z. Papp, D. Djairam, B. De Schutter, and J.J. Smit, “Optimization of condition-based asset management using a predictive health model,” *Proceedings of the 16th International Symposium on High Voltage Engineering*, Cape Town, South Africa, pp. 1529–1534, Aug. 2009.
- [C40] R.R. Negenborn, P.-J. van Overloop, and B. De Schutter, “Coordinated distributed model predictive reach control of irrigation canals,” *Proceedings of the European Control Conference 2009*, Budapest, Hungary, pp. 1420–1425, Aug. 2009.
- [C41] A.N. Tarău, B. De Schutter, and H. Hellendoorn, “Receding horizon approaches for route choice control of automated baggage handling systems,” *Proceedings of the European Control Conference 2009*, Budapest, Hungary, pp. 2978–2983, Aug. 2009.
- [C42] M. van den Berg, B. De Schutter, A. Hegyi, and H. Hellendoorn, “Day-to-day route choice control in traffic networks with time-varying demand profiles,” *Proceedings of the European Control Conference 2009*, Budapest, Hungary, pp. 1776–1781, Aug. 2009.
- [C43] M. Arnold, R.R. Negenborn, G. Andersson, and B. De Schutter, “Model-based predictive control applied to multi-carrier energy systems,” *Proceedings of the 2009 IEEE PES General Meeting*, Calgary, Canada, July 2009. Paper 09GM1452.
- [C44] A.N. Tarău, B. De Schutter, and H. Hellendoorn, “Distributed route choice control in DCV-based baggage handling systems,” *Proceedings of the 18th IEEE International Conference on Control Applications*, Saint Petersburg, Russia, pp. 818–824, July 2009.
- [C45] G. Bajracharya, T. Koltunowicz, R.R. Negenborn, Z. Papp, D. Djairam, B. De Schutter, and J.J. Smit, “Optimization of maintenance for power system equipment using a predictive health model,” *Proceedings of the 2009 IEEE Bucharest Power Tech Conference*, Bucharest, Romania, June–July 2009. Paper 563.
- [C46] J. Haddad, D. Mahalel, B. De Schutter, I. Ioslovich, and P.-O. Gutman, “Optimal steady-state traffic control for isolated intersections,” *Proceedings of the 6th IFAC Symposium on Robust Control Design (ROCOND’09)*, Haifa, Israel, pp. 96–101, June 2009.

- [C47] J. Haddad, B. De Schutter, D. Mahalel, and P.-O. Gutman, “Steady-state and N-stages control for isolated controlled intersections,” *Proceedings of the 2009 American Control Conference*, St. Louis, Missouri, pp. 2843–2848, June 2009.
- [C48] Ö.A. Tekin, R. Babuška, T. Tomiyama, and B. De Schutter, “Toward a flexible control design framework to automatically generate control code for mechatronic systems,” *Proceedings of the 2009 American Control Conference*, St. Louis, Missouri, pp. 4933–4938, June 2009.
- [C49] J. van Ast, R. Babuška, and B. De Schutter, “Fuzzy ant colony optimization for optimal control,” *Proceedings of the 2009 American Control Conference*, St. Louis, Missouri, pp. 1003–1008, June 2009.
- [C50] S.K. Zegeye, B. De Schutter, H. Hellendoorn, and E. Breunese, “Reduction of travel times and traffic emissions using model predictive control,” *Proceedings of the 2009 American Control Conference*, St. Louis, Missouri, pp. 5392–5397, June 2009.
- [C51] S.K. Zegeye, B. De Schutter, J. Hellendoorn, and E.A. Breunese, “Model-based traffic control for the reduction of fuel consumption, emissions, and travel time,” *Proceedings of mobil.TUM 2009 — International Scientific Conference on Mobility and Transport*, Munich, Germany, 11 pp., May 2009.
- [C52] L. Buşoniu, D. Ernst, B. De Schutter, and R. Babuška, “Policy search with cross-entropy optimization of basis functions,” *Proceedings of the 2009 IEEE Symposium on Adaptive Dynamic Programming and Reinforcement Learning (ADPRL 2009)*, Nashville, Tennessee, pp. 153–160, Mar.–Apr. 2009.
- [C53] M. Houwing, R.R. Negenborn, M.D. Ilić, and B. De Schutter, “Model predictive control of fuel cell micro cogeneration systems,” *Proceedings of the 2009 IEEE International Conference on Networking, Sensing and Control*, Okayama, Japan, pp. 708–713, Mar. 2009.
- [C54] R.R. Negenborn, M. Houwing, B. De Schutter, and J. Hellendoorn, “Model predictive control for residential energy resources using a mixed-logical dynamic model,” *Proceedings of the 2009 IEEE International Conference on Networking, Sensing and Control*, Okayama, Japan, pp. 702–707, Mar. 2009.
- [C55] A. Tarău, B. De Schutter, and H. Hellendoorn, “Centralized versus decentralized route choice control in DCV-based baggage handling systems,” *Proceedings of the 2009 IEEE International Conference on Networking, Sensing and Control*, Okayama, Japan, pp. 334–339, Mar. 2009.
- [C56] L.D. Baskar, B. De Schutter, J. Hellendoorn, and A. Tarău, “Traffic management for intelligent vehicle highway systems using model-based predictive control,” *Proceedings of the 88th Annual Meeting of the Transportation Research Board*, Washington, DC, 15 pp., Jan. 2009. Paper 09-2107.
- [C57] A.N. Tarău, B. De Schutter, and J. Hellendoorn, “Route choice control of automated baggage handling systems,” *Proceedings of the 88th Annual Meeting of the Transportation Research Board*, Washington, DC, 14 pp., Jan. 2009. Paper 09-0432.
- [C58] M. Arnold, R.R. Negenborn, G. Andersson, and B. De Schutter, “Distributed control applied to combined electricity and natural gas infrastructures,” *Proceedings of the International Conference on Infrastructure Systems 2008: Building Networks for a Brighter Future*, Rotterdam, The Netherlands, 6 pp., Nov. 2008. Paper 172.
- [C59] R.R. Negenborn and B. De Schutter, “A distributed model predictive control approach for the control of irrigation canals,” *Proceedings of the International Conference on Infrastructure Systems 2008: Building Networks for a Brighter Future*, Rotterdam, The Netherlands, 6 pp., Nov. 2008. Paper 152.
- [C60] R.T. van Katwijk, B. De Schutter, and J. Hellendoorn, “Multi-agent coordination of traffic-control instruments,” *Proceedings of the International Conference on Infrastructure Systems 2008: Building Networks for a Brighter Future*, Rotterdam, The Netherlands, 6 pp., Nov. 2008. Paper 141.
- [C61] L.D. Baskar, B. De Schutter, and H. Hellendoorn, “Dynamic speed limits and on-ramp metering for IVHS using model predictive control,” *Proceedings of the 11th International IEEE Conference on Intelligent Transportation Systems (ITSC 2008)*, Beijing, China, pp. 821–826, Oct. 2008.

- [C62] L.D. Baskar, B. De Schutter, and H. Hellendoorn, "Model predictive control for intelligent speed adaptation in intelligent vehicle highway systems," *Proceedings of the 17th IEEE International Conference on Control Applications*, San Antonio, Texas, pp. 468–473, Sept. 2008.
- [C63] R.R. Negenborn, M. Houwing, B. De Schutter, and H. Hellendoorn, "Adaptive prediction model accuracy in the control of residential energy resources," *Proceedings of the 17th IEEE International Conference on Control Applications*, San Antonio, Texas, pp. 311–316, Sept. 2008.
- [C64] A. Tarău, B. De Schutter, and H. Hellendoorn, "Travel time control of destination coded vehicles in baggage handling systems," *Proceedings of the 17th IEEE International Conference on Control Applications*, San Antonio, Texas, pp. 293–298, Sept. 2008.
- [C65] M. van den Berg, B. De Schutter, J. Hellendoorn, and A. Hegyi, "Influencing route choice in traffic networks: A model predictive control approach based on mixed-integer linear programming," *Proceedings of the 17th IEEE International Conference on Control Applications*, San Antonio, Texas, pp. 299–304, Sept. 2008.
- [C66] R.T. van Katwijk, B. De Schutter, and J. Hellendoorn, "Movement-based look-ahead traffic-adaptive intersection control," *Proceedings of the UKACC International Conference on Control 2008*, London, UK, 6 pp., Sept. 2008. Paper Th09.01.
- [C67] L. Buşoniu, D. Ernst, B. De Schutter, and R. Babuška, "Fuzzy partition optimization for approximate fuzzy Q-iteration," *Proceedings of the 17th IFAC World Congress*, Seoul, Korea, pp. 5629–5634, July 2008.
- [C68] M. Burger, A. Hegyi, and B. De Schutter, "Model-based speed limit control with different traffic state measurements," *Proceedings of the 17th IFAC World Congress*, Seoul, Korea, pp. 14072–14077, July 2008.
- [C69] D. Corona, J. Buisson, and B. De Schutter, "A Hamiltonian approach for the optimal control of the switching signal for a DC-DC converter," *Proceedings of the 17th IFAC World Congress*, Seoul, Korea, pp. 7654–7659, July 2008.
- [C70] Zs. Lendek, K.M. van Schagen, R. Babuška, A. Veersma, and B. De Schutter, "Cascaded parameter estimation for a water treatment plant using particle filters," *Proceedings of the 17th IFAC World Congress*, Seoul, Korea, pp. 10857–10862, July 2008.
- [C71] A.N. Tarău, B. De Schutter, and J. Hellendoorn, "Throughput optimization of automated flats sorting machines," *Proceedings of the 17th IFAC World Congress*, Seoul, Korea, pp. 51–56, July 2008.
- [C72] J. van Ast, R. Babuška, and B. De Schutter, "Particle swarms in optimization and control," *Proceedings of the 17th IFAC World Congress*, Seoul, Korea, pp. 5131–5136, July 2008.
- [C73] M. van den Berg, A. Hegyi, B. De Schutter, and J. Hellendoorn, "Influencing long-term route choice by traffic control measures – A model study," *Proceedings of the 17th IFAC World Congress*, Seoul, Korea, pp. 13052–13057, July 2008.
- [C74] T. van den Boom and B. De Schutter, "Model predictive control for switching max-plus-linear systems with random and deterministic switching," *Proceedings of the 17th IFAC World Congress*, Seoul, Korea, pp. 7660–7665, July 2008.
- [C75] L.D. Baskar, B. De Schutter, and H. Hellendoorn, "Model-based predictive traffic control for intelligent vehicles: Dynamic speed limits and dynamic lane allocation," *Proceedings of the 2008 IEEE Intelligent Vehicles Symposium (IV'08)*, Eindhoven, The Netherlands, pp. 174–179, June 2008.
- [C76] L. Buşoniu, D. Ernst, B. De Schutter, and R. Babuška, "Consistency of fuzzy model-based reinforcement learning," *Proceedings of the 2008 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 2008)*, Hong Kong, pp. 518–524, June 2008.
- [C77] M. Houwing, R.R. Negenborn, and B. De Schutter, "Economic advantages of applying model predictive control to distributed energy resources: The case of micro-CHP systems," *Proceedings of the 16th Mediterranean Conference on Control and Automation (MED'08)*, Ajaccio, France, pp. 1550–1555, June 2008.

- [C78] Zs. Lendek, R. Babuška, and B. De Schutter, “Stability analysis and observer design for decentralized TS fuzzy systems,” *Proceedings of the 2008 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 2008)*, Hong Kong, pp. 631–636, June 2008.
- [C79] J. van Ast, R. Babuška, and B. De Schutter, “A general modeling framework for swarms,” *Proceedings of the 2008 IEEE Congress on Evolutionary Computation (CEC 2008)*, Hong Kong, pp. 3796–3801, June 2008.
- [C80] J. van Ast, R. Babuška, and B. De Schutter, “Ant colony optimization for optimal control,” *Proceedings of the 2008 IEEE Congress on Evolutionary Computation (CEC 2008)*, Hong Kong, pp. 2040–2046, June 2008.
- [C81] B. De Schutter and T. van den Boom, “Max-plus algebra and max-plus linear discrete event systems: An introduction,” *Proceedings of the 9th International Workshop on Discrete Event Systems (WODES’08)*, Göteborg, Sweden, pp. 36–42, May 2008.
- [C82] T. van den Boom and B. De Schutter, “Randomly switching max-plus linear systems and equivalent classes of discrete event systems,” *Proceedings of the 9th International Workshop on Discrete Event Systems (WODES’08)*, Göteborg, Sweden, pp. 242–247, May 2008.
- [C83] M. Burger, A. Hegyi, and B. De Schutter, “Suitability of different mean speeds for model-based traffic control,” *Proceedings of the 87th Annual Meeting of the Transportation Research Board*, Washington, DC, 18 pp., Jan. 2008. Paper 08-2010.
- [C84] D. Corona and B. De Schutter, “Comparison of a linear and a hybrid adaptive cruise controller for a SMART,” *Proceedings of the 46th IEEE Conference on Decision and Control*, New Orleans, Louisiana, pp. 4779–4784, Dec. 2007.
- [C85] Zs. Lendek, R. Babuška, and B. De Schutter, “TS fuzzy controllers for cascaded systems,” *Proceedings of the 3rd IFAC Workshop on Advanced Fuzzy and Neural Control (AFNC 07)*, Valenciennes, France, 6 pp., Oct. 2007. Paper MO4-2.
- [C86] L. Buşoniu, D. Ernst, B. De Schutter, and R. Babuška, “Fuzzy approximation for convergent model-based reinforcement learning,” *Proceedings of the 2007 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 2007)*, London, UK, pp. 968–973, July 2007.
- [C87] D. Corona, J. Buisson, B. De Schutter, and A. Giua, “Stabilization of switched affine systems: An application to the buck-boost converter,” *Proceedings of the 2007 American Control Conference*, New York, New York, pp. 6037–6042, July 2007.
- [C88] A. Hegyi, M. Burger, B. De Schutter, J. Hellendoorn, and T.J.J. van den Boom, “Towards a practical application of model predictive control to suppress shock waves on freeways,” *Proceedings of the European Control Conference 2007 (ECC’07)*, Kos, Greece, pp. 1764–1771, July 2007.
- [C89] M. Houwing, R.R. Negenborn, P.W. Heijnen, B. De Schutter, and H. Hellendoorn, “Least-cost model predictive control of residential energy resources when applying μ CHP,” *Proceedings of Power Tech 2007*, Lausanne, Switzerland, 6 pp., July 2007. Paper 291.
- [C90] G. Hug-Glanzmann, R. Negenborn, G. Andersson, B. De Schutter, and H. Hellendoorn, “Multi-area control of overlapping areas in power systems for FACTS control,” *Proceedings of Power Tech 2007*, Lausanne, Switzerland, 6 pp., July 2007. Paper 277.
- [C91] Zs. Lendek, R. Babuška, and B. De Schutter, “Distributed Kalman filtering for multiagent systems,” *Proceedings of the European Control Conference 2007 (ECC’07)*, Kos, Greece, pp. 2193–2200, July 2007.
- [C92] Zs. Lendek, R. Babuška, and B. De Schutter, “Stability of cascaded Takagi-Sugeno fuzzy systems,” *Proceedings of the 2007 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 2007)*, London, UK, pp. 505–510, July 2007.
- [C93] R.R. Negenborn, A.G. Beccuti, T. Demiray, S. Leirens, G. Damm, B. De Schutter, and M. Morari, “Supervisory hybrid model predictive control for voltage stability of power networks,” *Proceedings of the 2007 American Control Conference*, New York, New York, pp. 5444–5449, July 2007.

- [C94] T. van den Boom and B. De Schutter, “Stabilizing model predictive controllers for randomly switching max-plus-linear systems,” *Proceedings of the European Control Conference 2007 (ECC’07)*, Kos, Greece, pp. 4952–4959, July 2007.
- [C95] L.D. Baskar, B. De Schutter, and H. Hellendoorn, “Hierarchical traffic control and management with intelligent vehicles,” *Proceedings of the 2007 IEEE Intelligent Vehicles Symposium (IV’07)*, Istanbul, Turkey, pp. 834–839, June 2007.
- [C96] R.T. van Katwijk, B. De Schutter, and J. Hellendoorn, “Look-ahead traffic-adaptive signal control,” *Proceedings of the 6th European Congress on Intelligent Transport Systems and Services (ITS’07)*, Aalborg, Denmark, 12 pp., June 2007. Paper 2417.
- [C97] R. van Tongeren, O. Gietelink, B. De Schutter, and M. Verhaegen, “Traffic modelling validation of advanced driver assistance systems,” *Proceedings of the 2007 IEEE Intelligent Vehicles Symposium (IV’07)*, Istanbul, Turkey, pp. 1246–1251, June 2007.
- [C98] L. Buşoniu, D. Ernst, B. De Schutter, and R. Babuška, “Continuous-state reinforcement learning with fuzzy approximation,” *Proceedings of the 7th Annual Symposium on Adaptive and Learning Agents and Multi-Agent Systems (ALAMAS 2007)* (K. Tuyls, S. de Jong, M. Ponsen, and K. Verbeeck, eds.), Maastricht, The Netherlands, pp. 21–35, Apr. 2007.
- [C99] R.R. Negenborn, B. De Schutter, and J. Hellendoorn, “Efficient implementation of serial multi-agent model predictive control by parallelization,” *Proceedings of the 2007 IEEE International Conference on Networking, Sensing and Control (ICNSC ’07)*, London, UK, pp. 175–180, Apr. 2007.
- [C100] T.J.J. van den Boom and B. De Schutter, “On a model predictive control algorithm for dynamic railway network management,” *Proceedings of the 2nd International Seminar on Railway Operations Modelling and Analysis (RailHannover2007)* (I.A. Hansen, A. Radtke, J. Pachel, and E. Wendler, eds.), Hannover, Germany, 15 pp., Mar. 2007.
- [C101] L. Buşoniu, R. Babuška, and B. De Schutter, “Multi-agent reinforcement learning: A survey,” *Proceedings of the 9th International Conference on Control, Automation, Robotics and Vision (ICARCV 2006)*, Singapore, pp. 527–532, Dec. 2006.
- [C102] L. Buşoniu, B. De Schutter, and R. Babuška, “Decentralized reinforcement learning control of a robotic manipulator,” *Proceedings of the 9th International Conference on Control, Automation, Robotics and Vision (ICARCV 2006)*, Singapore, pp. 1347–1352, Dec. 2006.
- [C103] D. Corona, I. Necoara, B. De Schutter, and T. van den Boom, “Robust hybrid MPC applied to the design of an adaptive cruise controller for a road vehicle,” *Proceedings of the 45th IEEE Conference on Decision and Control*, San Diego, California, pp. 1721–1726, Dec. 2006.
- [C104] B. De Schutter, J. Schepers, and I. Van Mechelen, “On algorithms for a binary-real (\max, \times) matrix approximation problem,” *Proceedings of the 45th IEEE Conference on Decision and Control*, San Diego, California, pp. 5168–5173, Dec. 2006.
- [C105] I. Necoara, E.C. Kerrigan, B. De Schutter, and T.J.J. van den Boom, “Worst-case optimal control of uncertain max-plus-linear systems,” *Proceedings of the 45th IEEE Conference on Decision and Control*, San Diego, California, pp. 6055–6060, Dec. 2006.
- [C106] D. Corona, M. Lazar, B. De Schutter, and M. Heemels, “A hybrid MPC approach to the design of a Smart adaptive cruise controller,” *Proceedings of the 2006 IEEE International Conference on Control Applications (CCA 2006)*, Munich, Germany, pp. 231–236, Oct. 2006.
- [C107] T. Bellemans, B. De Schutter, G. Wets, and B. De Moor, “Model predictive control for ramp metering combined with extended Kalman filter-based traffic state estimation,” *Proceedings of the 2006 IEEE Intelligent Transportation Systems Conference (ITSC 2006)*, Toronto, Canada, pp. 406–411, Sept. 2006.
- [C108] A. Hegyi, D. Girimonte, R. Babuška, and B. De Schutter, “A comparison of filter configurations for freeway traffic state estimation,” *Proceedings of the 2006 IEEE Intelligent Transportation Systems Conference (ITSC 2006)*, Toronto, Canada, pp. 1029–1034, Sept. 2006.
- [C109] R.R. Negenborn, B. De Schutter, and H. Hellendoorn, “Multi-agent model predictive control for transportation networks with continuous and discrete elements,” *Proceedings of the 11th IFAC Symposium on Control in Transportation Systems*, Delft, The Netherlands, pp. 609–614, Aug. 2006.

- [C110] M. van den Berg, B. De Schutter, and H. Hellendoorn, “Effects of on-ramp and off-ramp metering on queue forming in urban traffic networks,” *Proceedings of the 11th IFAC Symposium on Control in Transportation Systems*, Delft, The Netherlands, pp. 130–135, Aug. 2006.
- [C111] T.J.J. van den Boom and B. De Schutter, “Dynamic railway network management using switching max-plus-linear models,” *Proceedings of the 11th IFAC Symposium on Control in Transportation Systems*, Delft, The Netherlands, pp. 343–348, Aug. 2006.
- [C112] R.T. van Katwijk, B. De Schutter, and J. Hellendoorn, “Traffic adaptive control of a single intersection: A taxonomy of approaches,” *Proceedings of the 11th IFAC Symposium on Control in Transportation Systems*, Delft, The Netherlands, pp. 227–232, Aug. 2006.
- [C113] G. Jiroveanu, R.K. Boel, and B. De Schutter, “Fault diagnosis for time Petri nets,” *Proceedings of the 8th International Workshop on Discrete Event Systems (WODES’06)*, Ann Arbor, Michigan, pp. 313–318, July 2006.
- [C114] I. Necoara, B. De Schutter, T. van den Boom, and H. Hellendoorn, “Min-max model predictive control for uncertain max-min-plus-scaling systems,” *Proceedings of the 8th International Workshop on Discrete Event Systems (WODES’06)*, Ann Arbor, Michigan, pp. 439–444, July 2006.
- [C115] T.J.J. van den Boom and B. De Schutter, “MPC of implicit switching max-plus-linear discrete event systems – Timing aspects,” *Proceedings of the 8th International Workshop on Discrete Event Systems (WODES’06)*, Ann Arbor, Michigan, pp. 457–462, July 2006.
- [C116] D. Corona and B. De Schutter, “Adaptive cruise controller design: A comparative assessment for PWA systems,” *Proceedings of the 2nd IFAC Conference on Analysis and Design of Hybrid Systems (ADHS’06)*, Alghero, Italy, pp. 253–258, June 2006.
- [C117] O. Gietelink, B. De Schutter, and M. Verhaegen, “Adaptive importance sampling for probabilistic validation of advanced driver assistance systems,” *Proceedings of the 2006 American Control Conference*, Minneapolis, Minnesota, pp. 4002–4007, June 2006.
- [C118] G. Jiroveanu, B. De Schutter, and R.K. Boel, “On-line diagnosis for time Petri nets,” *Proceedings of the 17th International Workshop on Principles of Diagnosis (DX-06)*, Burgos, Spain, 8 pp., June 2006.
- [C119] I. Necoara, B. De Schutter, T.J.J. van den Boom, and J. Hellendoorn, “Stable receding horizon control for max-plus-linear systems,” *Proceedings of the 2006 American Control Conference*, Minneapolis, Minnesota, pp. 4055–4060, June 2006.
- [C120] I. Necoara, T.J.J. van den Boom, B. De Schutter, and J. Hellendoorn, “Stabilization of max-plus-linear systems using receding horizon control – The unconstrained case,” *Proceedings of the 2nd IFAC Conference on Analysis and Design of Hybrid Systems (ADHS’06)*, Alghero, Italy, pp. 148–153, June 2006.
- [C121] R.R. Negenborn, B. De Schutter, and H. Hellendoorn, “Multi-agent model predictive control for transportation networks: Serial versus parallel schemes,” *Proceedings of the 12th IFAC Symposium on Information Control Problems in Manufacturing (INCOM’2006)*, Saint-Etienne, France, pp. 339–344, May 2006.
- [C122] R.R. Negenborn, B. De Schutter, and H. Hellendoorn, “Multi-agent model predictive control of transportation networks,” *Proceedings of the 2006 IEEE International Conference on Networking, Sensing and Control (ICNSC 2006)*, Ft. Lauderdale, Florida, pp. 296–301, Apr. 2006.
- [C123] Z. Lukszo, M.P.C. Weijnen, R.R. Negenborn, B. De Schutter, and M. Ilić, “Challenges for process system engineering in infrastructure operation and control,” in *16th European Symposium on Computer Aided Process Engineering and 9th International Symposium on Process Systems Engineering* (Garmisch-Partenkirchen, Germany, July 2006) (W. Marquardt and C. Pantelides, eds.), vol. 21 of *Computer-Aided Chemical Engineering*, Amsterdam, The Netherlands: Elsevier, ISBN 978-0-444-52969-5, pp. 95–100, 2006.
- [C124] I. Necoara, B. De Schutter, T.J.J. van den Boom, and J. Hellendoorn, “Robustly stabilizing MPC for perturbed PWL systems,” *Proceedings of the 44th IEEE Conference on Decision and Control, and the European Control Conference 2005 (CDC-ECC’05)*, Seville, Spain, pp. 3759–3764, Dec. 2005.

- [C125] T.J.J. van den Boom, B. De Schutter, and I. Necoara, "On MPC for max-plus-linear systems: Analytic solution and stability," *Proceedings of the 44th IEEE Conference on Decision and Control, and the European Control Conference 2005 (CDC-ECC'05)*, Seville, Spain, pp. 7816–7821, Dec. 2005.
- [C126] M. van den Berg, B. De Schutter, and J. Hellendoorn, "Information providing as a control measure in an integrated traffic control approach," *Proceedings of the 8th International IEEE Conference on Intelligent Transportation Systems (ITSC '05)*, Vienna, Austria, pp. 91–96, Sept. 2005.
- [C127] I. Necoara, B. De Schutter, and T.J.J. van den Boom, "Model predictive control for perturbed piecewise affine systems," *Proceedings of the 5th EUROMECH Nonlinear Dynamics Conference (ENOC-2005)*, Eindhoven, The Netherlands, pp. 231–240, Aug. 2005.
- [C128] O. Gietelink, B. De Schutter, and M. Verhaegen, "Probabilistic validation of advanced driver assistance systems," *Proceedings of the 16th IFAC World Congress*, Prague, Czech Republic, 6 pp., July 2005. Paper 4254 / Tu-M18-TO/5.
- [C129] A. Hegyi, B. De Schutter, and J. Hellendoorn, "Optimal traffic control in freeway networks with bottlenecks," *Proceedings of the 16th IFAC World Congress*, Prague, Czech Republic, 6 pp., July 2005. Paper 3750 / Mo-M18-TO/5.
- [C130] I. Necoara, B. De Schutter, W.P.M.H. Heemels, S. Weiland, M. Lazar, and T.J.J. van den Boom, "Control of PWA systems using a stable receding horizon method," *Proceedings of the 16th IFAC World Congress*, Prague, Czech Republic, 6 pp., July 2005. Paper 2794 / Tu-E21-TO/2.
- [C131] R.R. Negenborn, B. De Schutter, M.A. Wiering, and H. Hellendoorn, "Learning-based model predictive control for Markov decision processes," *Proceedings of the 16th IFAC World Congress*, Prague, Czech Republic, 6 pp., July 2005. Paper 2106 / We-M16-TO/2.
- [C132] T.J.J. van den Boom and B. De Schutter, "MPC for max-plus-linear systems with guaranteed stability," *Proceedings of the 16th IFAC World Congress*, Prague, Czech Republic, 6 pp., July 2005. Paper 2342 / Mo-E12-TO/1.
- [C133] O.J. Gietelink, B. De Schutter, and M. Verhaegen, "A probabilistic approach for validation of advanced driver assistance systems," *Proceedings of the 84th Annual Meeting of the Transportation Research Board*, Washington, DC, 24 pp., Jan. 2005. Paper 05-1524.
- [C134] A. Hegyi, B. De Schutter, and J. Hellendoorn, "Optimal control of freeway networks with bottlenecks and static demands," *Proceedings of the 84th Annual Meeting of the Transportation Research Board*, Washington, DC, 20 pp., Jan. 2005. Paper 05-0799.
- [C135] M. van den Berg, T. Bellemans, B. De Schutter, B. De Moor, and J. Hellendoorn, "Control of traffic with anticipative ramp metering," *Proceedings of the 84th Annual Meeting of the Transportation Research Board*, Washington, DC, 17 pp., Jan. 2005. Paper 05-0252.
- [C136] R.T. van Katwijk, P. van Koningsbruggen, B. De Schutter, and J. Hellendoorn, "A test bed for multi-agent control systems in road traffic management," *Proceedings of the 84th Annual Meeting of the Transportation Research Board*, Washington, DC, 22 pp., Jan. 2005. Paper 05-0774.
- [C137] I. Necoara, B. De Schutter, T.J.J. van den Boom, and J. Hellendoorn, "Model predictive control for perturbed continuous piecewise affine systems with bounded disturbances," *Proceedings of the 43rd IEEE Conference on Decision and Control*, Paradise Island, The Bahamas, pp. 1848–1853, Dec. 2004.
- [C138] A. Karimi, A. Hegyi, B. De Schutter, J. Hellendoorn, and F. Middelham, "Integrated model predictive control of dynamic route guidance information systems and ramp metering," *Proceedings of the 7th International IEEE Conference on Intelligent Transportation Systems (ITSC 2004)*, Washington, DC, pp. 491–496, Oct. 2004.
- [C139] M. van den Berg, T. Bellemans, B. De Schutter, B. De Moor, and J. Hellendoorn, "Anticipative ramp metering control using dynamic traffic assignment," *Proceedings of the 7th International IEEE Conference on Intelligent Transportation Systems (ITSC 2004)*, Washington, DC, pp. 503–508, Oct. 2004.
- [C140] T.J.J. van den Boom and B. De Schutter, "Modelling and control of discrete event systems using switching max-plus-linear systems," *Proceedings of the 7th International Workshop on Discrete Event Systems (WODES'04)*, Reims, France, pp. 115–120, Sept. 2004.

- [C141] O. Gietelink, J. Ploeg, B. De Schutter, and M. Verhaegen, "Testing advanced driver assistance systems for fault management with the VEHIL test facility," *Proceedings of the 7th International Symposium on Advanced Vehicle Control (AVEC'04)*, Arnhem, The Netherlands, pp. 579–584, Aug. 2004.
- [C142] T. Bellemans, B. De Schutter, and B. De Moor, "Anticipative ramp metering control for freeway traffic networks," *Proceedings of the 16th International Symposium on Mathematical Theory of Networks and Systems (MTNS 2004)*, Leuven, Belgium, 12 pp., July 2004. Paper 320.
- [C143] B. De Schutter and T.J.J. van den Boom, "Model predictive control for discrete-event and hybrid systems – Part I: Discrete-event systems," *Proceedings of the 16th International Symposium on Mathematical Theory of Networks and Systems (MTNS 2004)*, Leuven, Belgium, 10 pp., July 2004. Paper 312.
- [C144] B. De Schutter and T.J.J. van den Boom, "Model predictive control for discrete-event and hybrid systems – Part II: Hybrid systems," *Proceedings of the 16th International Symposium on Mathematical Theory of Networks and Systems (MTNS 2004)*, Leuven, Belgium, 10 pp., July 2004. Paper 313.
- [C145] A. Karimi, A. Hegyi, B. De Schutter, H. Hellendoorn, and F. Middelham, "Integration of dynamic route guidance and freeway ramp metering using model predictive control," *Proceedings of the 2004 American Control Conference*, Boston, Massachusetts, pp. 5533–5538, June–July 2004.
- [C146] I. Necoara, B. De Schutter, and H. Hellendoorn, "On structural properties of Helbing's gas-kinetic traffic flow model," *Proceedings of the 2004 American Control Conference*, Boston, Massachusetts, pp. 5508–5513, June–July 2004.
- [C147] T. van den Boom and B. De Schutter, "Modeling and control of railway networks," *Proceedings of the 2004 American Control Conference*, Boston, Massachusetts, pp. 5728–5733, June–July 2004.
- [C148] O. Gietelink, J. Ploeg, B. De Schutter, and M. Verhaegen, "VEHIL: A test facility for validation of fault management systems for advanced driver assistance systems," *Proceedings of the 1st IFAC Symposium on Advances in Automotive Control*, Salerno, Italy, pp. 410–415, Apr. 2004.
- [C149] I. Necoara, B. De Schutter, and J. Hellendoorn, "Structural properties of Helbing's traffic flow model," *Proceedings of the 83rd Annual Meeting of the Transportation Research Board*, Washington, DC, 22 pp., Jan. 2004. Paper 04-2263.
- [C150] M. van den Berg, B. De Schutter, A. Hegyi, and J. Hellendoorn, "Model predictive control for mixed urban and freeway networks," *Proceedings of the 83rd Annual Meeting of the Transportation Research Board*, Washington, DC, 19 pp., Jan. 2004. Paper 04-3327.
- [C151] A. Hegyi, B. De Schutter, and J. Hellendoorn, "Optimal coordination of variable speed limits to suppress shock waves," *Proceedings of the 42nd IEEE Conference on Decision and Control*, Maui, Hawaii, pp. 2768–2773, Dec. 2003.
- [C152] S. Kanev, C. Scherer, M. Verhaegen, and B. De Schutter, "A BMI optimization approach to robust output-feedback control," *Proceedings of the 42nd IEEE Conference on Decision and Control*, Maui, Hawaii, pp. 851–856, Dec. 2003.
- [C153] M. van den Berg, A. Hegyi, B. De Schutter, and J. Hellendoorn, "A macroscopic traffic flow model for integrated control of freeway and urban traffic networks," *Proceedings of the 42nd IEEE Conference on Decision and Control*, Maui, Hawaii, pp. 2774–2779, Dec. 2003.
- [C154] O.J. Gietelink, J. Ploeg, B. De Schutter, and M. Verhaegen, "VEHIL: Test facility for fault management testing of advanced driver assistance systems," *Proceedings of the 10th ITS World Congress*, Madrid, Spain, 13 pp., Nov. 2003. Paper 2693.
- [C155] B. De Schutter, S.P. Hoogendoorn, H. Schuurman, and S. Stramigioli, "A multi-agent case-based traffic control scenario evaluation system," *Proceedings of the IEEE 6th International Conference on Intelligent Transportation Systems (ITSC'03)*, Shanghai, China, pp. 678–683, Oct. 2003.
- [C156] A. Hegyi, D. Ngo Duy, B. De Schutter, J. Hellendoorn, S.P. Hoogendoorn, and S. Stramigioli, "Suppressing shock waves on the A1 in The Netherlands – Model calibration and model-based predictive control," *Proceedings of the IEEE 6th International Conference on Intelligent Transportation Systems (ITSC'03)*, Shanghai, China, pp. 672–677, Oct. 2003.

- [C157] G. Schullerus, V. Krebs, B. De Schutter, and T. van den Boom, "Optimal input signal design for identification of max-plus-linear systems," *Proceedings of the 2003 European Control Conference (ECC'03)*, Cambridge, UK, 6 pp., Sept. 2003. Paper 026.
- [C158] T.J.J. van den Boom, B. De Schutter, and V. Verdult, "Identification of stochastic max-plus-linear systems," *Proceedings of the 2003 European Control Conference (ECC'03)*, Cambridge, UK, 6 pp., Sept. 2003. Paper 104.
- [C159] S.P. Hoogendoorn, H. Schuurman, and B. De Schutter, "Real-time traffic management scenario evaluation," *Proceedings of the 10th IFAC Symposium on Control in Transportation Systems (CTS 2003)*, Tokyo, Japan, pp. 343–348, Aug. 2003.
- [C160] T. Bellemans, B. De Schutter, and B. De Moor, "Anticipative model predictive control for ramp metering in freeway networks," *Proceedings of the 2003 American Control Conference*, Denver, Colorado, pp. 4077–4082, June 2003.
- [C161] A. Hegyi, B. De Schutter, and J. Hellendoorn, "MPC-based optimal coordination of variable speed limits to suppress shock waves in freeway traffic," *Proceedings of the 2003 American Control Conference*, Denver, Colorado, pp. 4083–4088, June 2003.
- [C162] T.J.J. van den Boom, B. De Schutter, G. Schullerus, and V. Krebs, "Adaptive model predictive control using max-plus-linear input-output models," *Proceedings of the 2003 American Control Conference*, Denver, Colorado, pp. 933–938, June 2003.
- [C163] B. De Schutter, T.J.J. van den Boom, and V. Verdult, "State space identification of max-plus-linear discrete event systems from input-output data," *Proceedings of the 41st IEEE Conference on Decision and Control*, Las Vegas, Nevada, pp. 4024–4029, Dec. 2002.
- [C164] S. Kanev, B. De Schutter, and M. Verhaegen, "The ellipsoid algorithm for probabilistic robust controller design," *Proceedings of the 41st IEEE Conference on Decision and Control*, Las Vegas, Nevada, pp. 2248–2253, Dec. 2002.
- [C165] T.J.J. van den Boom, B. De Schutter, and B. Heidergott, "Complexity reduction in MPC for stochastic max-plus-linear systems by variability expansion," *Proceedings of the 41st IEEE Conference on Decision and Control*, Las Vegas, Nevada, pp. 3567–3572, Dec. 2002.
- [C166] B. De Schutter and T.J.J. van den Boom, "Connection and speed control in railway systems – A model predictive control approach," *Proceedings of the 6th International Workshop on Discrete Event Systems (WODES'02)* (M. Silva, A. Giua, and J.M. Colom, eds.), Zaragoza, Spain, pp. 49–54, Oct. 2002.
- [C167] B. De Schutter and T.J.J. van den Boom, "Model predictive control for max-min-plus-scaling systems – Efficient implementation," *Proceedings of the 6th International Workshop on Discrete Event Systems (WODES'02)* (M. Silva, A. Giua, and J.M. Colom, eds.), Zaragoza, Spain, pp. 343–348, Oct. 2002.
- [C168] T. Bellemans, B. De Schutter, and B. De Moor, "Model predictive control with repeated model fitting for ramp metering," *Proceedings of the IEEE 5th International Conference on Intelligent Transportation Systems (ITSC'02)*, Singapore, pp. 236–241, Sept. 2002.
- [C169] P. Breton, A. Hegyi, B. De Schutter, and H. Hellendoorn, "Shock wave elimination/reduction by optimal coordination of variable speed limits," *Proceedings of the IEEE 5th International Conference on Intelligent Transportation Systems (ITSC'02)*, Singapore, pp. 225–230, Sept. 2002.
- [C170] B. De Schutter, W.P.M.H. Heemels, and A. Bemporad, "Max-plus-algebraic problems and the extended linear complementarity problem – Algorithmic aspects," *Proceedings of the 15th IFAC World Congress (b'02)*, Barcelona, Spain, 6 pp., July 2002. Paper 728 / T-We-M02.
- [C171] B. De Schutter, T.J.J. van den Boom, and G.J. Benschop, "MPC for continuous piecewise-affine systems," *Proceedings of the 15th IFAC World Congress (b'02)*, Barcelona, Spain, 6 pp., July 2002. Paper 229 / T-Fr-A16.
- [C172] A. Hegyi, B. De Schutter, H. Hellendoorn, and T. van den Boom, "Optimal coordination of ramp metering and variable speed control – An MPC approach," *Proceedings of the 2002 American Control Conference*, Anchorage, Alaska, pp. 3600–3605, May 2002.

- [C173] B. De Schutter, T. van den Boom, and A. Hegyi, "A model predictive control approach for recovery from delays in railway systems," *Proceedings of the 81st Annual Meeting of the Transportation Research Board*, Washington, DC, 13 pp., Jan. 2002. Paper 02-2707.
- [C174] A. Hegyi, B. De Schutter, and H. Hellendoorn, "Model predictive control for optimal coordination of ramp metering and variable speed control," *Proceedings of the 1st International NAISO Congress on Neuro Fuzzy Technologies (NF 2002)*, Havana, Cuba, 12 pp., Jan. 2002. Paper #100027-01-HH-152.
- [C175] A. Bemporad, W.P.M.H. Heemels, and B. De Schutter, "On hybrid systems and closed-loop MPC systems," *Proceedings of the 40th IEEE Conference on Decision and Control*, Orlando, Florida, pp. 1645–1650, Dec. 2001.
- [C176] W.P.M.H. Heemels, B. De Schutter, and A. Bemporad, "On the equivalence of classes of hybrid dynamical models," *Proceedings of the 40th IEEE Conference on Decision and Control*, Orlando, Florida, pp. 364–369, Dec. 2001.
- [C177] A. Hegyi, B. De Schutter, and H. Hellendoorn, "Model predictive control for optimal coordination of ramp metering and variable speed control," *Proceedings of the 1st European Symposium on Intelligent Technologies, Hybrid Systems and their implementation on Smart Adaptive Systems (EUNITE 2001)*, Tenerife, Spain, pp. 260–272, Dec. 2001.
- [C178] T.J.J. van den Boom and B. De Schutter, "Model predictive control for perturbed max-plus-linear systems: A stochastic approach," *Proceedings of the 40th IEEE Conference on Decision and Control*, Orlando, Florida, pp. 4535–4540, Dec. 2001.
- [C179] T.J.J. van den Boom and B. De Schutter, "MPC for perturbed max-plus-linear systems," *Proceedings of the European Control Conference 2001 (ECC'01)*, Porto, Portugal, pp. 3783–3788, Sept. 2001.
- [C180] B. De Schutter and T. van den Boom, "Model predictive control for discrete-event systems with soft and hard synchronization constraints," *Proceedings of the Workshop on Max-Plus Algebras and Their Applications to Discrete-Event Systems, Theoretical Computer Science, and Optimization*, Prague, Czech Republic, 6 pp., Aug. 2001.
- [C181] A. Hegyi, B. De Schutter, S. Hoogendoorn, R. Babuška, H. van Zuylen, and H. Schuurman, "A fuzzy decision support system for traffic control centers," *Proceedings of the 2001 IEEE Intelligent Transportation Systems Conference (ITSC'01)*, Oakland, California, pp. 358–363, Aug. 2001.
- [C182] B. De Schutter and T. van den Boom, "Model predictive control for railway networks," *Proceedings of the 2001 IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM'01)*, Como, Italy, pp. 105–110, July 2001.
- [C183] T. Bellemans, B. De Schutter, and B. De Moor, "An improved first-order macroscopic flow model for highway traffic simulation," *Proceedings of the 2001 American Control Conference*, Arlington, Virginia, pp. 2105–2110, June 2001.
- [C184] G.J.C. Copinga, B. De Schutter, J.M.A. Scherpen, and M.J.J.M. van de Ven, "A web-based study support environment for systems and control courses," *Proceedings of the 2001 American Control Conference*, Arlington, Virginia, pp. 1155–1160, June 2001.
- [C185] B. De Schutter and T.J.J. van den Boom, "Model predictive control for max-min-plus-scaling systems," *Proceedings of the 2001 American Control Conference*, Arlington, Virginia, pp. 319–324, June 2001.
- [C186] T. van den Boom and B. De Schutter, "MPC for max-plus-linear systems: Closed-loop behavior and tuning," *Proceedings of the 2001 American Control Conference*, Arlington, Virginia, pp. 325–330, June 2001.
- [C187] A. Hegyi, B. De Schutter, S. Hoogendoorn, R. Babuška, and H. van Zuylen, "Fuzzy decision support system for traffic control centers," *Proceedings of the European Symposium on Intelligent Techniques (ESIT 2000)*, Aachen, Germany, pp. 389–395, Sept. 2000. Paper BC-01-2.
- [C188] T. van den Boom and B. De Schutter, "MPC for max-plus-linear systems: Closed-loop behavior and tuning," *Proceedings of the Workshop on Systems with Time-Domain Constraints*, Eindhoven, The Netherlands, 18 pp., Aug.–Sept. 2000.

- [C189] T. Bellemans, B. De Schutter, and B. De Moor, "On data acquisition, modeling and simulation of highway traffic," *Proceedings of the 9th IFAC Symposium on Control in Transportation Systems 2000 (CTS 2000)*, Braunschweig, Germany, pp. 22–27, June 2000.
- [C190] B. De Schutter and T. van den Boom, "Model predictive control for max-plus-linear systems," *Proceedings of the 2000 American Control Conference*, Chicago, Illinois, pp. 4046–4050, June 2000.
- [C191] T. Bellemans, B. De Schutter, and B. De Moor, "Data acquisition, interfacing and pre-processing of highway traffic data," *Proceedings of Telematics Automotive 2000*, Birmingham, UK, vol. 1, pp. 4/1–4/7, Apr. 2000.
- [C192] B. De Schutter and T. van den Boom, "Model predictive control for max-min-plus systems," in *Discrete Event Systems: Analysis and Control* (Proceedings of the 5th International Workshop on Discrete Event Systems (WODES2000), Ghent, Belgium, Aug. 2000) (R. Boel and G. Stremersch, eds.), vol. 569 of *The Kluwer International Series in Engineering and Computer Science*, Boston, Massachusetts: Kluwer Academic Publishers, ISBN 0-7923-7897-0, pp. 201–208, 2000.
- [C193] B. De Schutter, "Optimal control of a class of linear hybrid systems with saturation," *Proceedings of the 38th IEEE Conference on Decision and Control*, Phoenix, Arizona, pp. 3978–3983, Dec. 1999.
- [C194] G. Nijssse, M. Verhaegen, B. De Schutter, D. Westwick, and N. Doelman, "State space modeling in multichannel active control systems," *Proceedings of the 1999 International Symposium on Active Control of Sound and Vibration (ACTIVE 99)* (S. Douglas, ed.), Fort Lauderdale, Florida, pp. 909–920, Dec. 1999.
- [C195] B. De Schutter, "Designing optimal timing and sequencing strategies for a continuous steel foundry," *Proceedings of the European Control Conference 1999 (ECC'99)*, Karlsruhe, Germany, 5 pp., Aug.–Sept. 1999. Paper 160/BP-2.6.
- [C196] B. De Schutter, "The extended linear complementarity problem and linear complementary-slackness systems," *Proceedings of the European Control Conference 1999 (ECC'99)*, Karlsruhe, Germany, 5 pp., Aug.–Sept. 1999. Paper 1006-3/CM-9.3.
- [C197] B. De Schutter, "Optimal traffic light control for a single intersection," *Proceedings of the 1999 American Control Conference*, San Diego, California, pp. 2195–2199, June 1999.
- [C198] B. De Schutter and B. De Moor, "On the sequence of consecutive matrix powers of boolean matrices in the max-plus algebra," in *Theory and Practice of Control and Systems* (Proceedings of the 6th IEEE Mediterranean Conference on Control and Systems, Alghero, Italy, June 1998) (A. Tornambè, G. Conte, and A.M. Perdon, eds.), Singapore: World Scientific, ISBN 981-02-3668-9, pp. 672–677, 1999.
- [C199] B. De Schutter and B. De Moor, "The extended linear complementarity problem and the modeling and analysis of hybrid systems," in *Hybrid Systems V* (Proceedings of the 5th International Hybrid Systems Workshop, Notre Dame, Indiana, Sept. 1997) (P. Antsaklis, W. Kohn, M. Lemmon, A. Nerode, and S. Sastry, eds.), vol. 1567 of *Lecture Notes in Computer Science*, Springer, ISBN 3-540-65643-X, pp. 70–85, 1999.
- [C200] B. De Schutter and B. De Moor, "On the boolean minimal realization problem in the max-plus algebra," *Proceedings of the 4th International Workshop on Discrete Event Systems (WODES'98)*, Cagliari, Italy, pp. 231–236, Aug. 1998.
- [C201] R. de Vries, B. De Schutter, and B. De Moor, "On max-algebraic models for transportation networks," *Proceedings of the 4th International Workshop on Discrete Event Systems (WODES'98)*, Cagliari, Italy, pp. 457–462, Aug. 1998.
- [C202] R. de Vries, B. De Schutter, and B. De Moor, "Minimal realizations and state space transformations in the symmetrized max-algebra," *Proceedings of the IFAC Conference on System Structure and Control (SSC'98)*, Nantes, France, pp. 587–592, July 1998.
- [C203] B. De Schutter, V. Blondel, and B. De Moor, "On the complexity of the boolean minimal realization problem in the max-plus algebra," *Advances in Systems, Signals, Control and Computers* (Proceedings of the International Conference on Systems, Signals, Control, Computers (SSCC'98), Durban, South Africa, Sept. 1998) (V.B. Bajić, ed.), vol. II, pp. 451–455, 1998.

- [C204] T. Van Gestel, K. De Cock, R. Jans, B. De Schutter, Z. Degraeve, and B. De Moor, “Discrete stochastic modelling of ATM-traffic with circulant transition matrices,” *Mathematical Theory of Networks and Systems* (Proceedings of the MTNS-98 Symposium, held in Padova, Italy, July 1998) (A. Beghi, L. Finesso, and G. Picci, eds.), Padova, Italy: Il Poligrafo, pp. 891–894, 1998.
- [C205] B. De Schutter and B. De Moor, “Optimal traffic light control for a single intersection,” *Proceedings of the 1997 International Symposium on Nonlinear Theory and its Applications (NOLTA’97)*, Honolulu, Hawaii, pp. 1085–1088, Nov.–Dec. 1997.
- [C206] B. De Schutter and B. De Moor, “The extended linear complementarity problem and its applications in the analysis and control of discrete event systems and hybrid systems,” *Proceedings of the IEEE Singapore International Symposium on Control Theory and Applications (SISCTA’97)*, Singapore, pp. 394–398, July 1997.
- [C207] B. De Schutter and B. De Moor, “The QR decomposition and the singular value decomposition in the symmetrized max-plus algebra,” *Proceedings of the European Control Conference (ECC’97)*, Brussels, Belgium, 6 pp., July 1997. Paper 295/TH-E K6.
- [C208] B. De Schutter and B. De Moor, “Matrix factorization and minimal state space realization in the max-plus algebra,” *Proceedings of the 1997 American Control Conference*, Albuquerque, New Mexico, pp. 3136–3140, June 1997.
- [C209] B. De Schutter and B. De Moor, “Generalized linear complementarity problems and the analysis of continuously variable systems and discrete event systems,” in *Hybrid and Real-Time Systems* (Proceedings of the International Workshop on Hybrid and Real-Time Systems (HART’97), Grenoble, France, Mar. 1997) (O. Maler, ed.), vol. 1201 of *Lecture Notes in Computer Science*, Springer-Verlag, ISBN 3-540-62600-X, pp. 409–414, 1997.
- [C210] B. De Schutter and B. De Moor, “Applications of the extended linear complementarity problem in the max-plus algebra,” *Proceedings of the International Workshop on Discrete Event Systems (WODES’96)*, Edinburgh, UK, pp. 69–74, Aug. 1996.
- [C211] B. De Schutter and B. De Moor, “State space transformations and state space realization in the max algebra,” *Proceedings of the 34th IEEE Conference on Decision and Control*, New Orleans, Louisiana, pp. 891–896, Dec. 1995.
- [C212] B. De Schutter and B. De Moor, “Minimal state space realization of MIMO systems in the max algebra,” *Proceedings of the 3rd European Control Conference (ECC’95)*, Rome, Italy, pp. 411–416, Sept. 1995.
- [C213] B. De Schutter and B. De Moor, “The characteristic equation and minimal state space realization of SISO systems in the max algebra,” in *11th International Conference on Analysis and Optimization of Systems* (Sophia-Antipolis, France, June 1994) (G. Cohen and J.P. Quadrat, eds.), vol. 199 of *Lecture Notes in Control and Information Sciences*, Springer-Verlag, ISBN 3-540-19896-2, pp. 273–282, 1994.

6 National conference papers (published or accepted)

- [O1] L. Buşoniu, B. De Schutter, R. Babuška, and D. Ernst, “Using prior knowledge to accelerate on-line least-squares policy iteration,” Tech. rep. 10-024, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 6 pp., Apr. 2010. Accepted for the *2010 IEEE International Conference on Automation, Quality and Testing, Robotics (AQTR 2010)*, Cluj-Napoca, Romania, May 2010.
- [O2] Zs. Lendek, R. Babuška, and B. De Schutter, “Stability bounds for fuzzy estimation and control – Part II: Output-feedback control,” Tech. rep. 10-026, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 6 pp., Apr. 2010. Accepted for the *2010 IEEE International Conference on Automation, Quality and Testing, Robotics (AQTR 2010)*, Cluj-Napoca, Romania, May 2010.

- [O3] Zs. Lendek, R. Babuška, and B. De Schutter, “Stability bounds for fuzzy estimation and control – Part I: State estimation,” Tech. rep. 10-025, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 6 pp., Apr. 2010. Accepted for the *2010 IEEE International Conference on Automation, Quality and Testing, Robotics (AQTR 2010)*, Cluj-Napoca, Romania, May 2010.
- [O4] L. Baskar, B. De Schutter, and H. Hellendoorn, “Intelligent speed adaptation in intelligent vehicle highway systems – A model predictive control approach,” *Proceedings of the 10th TRAIL Congress 2008 – TRAIL in Perspective – CD-ROM*, Rotterdam, The Netherlands, 13 pp., Oct. 2008.
- [O5] A. Tarău, B. De Schutter, and H. Hellendoorn, “Route choice control for DCVs in baggage handling systems – Comparison between centralized and decentralized approaches,” *Proceedings of the 10th TRAIL Congress 2008 – TRAIL in Perspective – CD-ROM*, Rotterdam, The Netherlands, 14 pp., Oct. 2008.
- [O6] M. van den Berg, B. De Schutter, H. Hellendoorn, and A. Hegyi, “Day-to-day route choice control in traffic networks – A model predictive control approach based on mixed integer linear programming,” *Proceedings of the 10th TRAIL Congress 2008 – TRAIL in Perspective – CD-ROM*, Rotterdam, The Netherlands, 14 pp., Oct. 2008.
- [O7] S. Zegeye, B. De Schutter, H. Hellendoorn, and E. Breunese, “A model-based predictive traffic control approach for the reduction of emissions,” *Proceedings of the 10th TRAIL Congress 2008 – TRAIL in Perspective – Selected Papers*, Rotterdam, The Netherlands, 11 pp., Oct. 2008.
- [O8] L.D. Baskar, B. De Schutter, and H. Hellendoorn, “Decentralized traffic control and management with intelligent vehicles,” *Proceedings of the 9th TRAIL Congress 2006 – TRAIL in Motion – CD-ROM*, Rotterdam, The Netherlands, 16 pp., Nov. 2006.
- [O9] A. Tarău, B. De Schutter, and H. Hellendoorn, “Multi-agent controllers for large-scale transportation systems – Application to postal automation,” *Proceedings of the 9th TRAIL Congress 2006 – TRAIL in Motion – CD-ROM*, Rotterdam, The Netherlands, 12 pp., Nov. 2006.
- [O10] M. van den Berg, A. Hegyi, B. De Schutter, and H. Hellendoorn, “Influencing long-term route choice by traffic control measures, a basic model study,” *Proceedings of the 9th TRAIL Congress 2006 – TRAIL in Motion – CD-ROM*, Rotterdam, The Netherlands, 16 pp., Nov. 2006.
- [O11] R. van Katwijk, B. De Schutter, and H. Hellendoorn, “Look-ahead traffic adaptive control of a single intersection – A taxonomy and a new hybrid algorithm,” *Proceedings of the 9th TRAIL Congress 2006 – TRAIL in Motion – CD-ROM*, Rotterdam, The Netherlands, 14 pp., Nov. 2006.
- [O12] A. Hegyi and B. De Schutter, “Dynamisch verkeersmanagement voor het verbeteren van de luchtkwaliteit,” *Proceedings of the Congres Geluid, Trillingen en Luchtkwaliteit in Nederland* (Conference on Noise, Vibrations, and Air Quality in The Netherlands), Nieuwegein, The Netherlands, 4 pp., Nov. 2005. In Dutch.
- [O13] L. Buşoni, B. De Schutter, and R. Babuška, “Multiagent reinforcement learning with adaptive state focus,” *Proceedings of the 17th Belgium-Netherlands Conference on Artificial Intelligence (BNAIC 2005)* (K. Verbeeck, K. Tuyls, A. Nowé, B. Manderick, and B. Kuijpers, eds.), Brussels, Belgium, pp. 35–42, Oct. 2005.
- [O14] O.J. Gietelink, B. De Schutter, and M. Verhaegen, “A probabilistic approach for validation of advanced driver assistance systems,” *Proceedings of the 8th TRAIL Congress 2004 – A World of Transport, Infrastructure and Logistics – CD-ROM*, Rotterdam, The Netherlands, 17 pp., Nov. 2004.
- [O15] A. Hegyi, B. De Schutter, and J. Hellendoorn, “Optimal freeway control in networks with bottlenecks and static demands,” *Proceedings of the 8th TRAIL Congress 2004 – A World of Transport, Infrastructure and Logistics – Selected Papers* (P.H.L. Bovy, ed.), Rotterdam, The Netherlands, pp. 205–227, Nov. 2004.
- [O16] R.R. Negenborn, B. De Schutter, M.A. Wiering, and J. Hellendoorn, “Experience-based model predictive control using reinforcement learning,” *Proceedings of the 8th TRAIL Congress 2004 – A World of Transport, Infrastructure and Logistics – CD-ROM*, Rotterdam, The Netherlands, 18 pp., Nov. 2004.

- [O17] M. van den Berg, B. De Schutter, and H. Hellendoorn, “Integrated model predictive control for mixed urban and freeway networks,” *Proceedings of the 8th TRAIL Congress 2004 – A World of Transport, Infrastructure and Logistics – Selected Papers* (P.H.L. Bovy, ed.), Rotterdam, The Netherlands, pp. 27–49, Nov. 2004.
- [O18] R.T. van Katwijk, P. van Koningsbruggen, B. De Schutter, and J. Hellendoorn, “A test bed for multi-agent control systems in road traffic management,” *Proceedings of the 8th TRAIL Congress 2004 – A World of Transport, Infrastructure and Logistics – Selected Papers* (P.H.L. Bovy, ed.), Rotterdam, The Netherlands, pp. 309–329, Nov. 2004.
- [O19] A. Hegyi, B. De Schutter, and J. Hellendoorn, “Optimal coordination of variable speed limits to suppress shock waves,” *Proceedings of the 7th TRAIL Congress 2002 – TRAILblazing into the Future – Selected Papers* (P.H.L. Bovy, ed.), Rotterdam, The Netherlands, pp. 197–220, Nov. 2002.
- [O20] A. Hegyi, B. De Schutter, R. Babuška, S. Hoogendoorn, H. van Zuylen, and H. Schuurman, “A fuzzy decision support system for traffic control centers,” *Proceedings of the TRAIL 6th Annual Congress 2000 – Transport, Infrastructure and Logistics, Part 2*, The Hague/Scheveningen, The Netherlands, 10 pp., Dec. 2000.

7 PhD thesis

- [D1] B. De Schutter, *Max-Algebraic System Theory for Discrete Event Systems*². PhD thesis, Faculty of Applied Sciences, K.U.Leuven, Leuven, Belgium, ISBN 90-5682-016-8, 331 pp., Feb. 1996.

8 Project reports

- [P1] A. Kozma, C. Savorgnan, R.R. Negenborn, and B. De Schutter, “Report on or proceedings of a special session at an international conference,” Deliverable D8.2.1, European FP7 STREP project HD-MPC, 16 pp., Feb. 2010.
- [P2] S. Lin and B. De Schutter, “A survey on coordinated traffic control,” Tech. rep. 09-054, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 44 pp., Dec. 2009. Report for the Centre for Transport and Navigation (DVS) of the Dutch Ministry of Transport, Public Works and Water Management. Confidential.
- [P3] H. Scheu, J.C. Calderón, D. Doan, J.F. García, R.R. Negenborn, A. Tarău, F.V. Arroyave, B. De Schutter, J.J. Espinosa, and W. Marquardt, “Report on assessment of existing coordination mechanisms for simple case studies, and on possible options for improving and extending these coordination mechanisms,” Deliverable D3.3.1, European FP7 STREP project HD-MPC, 30 pp., Dec. 2009.
- [P4] D. Doan, T. Keviczky, and B. De Schutter, “Overview, toolbox and tutorial manual of existing state-of-the-art distributed optimization algorithms,” Deliverable D4.1.2, European FP7 STREP project HD-MPC, 17 pp., Aug. 2009.
- [P5] B. De Schutter, R.R. Negenborn, M. Diehl, K. Gevaert, and C. Savorgnan, “Report on the set-up of a website including downloads of reports, presentations, open-source software and a database of benchmark problems,” Deliverable D8.1.1, European FP7 STREP project HD-MPC, 11 pp., Mar. 2009.
- [P6] A. Hegyi, B. De Schutter, J. Hellendoorn, and R.T. van Katwijk, “Testbed selection for the Transumo/ATMA sub-project *Integrated Model Predictive Control (IMPreC)*,” Tech. rep., Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 11 pp., Feb. 2007. Report for the BSIK-TRANSUMO ATMA project.

²For my PhD thesis I have been awarded the Biennial 1998 Richard C. DiPrima Prize and the Triennial Robert Stock Prize for PhD theses in Exact Sciences at K.U.Leuven in the period 1996–1997–1998.

- [P7] S.P. Hoogendoorn and B. De Schutter, “BOSS scenario evaluatie,” Tech. rep., Transport Research Centre (AVV), Ministry of Transport, Public Works and Water Management, Rotterdam, The Netherlands, 65 pp., Dec. 2002. Final report for the AVV project BOSS Scenario Evaluation. In Dutch. Confidential.
- [P8] S.P. Hoogendoorn, B. De Schutter, A. Hegyi, H.J. van Zuylen, and R. Babuška, “Verkenning fuzzy decision support systeem – Eindrapport,” Tech. rep., Transport Research Centre (AVV), Ministry of Transport, Public Works and Water Management, Rotterdam, The Netherlands, 69 pp., Sept. 2000. Final report for the AVV project Fuzzy Decision Support System. In Dutch. Confidential.
- [P9] S.P. Hoogendoorn, H.J. van Zuylen, B. De Schutter, and A. Hegyi, “Functioneel ontwerp fuzzy decision support systeem,” Tech. rep. VK 2000.008, Transportation Planning and Traffic Engineering Section, Faculty of Civil Engineering and Geosciences, Delft University of Technology, Delft, The Netherlands, 31 pp., Aug. 2000. Report for the AVV project Fuzzy Decision Support System. In Dutch. Confidential.
- [P10] G. Nijse, D. Westwick, B. De Schutter, and M. Verhaegen, “Simplification of multichannel active noise control systems: A feasibility study,” Tech. rep. TUD/ITS/ET/SCE:1999.05, Control Systems Engineering, Fac. of Information Technology and Systems, Delft University of Technology, Delft, The Netherlands, 46 pp., June 1999. Final report for the TNO-TPD project on active noise control. Confidential.
- [P11] D. Westwick, G. Nijse, B. De Schutter, and M. Verhaegen, “Simplification of multichannel active noise control systems: Midterm progress report,” Tech. rep. TUD/ITS/ET/SCE:1999.01, Control Systems Engineering, Fac. of Information Technology and Systems, Delft University of Technology, Delft, The Netherlands, 30 pp., Mar. 1999. Midterm progress report for the TNO-TPD project on active noise control. Confidential.

9 Abstracts

- [A1] Z. Cong, B. De Schutter, and R. Babuška, “Swarm intelligence for traffic control,” *Book of Abstracts of the 29th Benelux Meeting on Systems and Control*, Heeze, The Netherlands, p. 35, Mar.–Apr. 2010.
- [A2] S.S. Farahani, T.J.J. van den Boom, and B. De Schutter, “An approximation method for stochastic max-plus linear systems,” *Book of Abstracts of the 29th Benelux Meeting on Systems and Control*, Heeze, The Netherlands, p. 90, Mar.–Apr. 2010.
- [A3] N. Groot, B. De Schutter, and H. Hellendoorn, “Multi-level model predictive control of large-scale networks,” *Book of Abstracts of the 29th Benelux Meeting on Systems and Control*, Heeze, The Netherlands, p. 107, Mar.–Apr. 2010.
- [A4] Z. Hidayat, R. Babuška, and B. De Schutter, “Comparison of decentralized Kalman filters for heated plates,” *Book of Abstracts of the 29th Benelux Meeting on Systems and Control*, Heeze, The Netherlands, p. 175, Mar.–Apr. 2010.
- [A5] G.A.D. Lopes, R. Babuška, A.J.J. van den Boom, and B. De Schutter, “Modeling legged locomotion via the max-plus algebra,” *Book of Abstracts of the 29th Benelux Meeting on Systems and Control*, Heeze, The Netherlands, p. 44, Mar.–Apr. 2010.
- [A6] D. Doan, T. Keviczky, B. De Schutter, I. Necoara, and M. Diehl, “A Jacobi algorithm for distributed model predictive control of dynamically coupled systems,” *Book of Abstracts of the 28th Benelux Meeting on Systems and Control*, Spa, Belgium, p. 66, Mar. 2009.
- [A7] S. Lin, B. De Schutter, and Y. Xi, “A simplified model for urban traffic network control,” *Book of Abstracts of the 28th Benelux Meeting on Systems and Control*, Spa, Belgium, p. 90, Mar. 2009.
- [A8] S.K. Zegeye, B. De Schutter, and J. Hellendoorn, “Model predictive control for the reduction of traffic emissions,” *Book of Abstracts of the 28th Benelux Meeting on Systems and Control*, Spa, Belgium, p. 135, Mar. 2009.

- [A9] M. Gerard, M. Verhaegen, and B. De Schutter, "A hybrid steepest descent method for constrained convex optimization," *Abstracts of the 27th Benelux Meeting on Systems and Control*, Heeze, The Netherlands, p. 135, Mar. 2008.
- [A10] Ö.A. Tekin, R. Babuška, and B. De Schutter, "Automatic control code generation for mechatronic systems," *Abstracts of the 27th Benelux Meeting on Systems and Control*, Heeze, The Netherlands, p. 58, Mar. 2008.
- [A11] J. van Ast, R. Babuška, and B. De Schutter, "Distributed surveillance by swarms of moving agents," *Abstracts of the 27th Benelux Meeting on Systems and Control*, Heeze, The Netherlands, p. 93, Mar. 2008.
- [A12] S.K. Zegeye, B. De Schutter, and J. Hellendoorn, "Model-based traffic flow control for the reduction of fuel consumption and exhaust emissions," *Abstracts of the 27th Benelux Meeting on Systems and Control*, Heeze, The Netherlands, p. 89, Mar. 2008.
- [A13] L.D. Baskar, B. De Schutter, and H. Hellendoorn, "Hierarchical traffic control and management with intelligent vehicles," *Abstracts of the 26th Benelux Meeting on Systems and Control*, Lommel, Belgium, p. 56, Mar. 2007.
- [A14] L. Buşoniu, B. De Schutter, and R. Babuška, "Fuzzy approximation in continuous-space reinforcement learning," *Abstracts of the 26th Benelux Meeting on Systems and Control*, Lommel, Belgium, p. 142, Mar. 2007.
- [A15] Zs. Lendek, R. Babuška, and B. De Schutter, "Distributed fuzzy observers," *Abstracts of the 26th Benelux Meeting on Systems and Control*, Lommel, Belgium, p. 182, Mar. 2007.
- [A16] A. Tarău, B. De Schutter, and H. Hellendoorn, "Multi-agent control for large-scale transportation systems," *Abstracts of the 26th Benelux Meeting on Systems and Control*, Lommel, Belgium, p. 155, Mar. 2007.
- [A17] J.M. van Ast, R. Babuška, and B. De Schutter, "Swarm intelligence methods for traffic control," *Abstracts of the 26th Benelux Meeting on Systems and Control*, Lommel, Belgium, p. 54, Mar. 2007.
- [A18] L. Buşoniu, B. De Schutter, and R. Babuška, "Learning in multiagent systems: A Survey," *Abstracts of the 25th Benelux Meeting on Systems and Control*, Heeze, The Netherlands, p. 29, Mar. 2006.
- [A19] D. Corona and B. De Schutter, "Adaptive cruise controller design: A comparative assessment for piecewise affine systems," *Abstracts of the 25th Benelux Meeting on Systems and Control*, Heeze, The Netherlands, p. 132, Mar. 2006.
- [A20] Zs. Lendek, R. Babuška, and B. De Schutter, "Nonlinear state estimation for control: Comparison of UKF and PF," *Abstracts of the 25th Benelux Meeting on Systems and Control*, Heeze, The Netherlands, p. 93, Mar. 2006.
- [A21] R.R. Negenborn, B. De Schutter, and H. Hellendoorn, "Multi-agent model predictive control of transportation networks," *Abstracts of the 25th Benelux Meeting on Systems and Control*, Heeze, The Netherlands, p. 131, Mar. 2006.
- [A22] M. van den Berg, B. De Schutter, and J. Hellendoorn, "Re-routing traffic with on-ramp and off-ramp metering," *Abstracts of the 25th Benelux Meeting on Systems and Control*, Heeze, The Netherlands, p. 105, Mar. 2006.
- [A23] R.R. Negenborn, B. De Schutter, and H. Hellendoorn, "Multi-agent control of large-scale network systems," *Abstracts of the 24th Benelux Meeting on Systems and Control*, Houffalize, Belgium, p. 59, Mar. 2005.
- [A24] M. van den Berg, B. De Schutter, and J. Hellendoorn, "Travel time information as control measure," *Abstracts of the 24th Benelux Meeting on Systems and Control*, Houffalize, Belgium, p. 58, Mar. 2005.
- [A25] O. Gietelink, J. Ploeg, B. De Schutter, and M. Verhaegen, "Validation of advanced driver assistance systems with VEHL," *Abstracts of the 23rd Benelux Meeting on Systems and Control*, Helvoirt, The Netherlands, p. 15, Mar. 2004.

- [A26] A. Hegyi, B. De Schutter, and H. Hellendoorn, "Implications of the capacity drop phenomenon for freeway traffic control," *Abstracts of the 23rd Benelux Meeting on Systems and Control*, Helvoirt, The Netherlands, p. 17, Mar. 2004.
- [A27] I. Necoara, B. De Schutter, T. van den Boom, and H. Hellendoorn, "Model predictive control for perturbed continuous PWA systems," *Abstracts of the 23rd Benelux Meeting on Systems and Control*, Helvoirt, The Netherlands, p. 87, Mar. 2004.
- [A28] M. van den Berg, B. De Schutter, and J. Hellendoorn, "Model predictive control for mixed urban and freeway networks," *Abstracts of the 23rd Benelux Meeting on Systems and Control*, Helvoirt, The Netherlands, p. 101, Mar. 2004.
- [A29] B. De Schutter, I. Necoara, S. Hoogendoorn, and H. Schuurman, "A multi-agent case-based traffic control scenario evaluation system," *Abstracts of the 22nd Benelux Meeting on Systems and Control*, Lommel, Belgium, p. 141, Mar. 2003.
- [A30] O. Gietelink, J. Ploeg, B. De Schutter, and M. Verhaegen, "Design methodology for fault-tolerant control of advanced driver assistance systems," *Abstracts of the 22nd Benelux Meeting on Systems and Control*, Lommel, Belgium, p. 134, Mar. 2003.
- [A31] A. Hegyi, B. De Schutter, H. Hellendoorn, and D. Ngoduy, "Optimal speed limits to suppress shock waves on the A1," *Abstracts of the 22nd Benelux Meeting on Systems and Control*, Lommel, Belgium, p. 140, Mar. 2003.
- [A32] T. Bellemans, S. Maerivoet, B. De Moor, and B. De Schutter, "Potential benefits of ramp metering on motorways," *Abstracts of the 21st Benelux Meeting on Systems and Control*, Veldhoven, The Netherlands, p. 109, Mar. 2002.
- [A33] A. Hegyi, B. De Schutter, and H. Hellendoorn, "Model predictive control for optimal coordination of ramp metering and variable speed control," *Abstracts of the 21st Benelux Meeting on Systems and Control*, Veldhoven, The Netherlands, p. 110, Mar. 2002.
- [A34] M. Heemels, B. De Schutter, and A. Bemporad, "On the equivalence of hybrid dynamical models," *Abstracts of the 20th Benelux Meeting on Systems and Control*, Houffalize, Belgium, p. 110, Mar. 2001.
- [A35] T. Bellemans, B. De Schutter, and B. De Moor, "Fitting of a flow model to sensor data of highway traffic," *Abstracts of the 19th Benelux Meeting on Systems and Control*, Mierlo, The Netherlands, p. 31, Mar. 2000.
- [A36] A. Hegyi, B. De Schutter, S. Hoogendoorn, R. Babuška, and H. van Zuylen, "Fuzzy decision support system for traffic control centers," *Abstracts of the 19th Benelux Meeting on Systems and Control*, Mierlo, The Netherlands, p. 34, Mar. 2000.
- [A37] G. Nijssen, M. Verhaegen, B. De Schutter, D. Westwick, and N. Doelman, "State space model representations in adaptive disturbance rejection systems," *Abstracts of the 19th Benelux Meeting on Systems and Control*, Mierlo, The Netherlands, p. 122, Mar. 2000.
- [A38] T. Bellemans, B. De Schutter, and B. De Moor, "Optimal ramp metering on highways," *Abstracts of the 18th Benelux Meeting on Systems and Control*, Houthalen, Belgium, p. 97, Mar. 1999.
- [A39] B. De Schutter, B. De Moor, and R. de Vries, "The extended linear complementarity problem and optimal traffic light control," *Abstracts of the 16th European Conference on Operational Research (EURO XVI)*, Brussels, Belgium, p. 63, July 1998.
- [A40] B. De Schutter and B. De Moor, "Optimal traffic light control for a single intersection," *Abstracts of the 17th Benelux Meeting on Systems and Control*, Mierlo, The Netherlands, p. 215, Mar. 1998.
- [A41] B. De Schutter and B. De Moor, "The extended linear complementarity problem and the modeling and analysis of hybrid systems," *Book of extended abstracts of the Hybrid Systems V (HS'97) workshop*, Notre Dame, Indiana, pp. 15–20, Sept. 1997.
- [A42] B. De Moor, P. De Gerssem, B. De Schutter, and W. Favoreel, "DAISY: A database for identification of systems," *Abstracts of the 16th Benelux Meeting on Systems and Control*, Houffalize, Belgium, Mar. 1997.

- [A43] B. De Schutter and B. De Moor, “Matrix factorization and minimal state space realization in the max-plus algebra,” *Abstracts of the 16th Benelux Meeting on Systems and Control*, Houffalize, Belgium, Mar. 1997.
- [A44] B. De Schutter and B. De Moor, “The extended linear complementarity problem and its applications in the analysis of discrete event systems,” *Abstracts of the 11th Conference on Quantitative Methods for Decision Making (ORBEL 11)*, Namur, Belgium, pp. 43–45, Jan. 1997.
- [A45] B. De Schutter and B. De Moor, “Applications of the extended linear complementarity problem in the max-plus algebra,” *Abstracts of the 15th Benelux Meeting on Systems and Control*, Mierlo, The Netherlands, Mar. 1996.
- [A46] B. De Schutter and B. De Moor, “Minimal state space realization of MIMO systems in the max algebra,” *Abstracts of the 14th Benelux Meeting on Systems and Control*, Houthalen, Belgium, Mar. 1995.
- [A47] B. De Schutter and B. De Moor, “The extended linear complementarity problem,” *Abstracts of ICCAM 94 (International Congress on Computational and Applied Mathematics)*, Leuven, Belgium, July 1994.

10 Lecture notes

- [L1] B. De Schutter, *Advanced Traffic Control: Model-Based Predictive Control*, Lecture Notes for the lecture on Advanced Traffic Control of the PAO Course Dynamic Traffic Management, Delft, The Netherlands, Delft University of Technology, 17 pp., Sept. 2009. Revised edition.
- [L2] T. van den Boom and B. De Schutter, *Optimization in Systems and Control*, Lecture Notes of the Course “Optimization in Systems and Control” (SC4091), Delft University of Technology, 192 pp., July 2009. Revised edition.
- [L3] B. De Schutter and W.P.M.H. Heemels, *Modeling and Control of Hybrid Systems*, Lecture Notes of the Course “Modeling and Control of Hybrid Systems” (SC4160), Delft University of Technology, 157 pp., Jan. 2009. Revised edition.
- [L4] B. De Schutter and W.P.M.H. Heemels, *Modeling and Control of Hybrid Systems*, Lecture Notes of the DISC Course “Modeling and Control of Hybrid Systems”, DISC (Dutch Institute of Systems and Control), 157 pp., Nov. 2008. Revised edition.

11 Published reviews

- [R1] B. De Schutter, Review of “Duality and separation theorems in idempotent semimodules” (by G. Cohen, S. Gaubert, and J.P. Quadrat, *Linear Algebra and Its Applications*, vol. 379, pp. 395–422, 2004), *Mathematical Reviews*, 2005. Review 2005e:46007.
- [R2] B. De Schutter, Review of “On the linear assignment problem for special matrices” (by P. Butkovič and R.A. Cuninghame-Green, *IMA Journal of Management Mathematics*, vol. 15, no. 1, pp. 1–12, 2004), *Mathematical Reviews*, 2005. Review 2005f:93115.
- [R3] B. De Schutter, Review of “Comparison and aggregation of max-plus linear systems” (by J. Ledoux and L. Truffet, *Linear Algebra and Its Applications*, vol. 378, pp. 245–272, 2004), *Mathematical Reviews*, 2004. Review 2004m:93085.
- [R4] B. De Schutter, Review of “Continuous extension of order-preserving homogeneous maps” (by A.D. Burbanks, C.T. Sparrow, and R.D. Nussbaum, *Kybernetika*, Special Issue on Max-Plus Algebras, vol. 39, no. 2, pp. 205–215, 2003), *Mathematical Reviews*, 2004. Review 2004g:06010.
- [R5] B. De Schutter, Review of *Constrained Optimal Control of Linear and Hybrid Systems* (by F. Borrelli, vol. 290 of *Lecture Notes in Control and Information Sciences*, Berlin: Springer, 2003), *Mathematical Reviews*, 2004. Review 2004i:49001.

- [R6] B. De Schutter, Review of *Piecewise Linear Control Systems* (by M. Johansson, vol. 284 of *Lecture Notes in Control and Information Sciences*, Berlin, Germany: Springer, 2003), *Mathematical Reviews*, 2004. Review 2004d:93002.
- [R7] B. De Schutter, Review of “Games for synthesis of controllers with partial observation” (by A. Arnold, A. Vincent, and I. Walukiewicz, *Theoretical Computer Science*, vol. 303, no. 1, pp. 7–34, 2003), *Mathematical Reviews*, 2004. Review 2004h:93121.
- [R8] B. De Schutter, Review of “Minimax—or feared value— L^1/L^∞ control” (by P. Bernhard, *Theoretical Computer Science*, Special Issue on Max-Plus Algebras, vol. 293, no. 1, pp. 25–44, 2003), *Mathematical Reviews*, 2004. Review 2004b:49054.
- [R9] B. De Schutter, Review of “Reduced supervisors for timed discrete-event systems” (by P. Gohari and W.M. Wonham, *IEEE Transactions on Automatic Control*, vol. 48, no. 7, pp. 1187–1198, 2003), *Mathematical Reviews*, 2004. Review 2004c:93075.
- [R10] B. De Schutter, Review of “A general architecture for decentralized supervisory control of discrete-event systems” (by T.S. Yoo and S. Lafortune, *Discrete Event Dynamic Systems: Theory and Applications*, vol. 12, no. 3, pp. 335–377, 2002), *Mathematical Reviews*, 2003. Review 2003h:93046.
- [R11] B. De Schutter, Review of “Discrete supervisory control of hybrid systems based on l -complete approximations” (by T. Moor, J. Raisch, S. O’Young, *Discrete Event Dynamic Systems: Theory and Applications*, vol. 12, no. 1, pp. 83–107, 2002), *Mathematical Reviews*, 2003. Review 2003a:93045.
- [R12] B. De Schutter, Review of “Generalized surrogate problem methodology for online stochastic discrete optimization” (by K. Gokbayrak and C.G. Cassandras, *Journal of Optimization Theory and Applications*, vol. 114, no. 1, pp. 97–132, 2002), *Mathematical Reviews*, 2003. Review 2003f:90048.
- [R13] B. De Schutter, Review of “Regular ordering and applications in control policies” (by E. Altman, B. Gaujal, and A. Hordijk, *Discrete Event Dynamic Systems: Theory and Applications*, vol. 12, no. 2, pp. 187–210, 2002), *Mathematical Reviews*, 2003. Review 2003e:90019.
- [R14] B. De Schutter, Review of “Asymptotic height optimization for topical IFS, Tetris heaps, and the finiteness conjecture” (by T. Bousch and J. Mairesse, *Journal of the American Mathematical Society*, vol. 15, no. 1, pp. 77–111, Sept. 2001), *Mathematical Reviews*, 2002. Review 2002j:49008.
- [R15] B. De Schutter, Review of “Dynamical consistency in hierarchical supervisory control” (by P. Hubbard and P.E. Caines, *IEEE Transactions on Automatic Control*, vol. 47, no. 1, pp. 37–52, Jan. 2002), *Mathematical Reviews*, 2002. Review 2002k:93049.
- [R16] B. De Schutter, Review of *Introduction to Discrete Event Systems* (by C.G. Cassandras and S. Lafortune, Boston, Massachusetts: Kluwer Academic Publishers, 1999), *Mathematical Reviews*, 2002. Review 2002f:93002.
- [R17] B. De Schutter, Review of “Equation with residuated functions” (by R.A. Cuninghame-Green and K. Zimmermann, *Commentationes Mathematicae Universitatis Carolinae*, vol. 42, no. 4, pp. 729–740, 2001), *Mathematical Reviews*, 2002. Review 2002j:93058.
- [R18] B. De Schutter, Review of “Synthesis of supervisors using learning algorithm of regular languages” (by K. Hiraishi, *Discrete Event Dynamic Systems: Theory and Applications*, vol. 11, no. 3, pp. 211–234, 2001), *Mathematical Reviews*, 2002. Review 2002c:93102.
- [R19] B. De Schutter, Review of “Towards a (max,+) control theory for public transportation networks” (by B. Heidergott and R. de Vries, *Discrete Event Dynamic Systems: Theory and Applications*, vol. 11, no. 4, pp. 371–398, Oct. 2001), *Mathematical Reviews*, 2002. Review 2002f:93074.
- [R20] B. De Schutter, Review of “Towards online computation of information state controllers” (by M.R. James, in *Perspectives in robust control* (S.O.R. Moheimani, ed.), vol. 268 of *Lecture Notes in Control and Information Sciences*, ch. 11, pp. 175–185, London: Springer, 2001), *Mathematical Reviews*, 2002. Review 2002a:93044.
- [R21] B. De Schutter, Review of “Transience bounds for long walks” (by M. Hartmann and C. Arguelles, *Mathematics of Operations Research*, vol. 24, no. 2, pp. 414–439, May 1999), *Mathematical Reviews*, 2002. Review 2002h:93070.

- [R22] B. De Schutter, Review of *Stability Analysis of Discrete Event Systems* (by K.M. Passino and K.L. Burgess, A volume in the *Wiley Series on Adaptive and Learning Systems for Signal Processing, Communications, and Control* (S. Haykin, ed.), New York: John Wiley & Sons, 1998), *Automatica*, vol. 37, no. 5, pp. 799–801, May 2001.
- [R23] B. De Schutter, Review of “Between mathematical programming and systems theory: Linear complementarity systems” (by H. Schumacher, in *Advances in Mathematical Systems Theory* (F. Colomnius, F. Wirth, U. Helmke, and D. Pratzel-Wolters, eds.), ch. 11, pp. 185–219, Boston, Massachusetts: Birkhäuser, 2000), *Mathematical Reviews*, 2001. Review 2001i:93008.
- [R24] B. De Schutter, Review of “Cycle times assignment of nonlinear discrete event dynamic systems” (by W. Chen, *Systems Science and Mathematical Sciences*, vol. 13, no. 2, pp. 213–218, Apr. 2000), *Mathematical Reviews*, 2001. Review 2001c:93062.
- [R25] B. De Schutter, Review of “Masked prioritized synchronization for interaction and control of discrete event systems” (by R. Kumar and M. Heymann, *IEEE Transactions on Automatic Control*, vol. 45, no. 11, pp. 1970–1982, Nov. 2000), *Mathematical Reviews*, 2001. Review 2001j:93069.
- [R26] B. De Schutter, Review of “Max-plus algebra and mathematical fear in dynamic optimization” (by P. Bernhard, *Set-Valued Analysis*, vol. 8, no. 1–2, pp. 71–84, 2000), *Mathematical Reviews*, 2001. Review 2001g:49045.
- [R27] B. De Schutter, Review of “Projected dynamical systems in a complementarity formalism” (by W.P.M.H. Heemels, J.M. Schumacher, and S. Weiland, *Operations Research Letters*, vol. 27, no. 2, pp. 83–91, 2000), *Mathematical Reviews*, 2001. Review 2001g:93012.
- [R28] B. De Schutter, Review of “A constructive fixed point theorem for min-max functions” (by J. Cochet-Terrasson, S. Gaubert, and J. Gunawardena, *Dynamics and Stability of Systems*, vol. 14, no. 4, pp. 407–433, 1999), *Mathematical Reviews*, 2000. Review 2000m:47077.
- [R29] B. De Schutter, Review of “An optimal control theory for discrete event systems” (by R. Sengupta and S. Lafortune, *SIAM Journal on Control and Optimization*, vol. 36, no. 2, pp. 488–541, Mar. 1998), *Mathematical Reviews*, 2000. Review 2000j:93070.
- [R30] B. De Schutter, Review of “Controllability in the max-algebra” (by J.M. Prou and E. Wagneur, *Kybernetika*, vol. 35, no. 1, pp. 13–24, 1999), *Mathematical Reviews*, 2000. Review 2000f:93060.
- [R31] B. De Schutter, Review of “Discrete event systems: The state of the art and new directions” (by C.G. Cassandras and S. Lafortune, in *Applied and Computational Control, Signals, and Circuits, Volume 1* (B. Datta, ed.), ch. 11, pp. 1–65, Boston, Massachusetts: Birkhäuser, 1999), *Mathematical Reviews*, 2000. Review 2000f:93057.
- [R32] B. De Schutter, Review of “Modular control and coordination of discrete-event systems dynamic systems using calculus of variations techniques” (by K.C. Wong and W.M. Wonham, *Discrete Event Dynamic Systems: Theory and Applications*, vol. 8, no. 3, pp. 247–297, 1998), *Mathematical Reviews*, 2000. Review 2000b:93055.
- [R33] B. De Schutter, Review of “Performance optimization of a class of discrete event dynamic systems using calculus of variations techniques” (by D.L. Pepyne and C.G. Cassandras, *Journal of Optimization Theory and Applications*, vol. 100, no. 3, pp. 599–622, Mar. 1999), *Mathematical Reviews*, 2000. Review 2000a:93069.
- [R34] B. De Schutter, Review of “Reachability and observability of linear systems over max-plus” (by M.J. Gazarik and E.W. Kamen, *Kybernetika*, vol. 35, no. 1, pp. 2–12, 1999), *Mathematical Reviews*, 2000. Review 2000f:93058.
- [R35] B. De Schutter, Review of “A method for the synthesis of controllers to handle safety, liveness, and real-time constraints” (by M. Barbeau, F. Kabanza, and R. St.-Denis, *IEEE Transactions on Automatic Control*, vol. 43, no. 11, Nov. 1998, pp. 1543–1559), *Mathematical Reviews*, 1999. Review 99h:93065.
- [R36] B. De Schutter, Review of “On the analyticity properties of infeasible-interior-point paths for monotone linear complementarity problems” (by J. Stoer and M. Wechs, *Numerische Mathematik*, vol. 81, pp. 631–645, 1999), *Mathematical Reviews*, 1999. Review 99m:90146.

- [R37] B. De Schutter, Review of “Supremum operators and computation of supremal elements in system theory” (by S. Hashtrudi Zad, R.H. Kwong, and W.M. Wonham, *SIAM Journal on Control and Optimization*, vol. 37, no. 3, pp. 695–709, 1999), *Mathematical Reviews*, 1999. Review 99m:93046.
- [R38] B. De Schutter, Review of “Analyse de systèmes min-max” (by G.J. Olsder, *Recherche Opérationnelle/Operations Research*, vol. 30, no. 1, 1996, pp. 17–30), *Mathematical Reviews*, 1997. Review 97d:93022.
- [R39] B. De Schutter, Review of “Analysis of stochastic min-max-plus systems: Results and conjectures” (by A. Jean-Marie and G.J. Olsder, *Mathematical and Computer Modelling*, vol. 23, no. 11/12, 1996, pp. 175–189), *Mathematical Reviews*, 1997. Review 97d:93023.
- [R40] B. De Schutter, Review of “Centralized and decentralized supervisory control of nondeterministic systems under partial observation” (by R. Kumar and M.A. Shayman, *SIAM Journal on Control and Optimization*, vol. 35, no. 2, Mar. 1997, pp. 363–383), *Mathematical Reviews*, 1997. Review 97k:93042.
- [R41] B. De Schutter, Review of “Max-plus algebra and applications to system theory and optimal control” (by Max-Plus Working Group, *Proceedings of the International Congress of Mathematicians*, Zürich, Switzerland, 1994, pp. 1511–1522), *Mathematical Reviews*, 1997. Review 97d:93021.
- [R42] B. De Schutter, Review of “On asymptotically efficient solutions for a class of supervisory control problems” (by R.S. Sreenivas, *IEEE Transactions on Automatic Control*, vol. 41, no. 12, Dec. 1996, pp. 1736–1750), *Mathematical Reviews*, 1997. Review 97h:93048.
- [R43] B. De Schutter, Review of “The generalized linear complementarity problem revisited” (by S.R. Mohan, S.K. Neogy, and R. Sridhar, *Mathematical Programming*, vol. 74, 1996, pp. 197–218), *Mathematical Reviews*, 1997. Review 97e:90100.
- [R44] B. De Schutter, Review of “The primal Douglas-Rachford splitting algorithm for a class of monotone mappings with application to the traffic equilibrium problem” (by M. Fukushima, *Mathematical Programming*, vol. 72, 1996, pp. 1–15), *Mathematical Reviews*, 1997. Review 97b:90114.
- [R45] B. De Schutter, Review of “Fully decentralized solutions of supervisory control problems” (by P. Kozák and W.M. Wonham, *IEEE Transactions on Automatic Control*, vol. 40, no. 12, Dec. 1995, pp. 2094–2097), *Mathematical Reviews*, 1996. Review 96h:93051.
- [R46] B. De Schutter, Review of “Superfluous matrices in linear complementarity” (by R. Sridhar, *Mathematical Programming*, vol. 71, 1995, pp. 195–206), *Mathematical Reviews*, 1996. Review 96k:90089.

12 Technical reports

- [T1] S.K. Zegeye, B. De Schutter, J. Hellendoorn, and E.A. Breunese, “A survey on traffic flow control for the reduction of emissions and fuel consumption,” Tech. rep. 08-020, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, Nov. 2008.
- [T2] J. van Ast, R. Babuška, and B. De Schutter, “Self-organizing moving agents: A survey,” Tech. rep. 07-021, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 42 pp., May 2007.
- [T3] A. Tarău, B. De Schutter, and J. Hellendoorn, “Multi-agent control of large-scale transportation systems: A survey,” Tech. rep. 07-016, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 51 pp., Mar. 2007.
- [T4] L.D. Baskar, B. De Schutter, H. Hellendoorn, Z. Papp, and T. van den Boom, “Hierarchical traffic control and management with intelligent vehicles: A survey,” Tech. rep. 06-040, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, Dec. 2006.
- [T5] T.J.J. van den Boom, B. Heidergott, and B. De Schutter, “Complexity reduction in MPC for stochastic max-plus-linear discrete event systems by variability expansion: Extended report,” Tech. rep. CSE02-016a, Control Systems Engineering, Fac. of Information Technology and Systems, Delft University of Technology, Delft, The Netherlands, 18 pp., Dec. 2006. A short version of this report has been published in *Automatica*, vol. 43, no. 6, pp. 1058–1063, June 2007.

- [T6] R. Babuška, L. Buşoniu, and B. De Schutter, “Reinforcement learning for multi-agent systems,” Tech. rep. 06-041, Delft Center for Systems and Control, Delft University of Technology, 7 pp., July 2006. Paper for a keynote presentation at the *11th IEEE International Conference on Emerging Technologies and Factory Automation (ETFA 2006)*, Prague, Czech Republic, Sept. 2006.
- [T7] I. Necoara, T.J.J. van den Boom, B. De Schutter, and J. Hellendoorn, “Stabilization of max-plus-linear systems using receding horizon control: The unconstrained case – Extended report,” Tech. rep. 06-007a, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 16 pp., Apr. 2006. A short version of this report has been published in the *Proceedings of the 2nd IFAC Conference on Analysis and Design of Hybrid Systems (ADHS’06)*, Alghero, Italy, pp. 148-153, June 2006.
- [T8] Zs. Lendek, R. Babuška, and B. De Schutter, “State estimation under uncertainty: A survey,” Tech. rep. 06-004, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 65 pp., Feb. 2006.
- [T9] L. Buşoniu, B. De Schutter, and R. Babuška, “Learning and coordination in dynamic multiagent systems,” Tech. rep. 05-019, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 98 pp., Oct. 2005.
- [T10] I. Necoara, B. De Schutter, T.J.J. van den Boom, and J. Hellendoorn, “Robustly stabilizing MPC for perturbed PWL systems: Extended report,” Tech. rep. 05-004a, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 6 pp., Feb. 2005. A short version of this paper has been published in the *Proceedings of the 44th IEEE Conference on Decision and Control, and the European Control Conference 2005 (CDC-ECC’05)*, Seville, Spain, pp. 3759-3764, Dec. 2005.
- [T11] R.R. Negenborn, B. De Schutter, and J. Hellendoorn, “Multi-agent model predictive control: A survey,” Tech. rep. 04-010, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 23 pp., Dec. 2004.
- [T12] I. Necoara, B. De Schutter, W.P.M.H. Heemels, S. Weiland, M. Lazar, and T.J.J. van den Boom, “Control of PWA systems using a stable receding horizon method: Extended report,” Tech. rep. 04-019a, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 26 pp., Oct. 2004. A short version of this report has been published in the *Proceedings of the 16th IFAC World Congress*, Prague, Czech Republic, July 2005. Paper 2794 / Tu-E21-TO/2.
- [T13] B. De Schutter and T.J.J. van den Boom, “MPC for continuous piecewise-affine systems – Addendum,” Tech. rep. CSE02-004a, Control Systems Engineering, Fac. of Information Technology and Systems, Delft University of Technology, Delft, The Netherlands, 9 pp., Oct. 2003.
- [T14] B. De Schutter and T.J.J. van den Boom, “Model predictive control for discrete-event and hybrid systems,” Tech. rep. 03-012, Delft Center for Systems and Control, Delft University of Technology, Delft, The Netherlands, 16 pp., Aug. 2003. Paper for the *Workshop on Nonlinear Predictive Control (Workshop S-5)* at the 42nd IEEE Conference on Decision and Control, Maui, Hawaii, Dec. 2003.
- [T15] A. Hegyi, B. De Schutter, and J. Hellendoorn, “Optimal coordination of variable speed limits to suppress shock waves – Addendum,” Tech. rep. CSE02-015a, Control Systems Engineering, Fac. of Information Technology and Systems, Delft University of Technology, Delft, The Netherlands, 4 pp., Mar. 2003.
- [T16] B. De Schutter and T. van den Boom, “Model predictive control for max-plus-linear discrete-event systems: Extended report & Addendum,” Tech. rep. bds:99-10a, Control Systems Engineering, Fac. of Information Technology and Systems, Delft University of Technology, Delft, The Netherlands, 27 pp., Nov. 2000. A short version of this report has been published in *Automatica*, vol. 37, no. 7, pp. 1049–1056, July 2001.
- [T17] B. De Schutter and T. van den Boom, “On model predictive control for max-min-plus-scaling discrete event systems,” Tech. rep. bds:00-04, Control Systems Engineering, Fac. of Information Technology and Systems, Delft University of Technology, Delft, The Netherlands, 19 pp., June 2000.

- [T18] B. De Schutter, “Optimal control of a class of linear hybrid systems with saturation: Addendum,” Tech. rep. bds:99-03a, Control Systems Engineering, Fac. of Information Technology and Systems, Delft University of Technology, Delft, The Netherlands, 8 pp., Oct. 1999.
- [T19] B. De Schutter, “Upper bounds for the index of cyclicity of a matrix,” Tech. rep. 98-32, ESAT-SISTA, K.U.Leuven, Leuven, Belgium, 16 pp., July 1999. Revised version.
- [T20] B. De Schutter and B. De Moor, “Optimal traffic light control for a single intersection: Addendum,” Tech. rep. 96-90a, ESAT-SISTA, K.U.Leuven, Leuven, Belgium, 19 pp., Jan. 1998.
- [T21] B. De Schutter, R. de Vries, and G.J. Olsder, “The minimal realization problem in the max-plus algebra: An overview,” Tech. rep. 97-107, ESAT-SISTA, K.U.Leuven, Leuven, Belgium, 7 pp., Dec. 1997.
- [T22] R. de Vries, B. De Schutter, and B. De Moor, “Minimal realizations and state space transformations in the symmetrized max-algebra,” Tech. rep. 97-84, ESAT-SISTA, K.U.Leuven, Leuven, Belgium, 21 pp., Dec. 1997.
- [T23] B. De Schutter, V. Blondel, R. de Vries, and B. De Moor, “On the boolean minimal realization problem in the max-plus algebra: Addendum,” Tech. rep. 97-68a, ESAT-SISTA, K.U.Leuven, Leuven, Belgium, 5 pp., Dec. 1997.
- [T24] T. Van Gestel, K. De Cock, R. Jans, B. De Schutter, Z. Degraeve, and B. De Moor, “Discrete stochastic modelling of ATM-traffic with circulant transition matrices: A time domain approach,” Tech. rep. 97-108, ESAT-SISTA, K.U.Leuven, Leuven, Belgium, 15 pp., Nov. 1997.
- [T25] B. De Schutter and B. De Moor, “On state space realizations of impulse responses of max-linear systems,” Tech. rep. 95-13, ESAT-SISTA, K.U.Leuven, Leuven, Belgium, 16 pp., Mar. 1995.
- [T26] B. De Schutter and B. De Moor, “The singular value decomposition in the extended max algebra is an extended linear complementarity problem,” Tech. rep. 95-07, ESAT-SISTA, K.U.Leuven, Leuven, Belgium, 27 pp., Mar. 1995.
- [T27] B. De Schutter and B. De Moor, “The singular value decomposition and the QR decomposition in the extended max algebra,” Tech. rep. 95-06, ESAT-SISTA, K.U.Leuven, Leuven, Belgium, 27 pp., Mar. 1995.
- [T28] B. De Schutter and B. De Moor, “The extended linear complementarity problem,” Tech. rep. 94-48, ESAT-SISTA, K.U.Leuven, Leuven, Belgium, 11 pp., Aug. 1994. Presented at the *6th International Congress on Computational and Applied Mathematics (ICCAM 94)*, Leuven, Belgium, July 1994.
- [T29] B. De Schutter and B. De Moor, “Minimal realization in the max algebra,” Tech. rep. 94-29, ESAT-SISTA, K.U.Leuven, Leuven, Belgium, 29 pp., May 1994.
- [T30] B. De Schutter and B. De Moor, “Minimal realization in the max algebra is an extended linear complementarity problem,” Tech. rep. 93-70, ESAT-SISTA, K.U.Leuven, Leuven, Belgium, 18 pp., Dec. 1993.
- [T31] B. De Schutter and B. De Moor, “Minimal state space realization of SISO systems in the max algebra,” Tech. rep. 93-57, ESAT-SISTA, K.U.Leuven, Leuven, Belgium, 31 pp., Oct. 1993.

13 Other publications

- [Z1] B. De Schutter and S.E. Shladover, “Introduction to the Special Section on IV’08,” *IEEE Transactions on Intelligent Transportation Systems*, vol. 10, no. 4, pp. 557–559, Dec. 2009.
- [Z2] B. De Schutter and A. Hegyi, “Introduction to the Special Section on ITSC ’05,” *IEEE Transactions on Intelligent Transportation Systems*, vol. 8, no. 1, pp. 1–3, Mar. 2007.