

# Citation List

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## 1 SCI Citations

**A. Rusnák, M. Fikar, K. Najim, and A. Mészáros. Generalized predictive control based on neural networks. *Neural Processing Letters*, 4(2):107 – 112, 1996.**

1. Potocnik P., Grabec I., Nonlinear model predictive control of a cutting process, *Neurocomputing*, 43: 107-126, 2002.
2. Chen, B. H., Woodley, J. M.: Wavelet shrinkage data processing for neural networks in bioprocess modeling, *Comp. Chem. Engng.* 26(11): 1611-1620, 2002.
3. Barreto, G. A., Araujo, A. F. R., Identification and Control of Dynamical Systems Using the Self-Organizing Map, *IEEE Transactions on Neural Networks*, 15(5), 1244-1259, September 2004.
4. Duarte-Mermoud, M.A., Suarez, A.M., Bassi, D.F., Multivariable predictive control of a pressurized tank using neural networks *Neural Computing & Applications* 15 (1): 18-25, 2006.
5. Liu G.P., Mu J.X., Rees D., Chai S.C., Design and stability analysis of networked control systems with random communication time delay using the modified MPC, *International Journal of Control* 79 (4): 288-297, 2006.
6. Mazinan, A. H., Sheikhan, M.: On the practice of artificial intelligence based predictive control scheme: a case study. *Applied Intelligence*, 36(1), 178-189, 2012.
7. Mazinan, A. H., Kazemi, M. F.: Analysis and control of a high-purity distillation column system. *Transactions of the Institute of Measurement and Control*, 34 (8), 1008-1018, 2012.

**K. Najim, A. Rusnák, A. Mészáros, and M. Fikar. Constrained long-range predictive control based on artificial neural networks. *Int. J. Sys. Sci.*, 28(12):1211–1226, 1997.**

8. Potocnik P., Grabec I., Nonlinear model predictive control of a cutting process, *Neurocomputing*, 43: 107-126, 2002.
9. Mekki, H., Chtourou, M., Derbel, N., Stochastic approximation based adaptive neural control for a class of nonlinear systems, *Control and Intelligent Systems* 33 (3), 190-198, 2005.
10. Mekki, H., Chtourou, M., Derbel, N., Variable structure neural networks for adaptive control of nonlinear systems using the stochastic approximation, *Simulation Modelling Practice and Theory* 14 (7), 1000-1009, 2006.
11. Boiko, I., Sayedain, S.: Analysis of dynamic nonlinearity of flow control loop through modified relay test probing. *International Journal of Control* 83 (12), pp. 2580-2587, 2010.

**M. Fikar and S. Engell. Receding horizon predictive control based upon Youla-Kučera parametrization. *European Journal of Control*, 3(4):304–316, 1997.**

12. Kowalczyk Z., Suchomski P., Robust continuous-time controller design via structural Youla-Kučera parameterization with application to predictive control, *Optimal Control Applications & Methods*, 25 (5): 235-262, 2004.
13. Bobál, V., Chalupa, P., Kubalčík, M., Dostál, P.: Self-Tuning predictive control of nonlinear servo-motor. *Journal of Electrical Engineering* 61 (6), pp. 365-372, 2010.

**M. Fikar, M. A. Latifi, F. Fournier, and Y. Creff. CVP versus IDP in dynamic optimisation of a distillation column. *Computers chem. Engng.*, 22:S625–S628, 1998b.**

14. Pibouleau, L., Floquet, P., Domenech, S., Azzaro-Pantel, C.: A Survey of Optimization Tools Through ESCAPE Symposia. *Comp. Chem. Engng.* 23, S495-S498, 1999.
15. Aziz N., Mujtaba I. M., Optimal operation policies in batch reactors, *Chemical Engineering Journal*, 85 (2-3): 313-325, 2002.
16. Srinivasan, B., Palanki, S., Bonvin, D.: Dynamic optimization of batch processes: I. Characterization of the nominal solution. *Comp. Chem. Engng.* 27(1): 1-26, 2003.

**M. Fikar, M. A. Latifi, F. Fournier, and Y. Creff. Application of Iterative Dynamic Programming to optimal control of a distillation column. *Can. J. Chem. Eng.*, 76 (12):1110–1117, 1998a.**

17. A. Woinaroschy, Time-Optimal Control of Startup Distillation Columns by Iterative Dynamic Programming, *Ind. Eng. Chem. Res.* 47(12), 4158-4169, 2008.
18. Luus, R., Handling Inequality Constraints in Optimal Control by Problem Reformulation, *Industrial & Engineering Chemistry Research*, 48(21), 9622-9630, 2009.

**Ľ. Čírka and M. Fikar. Identification tool for Simulink. Technical report KAMF9803, Department of Process Control, FCT STU, Bratislava, Slovakia, 1998.**

19. Kozka S., Zemanovicova A., Bachmann G., Hofbauer H., An application of identification and control design to the experimental calorimeter, *Chemical Papers*, 57 (4): 229-236, 2003.
20. Kozka S., Mikles J., An iterative identification and control design of a chemical reactor, *Chemical Papers*, 57 (5): 335-341, 2003.
21. Yucelen, T., Pourboghraat, F., Adaptive H-infinity optimal control strategy based on non-minimal state space realization, *Proceedings of the ASME International Mechanical Engineering Congress and Exposition 2007, Vol 9, Pts A-C - Mechanical Systems and Control 1951-1958*, 2008.
22. R. Matusu, R. Prokop, L. Pekar, Polynomial Approach to Discrete-Time Adaptive Control: Software Implementation for Industrial Application, *Proceedings of the 20th International DAAAM Symposium*, 523-524, 2009.
23. Yucelen, T., Pourboghraat, F., Active Noise Blocking: Non-Minimal Modeling, Robust Control, and Implementation, *Proceedings of the American Control Conference 2009, St. Louis, USA June 10-12, 2009*, 5492-5497.

**M. Fikar, M. Morari, and J. Mikleš. On Youla-Kučera parametrisation approach to predictive control. In P. M. Frank, editor, *CD ROM ECC'99, Karlsruhe, F163, 1999b.***

24. Kowalczyk Z., Suchomski P., Robust continuous-time controller design via structural Youla-Kučera parameterization with application to predictive control, *Optimal Control Applications & Methods*, 25 (5): 235-262, 2004.

**M. Fikar, M. A. Latifi, and Y. Creff. Optimal changeover profiles for an industrial depropanizer. *Chem. Eng. Sci.*, 54(13-14):2715–2720, 1999a.**

25. Chachuat, B., Singer, A. B., Barton, P. I, Global Methods for Dynamic Optimization and Mixed-Integer Dynamic Optimization, *Ind. Eng. Chem. Res.*, 45 (25), 8373-8392, 2006.
26. Washington, Ian D., Swartz, Christopher L. E.: Design Under Uncertainty Using Parallel Multiperiod Dynamic Optimization. *Aiche Journal*, 60(9), 3151-3168, 2014.
27. Cao, Yanan, Swartz, Christopher L. E., Baldea, Michael, Blouin, Stephane: Optimization-based assessment of design limitations to air separation plant agility in demand response scenarios. *Journal of Process Control*, 33, 37-48, 2015.
28. Yang, Feng, Teo, Kok Lay, Loxton, Ryan, Rehbock, Volker, Li, Bin, Yu, Changjun, Jennings, Leslie: Visual MISER: An Efficient User-Friendly Visual Program for Solving Optimal Control Problems. *Journal of Industrial and Management Optimization*, 12(2), 781-810, 2015.

**M. Fikar and J. Mikleš. *Identifikácia systémov*. STU Press, 1999. ISBN 80-227-1177-2. 114 pp.**

29. Borzikova J., Programming of recursive method algorithms Proceedings of 6th Conference on Mathematics and Physics at Technical Universities, Brno, Czech Republic, 57-63, 2009.

**J. Mikleš and M. Fikar. *Process Modelling, Identification, and Control I*. STU Press, Bratislava, Slovakia, 2000. 192 pp.**

30. Baiesu, A.-S.: Modeling a Nonlinear Binary Distillation Column. *Control Engineering and Applied Informatics*, č. 1, zv. 13, str. 49-53, 2011.
31. Korenciak, D., Gutten, M.: Opportunities for integration of modern systems into control processes in intelligent buildings. *Przeglad Elektrotechniczny*, 88 (2), 266-269, 2012.

**M. Fikar, M. A. Latifi, J. P. Corriou, and Y. Creff. CVP-based optimal control of an industrial depropanizer column. *Computers chem. Engng.*, 24(2–7):909–915, 2000.**

32. Franceschini, G., Macchietto, S., Model-based design of experiments for parameter precision: State of the art, *Chemical Engineering Science*, 63 (19) 2008, 4846-4872.
33. Zhang, Q., Li, S., Zhang, X., Lei, Y.: Constraint aggregation based numerical optimal control. Proceedings of the 29th Chinese Control Conference, CCC'10 2010, 1560-1565, 2010. (scopus)

**A. Rusnák, M. Fikar, M. A. Latifi, and A. Mészáros. Receding horizon iterative dynamic programming with discrete time models. *Computers chem. Engng.*, 25(1): 161–167, 2001.**

34. Xiong Z.H., Zhang J., Optimal control of fed-batch processes based on multiple neural networks, *Applied Intelligence* 22 (2): 149-161, 2005.
35. Zhang, B., Chen, D., Zhao, W., Iterative ant-colony algorithm and its application to dynamic optimization of chemical process, *Computers and Chemical Engineering* 29 (2005) 2078-2086.

36. Xi, X. C., Poo, A.N., Chou, S.K., Support vector regression model predictive control on a HVAC plant, *Control Engineering Practice* 15 (8), 897-908, 2007.

**M. Fikar and H. Unbehauen. Youla-Kučera design of decoupled control systems. *Int. J. Control*, 75(3):213–218, 2002.**

37. Mori K., Controller parameterization of Anantharam's example, *IEEE Tr. on Automatic Control*, 48 (9): 1655-1656, 2003.
38. Wang J., Wang Y., Shao H. H., Performance improvement of VAV air conditioning control system through diagonal matrix decoupling and Lonworks technology, *Energy and Buildings* 37 (9): 911-919, 2005.

**M. Fikar and M. A. Latifi. User's guide for FORTRAN dynamic optimisation code DYNO. Technical Report mf0201, LSGC CNRS, Nancy, France; STU Bratislava, Slovak Republic, 2002.**

39. Chachuat B., Singer A.B., Barton P.I., Global mixed-integer dynamic optimization, *AIChE Journal* 51 (8): 2235-2253, 2005.
40. Lee C.K., Barton P.I., Global optimization of linear hybrid systems with varying transition times, *SIAM Journal on Control and Optimization*, 47(2), 791-816, 2008.
41. M. H. Ramezani, N. Sadati, Hierarchical optimal control of large-scale nonlinear chemical processes, *ISA Transactions*, 48 (1), 38-47, 2009.

**Ľ. Čirka, J. Mikleš, and M. Fikar. A deterministic LQ tracking problem: Parametrisation of controller. *Kybernetika*, 38(4):469–478, 2002b.**

42. Pradin, B., Garcia, G.: *Modelisation, Analyse et Commande des Systemes Lineaires*, Presses Univ Mirail, Univ Toulouse Mirail, 5 Allees Antonio Machado, 31058 Toulouse, France, 2010.

**M. Fikar. On inequality path constraints in dynamic optimisation. Technical Report mf0102, Laboratoire des Sciences du Génie Chimique, CNRS, Nancy, France, 2001.**

43. Fu, Jun, Faust, Johannes M. M., Chachuat, Benoit, Mitos, Alexander: Local optimization of dynamic programs with guaranteed satisfaction of path constraints. *Automatica*, 62, 184-192, 2015.

**U. Halldorson, M. Fikar, and H. Unbehauen. Multirate nonlinear predictive control. In *American Control Conference 2002*, pages FM06–5, paper 743.pdf, Anchorage, Alaska, 2002.**

44. Vachon, Alexandre, Desbiens, Andre, Gagnon, Eric, Berard, Caroline: Launch ascent guidance by discrete multi-model predictive control. *Acta Astronautica*, 95, 101-110, 2014.
45. Nakamura, T., Kimura, S., Sato, T., Araki, N., Konishi, Y.: Multirate control for a twin-rotor type model helicopter. *ICIC Express Letters*, 8(2), 583-589, 2014.

**J. Mikleš and M. Fikar. *Modelovanie, identifikácia a riadenie procesov II*. STU Press, Bratislava, 2004b. 266 pp.**

46. Hrbcek, J., Spalek, J., Simak, V.: Process Model and Implementation the Multivariable Model Predictive Control to Ventilation System. *IEEE 8th International Symposium on Applied Machine Intelligence and Informatics*, Herlany, Slovakia, 211-214, 2010.

**U. Halldorsson, M. Fikar, and H. Unbehauen. Nonlinear predictive control with multirate optimization step lengths. *IEE Proc.-Control Theory Appl.*, 152(3):273 – 285, 2005.**

47. R. Cagienard, P. Grieder, E.C. Kerrigan, M. Morari, Move blocking strategies in receding horizon control, *Journal of Process Control*, 17(6), 2007, 563-570.
48. D.W. Yu and D.L. Yu, Multi-rate model predictive control of a chemical reactor based on three neural models, *Biochemical Engineering Journal*, 37 (1), 2007, 86-97.
49. M. T. Dokucu, Myung-June Park and Francis J. Doyle III, Multi-rate model predictive control of particle size distribution in a semibatch emulsion copolymerization reactor, *Journal of Process Control* 18 (1), 105-120, 2008.
50. Gondhalekar, R., Imura, J. Least-restrictive move-blocking model predictive control, *Automatica*, 46(7), 1234-1240, 2010.
51. Chen, W., Li, X., Chen, M.: Suboptimal Nonlinear Model Predictive Control Based on Genetic Algorithm. Proceedings of the 3rd International Symposium on Intelligent Information Technology Application, Nanchang, China, 119-124, 2009.
52. Stephens, M. A., Manzie, C., Good, M. C.: Model Predictive Control for Reference Tracking on an Industrial Machine Tool Servo Drive. *IEEE Transactions on Industrial Informatics*, 9(2), 808-816, 2013.
53. Matthews, B., Craig, I. K.: Demand side management of a run-of-mine ore milling circuit. *Control Engineering Practice*, 21 (6), 759-768, 2013.
54. Beikzadeh, Hossein, Marquez, Horacio J.: Multirate Observers for Nonlinear Sampled-Data Systems Using Input-to-State Stability and Discrete-Time Approximation. *IEEE Transactions on Automatic Control*, 59(9), 2469-2474, 2014.
55. Sorensen K.K., Stoustrup J., Bak T.: Adaptive MPC for a reefer container. *Control Engineering Practice*, 44, 55-64, 2015.

**M. Fikar, B. Chachuat, and M. A. Latifi. Optimal operation of alternating activated sludge processes. *Control Engineering Practice*, 13(7):853–861, 2005.**

56. Holenda, B., Domokos, E., Redey, A., Fazakas, J., Aeration optimization of a wastewater treatment plant using genetic algorithm, *Optimal Control Applications and Methods* 28 (3), 191-208, 2007.
57. R. Piotrowski, M.A. Brdys, K. Konarczak, K. Duzinkiewicz and W. Chotkowski, Hierarchical dissolved oxygen control for activated sludge processes, *Control Engineering Practice* 16 (1), 114-131, 2008.
58. Koumboulis E.N., Kouvakas N.D., King R.E., Stathaki, A., Two-stage robust control of substrate concentration for an activated sludge process, *ISA Transactions* 47 (3), 267-278, 2008.
59. M.I. Nelson, H.S. Sidhu, Analysis of the activated sludge model (number 1), *Applied Mathematics Letters*, 22(5), 629-635, 2009.
60. Silva A. G. M., Hornes M. O., Mitterer M. L., Queiroz, M. I., Application of coagulants in pretreatment of fish wastewater using factorial design *Desalination and Water Treatment-science and Engineering* 1(1-3), 208-214, 2009.
61. Chen, Y. R., Yu. J. M., Xu, H. W., Chen, Y., Oxygen Transfer and Hydrodynamics in a Flexible Fibre Biofilm Reactor for Wastewater Treatment, *Chinese Journal of Chemical Engineering*, 17(5), 879-882, 2009.

62. Caccavale, F., Digiulio, P., Iamarino, M., Masi, S., Pierri, F.: A neural network approach for on-line fault detection of nitrogen sensors in alternated active sludge treatment plants. *Water Science and Technology* 62 (12), pp. 2760-2768, 2010.
63. Fernandez, F. J., Castro, M. C., Rodrigo, M. A., Canizares, P.: Reduction of aeration costs by tuning a multi-set point on/off controller: A case study. *Control Engineering Practice*, 19(10), 1231-1237, 2011.
64. Rauh, A., Krasnochtanova, I., Aschemann, H.: Quantification of overestimation in interval simulations of uncertain systems. 16th International Conference on Methods and Models in Automation and Robotics (MMAR 2011), 116-121, 2011.
65. Vlad, C., Sbarciog, M., Barbu, M., Caraman, S., Wouwer, A. V.: Indirect Control of Substrate Concentration for a Wastewater Treatment Process by Dissolved Oxygen Tracking. *Control Engineering and Applied Informatics*, 14 (1), 37-47, 2012.
66. Rojas, J., Zhelev, T.: Energy efficiency optimisation of wastewater treatment: Study of ATAD. *Computers & Chemical Engineering*, 38, 52-63, 2012.
67. Amand, L., Carlsson, B.: Optimal aeration control in a nitrifying activated sludge process. *Water Research*, 46(7), 2101-2110, 2012.
68. Kusiak, A., Wei, X.: Optimization of the Activated Sludge Process. *Journal of Energy Engineering-asce*, 139(1), 12-17, 2013.
69. Diehl, S., Faras, S.: A Reduced-Order ODE-PDE Model for the Activated Sludge Process in Wastewater Treatment: Classification and Stability of Steady States. *Mathematical Models & Methods in Applied Sciences*, 23(3), 369-405, 2013.
70. Bournazou, M. N. C., Hooshiar, K., Arellano-Garcia, H., Wozny, G., Lyberatos, G.: Model based optimization of the intermittent aeration profile for SBRs under partial nitrification. *Water Research*, 47(10), 3399-3410, 2013.
71. Tong, K., Zhang, Y., Liu, G., Ye, Z., Chu, P. K.: Treatment of heavy oil wastewater by a conventional activated sludge process coupled with an immobilized biological filter. *International Biodeterioration & Biodegradation*, 84, 65-71, 2013.
72. Burger, R., Diehl, S., Faras, S., Nopens, I., Torfs, E.: A consistent modelling methodology for secondary settling tanks: A reliable numerical method. *Water Science and Technology*, 68(1), 192-208, 2013.
73. Han, Hong-Gui, Qian, Hu-Hai, Qiao, Jun-Fei: Nonlinear multiobjective model-predictive control scheme for wastewater treatment process. *Journal of Process Control*, 24(3), 47-59, 2014.
74. Delgado San Martín, J.A., Cruz Bournazou, M.N., Neubauer, P., Barz, T.: Mixed integer optimal control of an intermittently aerated sequencing batch reactor for wastewater treatment. *Computers and Chemical Engineering*, 71, 298-306, 2014.
75. Rehman, U., Vesvikar, M., Maere, T., Guo, L., Vanrolleghem, P. A., Nopens, I.: Effect of sensor location on controller performance in a wastewater treatment plant. *Water Science and Technology*, 5, 71, 700-708, 2015.

**M. Čižniar, D. Salhi, M. Fikar, and M.A. Latifi. A MATLAB package for orthogonal collocations on finite elements in dynamic optimisation. In J. Mikleš, J. Dvoran, and M. Fikar, editors, *Proceedings of the 15th Int. Conference Process Control '05, Štrbské Pleso, June 7–10, 2005, Slovakia, 2005c. 058f.pdf.***

76. L. T. Biegler, An overview of simultaneous strategies for dynamic optimization, *Chemical Engineering and Processing* 46, 2007, 1043-1053.

77. Houacine, M., Khardi, S.: Gauss Pseudospectral Method for Less Noise and Fuel Consumption from Aircraft Operations. *Journal of Aircraft* 47 (6), pp. 2152-2158, 2010.
78. Biegler, L. T.: *Nonlinear Programming: Concepts, Algorithms, and Applications to Chemical Processes*, SIAM, zv. 10, 2011.
79. Hedengren, John D., Shishavan, Reza Asgharzadeh, Powell, Kody M., Edgar, Thomas F.: Nonlinear modeling, estimation and predictive control in APMonitor. *Computers & Chemical Engineering*, 70(SI), 133-148, 2014.

**M. Čížniar, M. Fikar, and M. A. Latifi. Matlab dynamic optimisation code dynopt. user's guide. Technical report, KIRP FCHPT STU Bratislava, Slovak Republic, 2005a.**

80. Bonis, I., Theodoropoulos, C.: Model reduction-based optimization using large-scale steady-state simulators. *Chemical Engineering Science*, 69(1), 69-80, 2012.
81. Castellani, Marco, Pham, Q. Tuan, Pham, Duc T.: Dynamic optimisation by a modified bees algorithm. *Proceedings of the Institution of Mechanical Engineers Part I-Journal of Systems and Control Engineering*, 226 (I7), 956-971, 2012.
82. Zorom, Malicki, Zongo, Pascal, Barbier, Bruno, Some, Blaise: Optimal Control of a Spatio-Temporal Model for Malaria: Synergy Treatment and Prevention. *Journal of Applied Mathematics*, 854723, 2012.
83. AliKhan, M., Peyada, N. K., Go, T. H.: Flight Dynamics and Optimization of Three-Dimensional Perching Maneuver. *Journal of Guidance, Control, and Dynamics*, 36(6), 1791-1797, 2013.
84. Rao, D. M. K. K. V., Go, T. H.: Optimization, Stability Analysis, and Trajectory Tracking of Perching Maneuvers. *Journal of Guidance, Control, and Dynamics*, 37(2), 879-888, 2014.
85. Rao, D. M. K. K. Venkateswara, Tang, Hui, Go, Tiau Hiong: A parametric study of fixed-wing aircraft perching maneuvers. *Aerospace Science and Technology*, 42, 459-469, 2015.

**M. Čížniar, D. Salhi, M. Fikar, and M.A. Latifi. Dynopt - dynamic optimisation code for MATLAB. In *Technical Computing Prague 2005, 2005b. cizniar.pdf.***

86. Fesko, O.: A parallel approach to improvement and estimation of the approximate optimal control. *Journal of Computational Science*, 3(6), 486-491, 2012.

**M. Fikar and K. Calík. Automatic differentiation with DYNO. In J. Mikleš, J. Dvoran, and M. Fikar, editors, *Proceedings of the 15th Int. Conference Process Control '05, Štrbské Pleso, June 7–10, 2005, Slovakia, 2005. 003f.pdf.***

87. Fesko, O.: A parallel approach to improvement and estimation of the approximate optimal control. *Journal of Computational Science*, 3(6), 486-491, 2012.

**M. Čížniar, M. Fikar, and M.A. Latifi. A MATLAB package for dynamic optimisation code of processes. In I. Taufer, editor, *Preprint of the 7th Int. Scientific-Technical Conference Process Control 2006*, page R118, Kouty nad Děsnou, 2006.**

88. Rao, AV., Benson, DA., Darby, C., Patterson, MA., Francolin, C., Sanders, I., Huntington, GT.: Algorithm 902: GPOPS, A MATLAB Software for Solving Multiple-Phase Optimal Control Problems Using the Gauss Pseudospectral Method. *ACM Transactions on Mathematical Software* 37 (2) Article Number: 22, 2010.

**T. Hirmajer and M. Fikar. Optimal control of a two-stage reactor system. *Chemical Papers*, 60(5):381–387, 2006b.**

89. Bakošová, M. Puna, D. Dostál, P. Závacká, J., Robust stabilization of a chemical reactor, *Chemical Papers*, 63(5), 527-536, 2009.

**J. Mikleš, Ľ. Čirka, and M. Fikar.  $H_2$  optimal controller with integral action for a chemical reactor. In *Proceedings of the 2006 IEEE International Conference on Control Applications*, pages 2127–2131, Munich, Germany, 2006a.**

90. Bakošová, M. Puna, D. Dostál, P. Závacká, J., Robust stabilization of a chemical reactor, *Chemical Papers*, 63(5), 527-536, 2009.

**M. Huba, M. Kamenský, P. Bisták, and M. Fikar. Blended learning course: Constrained pid control. In S. Dormido, A. Fernandez, F. Morilla, and R. Pastor, editors, *Preprints of the 7th IFAC Symposium on Advances in Control Education*, page 161.pdf, 2006.**

91. Jáno, M., Žáková, K.: SciLaB based remote control of thermo-optical plant. *International Journal of Online Engineering*, 7(4), 10-15, 2011.

**J. Mikleš and M. Fikar. *Process Modelling, Identification, and Control*. Springer Verlag, Berlin, 2007.**

92. Bakošová, M. Puna, D. Dostál, P. Závacká, J., Robust stabilization of a chemical reactor, *Chemical Papers*, 63(5), 527-536, 2009.

93. Lutfy, O.F., Mohd Noor, S.B., Marhaban, M.H., Abbas, K.A., A genetically trained adaptive neuro-fuzzy inference system network utilized as a proportional-integral-derivative-like feedback controller for non-linear systems, *Proceedings of the Institution of Mechanical Engineers. Part I: Journal of Systems and Control Engineering* 223 (3), 309-321, 2009.

94. R. Selimaj, X. Berisha, Analysis and modelling of influence non-stationary exterior temperature in interior temperature and thermal heater capacity, *Mathematics And Computers In Science And Engineering*, *Proceedings of the 9th WSEAS international conference on Simulation, modelling and optimization*, Budapest, Hungary 179-181, 2009.

95. Tai, N. T., Kha, N. B., Ahn, K. K.: Predictive position and force control for shape memory alloy cylinders. *Journal of Mechanical Science and Technology*, 24 (8), 1717-1728, 2010.

96. Bobál, V., Chalupa, P., Kubalčík, M., Dostál, P.: Self-Tuning predictive control of nonlinear servo-motor. *Journal of Electrical Engineering* 61 (6), pp. 365-372, 2010.

97. Kuen, HY., Mjalli, FS., Koon, YH.: Recursive Least Squares-Based Adaptive Control of a Biodiesel Transesterification Reactor. *Industrial & Engineering Chemistry Research*, 49 (22), 11434-11442, 2010.

98. J. Marholt, F. Gazdoš, Modelling, identification and simulation of the inverted pendulum PS600, *Acta Montanistica Slovaca*, 15(1), 2010, 14-18.

99. Jomdecha, C., Prateepasen, A.: Effects of pulse ultrasonic irradiation on the lag phase of *Saccharomyces cerevisiae* growth. *Letters in Applied Microbiology*, 52(1), 62-69, 2011.

100. Lutfy, O. F., Noor, S. B. M., Marhaban, M. H., Abbas, K. A.: A genetically trained adaptive neuro-fuzzy inference system network utilized as a proportional-integral-derivative-like feedback controller for non-linear systems. *Proceedings of the Institution of Mechanical engineers Part I-Journal of Systems and Control Engineering*, č. I3, zv. 223, str. 309-321, 2009.



101. Lutfy, O. F., Noor, S. B. M., Marhaban, M. H., Abbas, K. A.: Non-linear modelling and control of a conveyor-belt grain dryer utilizing neuro-fuzzy systems. *Proceedings of the Institution of Mechanical engineers Part I-Journal of Systems and Control Engineering*, č. I5, zv. 225, str. 611-622, 2011.
102. Sendjaja, A. Y., Ng, Z. F., How, S. S., Kariwala, V.: Analysis and Tuning of RTD-A Controllers. *Industrial & Engineering Chemistry Research*, č. 6, zv. 50, str. 3415-3425, 2011.
103. Komadina, P., Tomas, V., Valcic, M.: Combinatorial Neural Networks Based Model for Identification of Marine Steam Turbine Clustered Parameters. *Promet-Traffic & Transportation*, č. 1, zv. 23, str. 1-9, 2011.
104. Komadina, P. V., Valcic, M.: Combinatorial Neural Networks Based Model for Identification of Marine Steam Turbine Clustered Parameters. *Promet-traffic & Transportation*, 23 (1), 1-9, 2011.
105. Sayyafzadeh, M., Pourafshary, P., Haghghi, M., Rashidi, F.: Application of transfer functions to model water injection in hydrocarbon reservoir. *Journal of Petroleum Science and Engineering*, 78 (1), 139-148, 2011.
106. Ho, Y. K., Shamiri, A., Mjalli, F. S., Hussain, M. A.: Control of industrial gas phase propylene polymerization in fluidized bed reactors. *Journal of Process Control*, 22(6), 947-958, 2012.
107. Sarhadi, P., Salahshoor, K., Khaki-Sedigh, A.: Robustness analysis and tuning of generalized predictive control using frequency domain approaches. *Applied Mathematical Modelling*, 36 (12), 6167-6185, 2012.
108. Tanda, R. F., Aguado, A.: Close-loop system identification based on an AGA-Simplex hybrid strategy. *Revista Iberoamericana de Automática e Informática industrial*, 10(1), 37-49, 2013.
109. Bobal, V., Kubalcik, M., Dostal, P., Matejcek, J.: Adaptive Predictive Control of Time-Delay Systems. *Nostradamus: Modern Methods of Prediction, Modeling and Analysis of Nonlinear Systems*, 61-72, 2013.
110. Szelitzky, T., Dulf, E. H.: Adaptive control in series load PWM induction heating inverters. *International Journal of Electronics*, 100(12), 1714-1723, 2013.
111. Menacer, A., Moreau, S., Champenois, G.: Parameters Identification of the Induction Machine Using a Non Linear Parametric Technique. *EPE Journal*, 22(4), 25-30, 2012.
112. Bakosova, Monika, Oravec, Juraj, Matejickova, Katarina: Model predictive control-based robust stabilization of a chemical reactor. *Chemical Papers*, 67(9), 1146-1156, 2013.
113. Ho, Yong Kuen, Yeoh, Hak Koon, Mjalli, Farouq S.: Generalized Predictive Control Algorithm with Real-Time Simultaneous Modeling and Tuning. *Industrial & Engineering Chemistry Research*, 53(22), 9411-9426, 2014.
114. Pavkovic, Danijel, Polak, Sinisa, Zorc, Davor: PID controller auto-tuning based on process step response and damping optimum criterion. *Isa Transactions*, 53(1), 85-96, 2014.
115. Sayyafzadeh, M., Mamghaderi, A., Pourafshary, P., Haghghi, M.: A Fast Simulator for Hydrocarbon Reservoirs During Gas Injection. *Petroleum Science and Technology*, 32(20), 2434-2442, 2014.
116. Vasickaninova, Anna, Bakosova, Monika: Control of a heat exchanger using neural network predictive controller combined with auxiliary fuzzy controller. *Applied Thermal Engineering*, 89, 1046-1053, 2015.
117. Oravec, Juraj, Bakosova, Monika: Robust model-based predictive control of exothermic chemical reactor. *Chemical Papers*, 69(10), 1389-1394, 2015.

118. Salahshoor, Karim, Khaki-Sedigh, Ali, Sarhadi, Pouria: An indirect adaptive predictive control for the pitch channel autopilot of a flight system. *Aerospace Science and Technology*, 45, 78-87, 2015.
119. Bououden, S., Chadli, M., Karimi, H. R.: Control of uncertain highly nonlinear biological process based on Takagi-Sugeno fuzzy models. *Signal Processing*, 108, 195-205, 2015.
120. Mishra, Rakesh Kumar, Dan, Tarun Kumar: Design of Lead-Lag Based Internal Model Controller for Binary Distillation Column. *Advancements of Medical Electronics*, 207-214, 2015.
121. Lutfy, Omar F., Selamat, Hazlina, Noor, S. B. Mohd: Intelligent Modeling and Control of a Conveyor Belt Grain Dryer Using a Simplified Type 2 Neuro-Fuzzy Controller. *Drying Technology*, 33(10), 1210-1222, 2015.

**M. Bakošová, M. Fikar, and Ľ. Čírka. E-learning in process control education. In *Proceedings of European Congress of Chemical Engineering (ECCE-6)*, page CDROM 1015.pdf, Copenhagen, 16-20 September 2007 2007a. EFCE.**

122. Márquez, D.A., Cárdenas, O.O., Implementation of a virtual laboratory for teaching PID controller (Implementación de un laboratorio virtual para la enseñanza de controladores PID), *Informacion Tecnologica* 19 (3), 75-78, 2008.
123. Tsoulkas, V., Pantelous, A., Papachristos, C.: A Conceptual Design of an e-Learning Platform for Mathematical Control Education. *Proceedings of the 8th European Conference on E-Learning*, 639-648, Bari, Italy, 2009.

**M. Fikar. On automatic generation of quizzes using MATLAB and XML in control engineering education. Technical Report fik07xml, OIRP UIAM FCHPT STU, 2007.**

124. Gangur, M.: The use of XSLT for table data tasks generation. *Recent Researches in Computer Science - Proceedings of the 15th WSEAS International Conference on Computers, Part of the 15th WSEAS CSCC Multiconference*, 503-508, 2011.
125. Gangur, M., Martinovsky, V.: A Programmed Learning Principle in Question Bank Creation. *Recent Patents on Computer Science*, 6(1), 14-24, 2013.

**M. Kvasnica, F. J. Christophersen, M. Herceg, and M. Fikar. Polynomial approximation of closed-form MPC for piecewise affine systems. In *Proceedings of the 17th World Congress of the International Federation of Automatic Control*, pages 3877–3882, Seoul, Korea, July 6-11 2008.**

126. Aangenent, W. H. T. M., Heemels, W. P. M. H., van de Molengraft, M. J. G., Henrion, D., Steinbuch, M.: Linear control of time-domain constrained systems. *Automatica*, 48(5), 736-746, 2012.
127. Genuit, B. A. G., Lu, L., Heemels, W. P. M. H.: Approximation of explicit model predictive control using regular piecewise affine functions: an input-to-state stability approach. *IET Control Theory and Applications*, 6(8), 1015-1028, 2012.

**T. Hirmajer, M. Fikar, E. Balsa-Canto, and J. R. Banga. Application of a control vector parameterization method using an interior point algorithm. In Bruzzone L., editor, *Proceedings of the Fifth IASTED International Conference Signal Processing, Pattern Recognition, and Applications*, pages 122–127, Innsbruck, 2008. ACTA Press.**

128. Berger, A., Grigoriev, A., van, Loon. J.: Price strategy implementation. *Computers & Operations Research*, 38 (2), 420-426, 2011.

**Ľ. Čirka, M. Kvasnica, and M. Fikar. Weblab module for the moodle learning management system. In M. Huba, editor, *Proceedings of the 9th International Conference Virtual University 2008*, page fid000131.pdf. E-academia Slovaca, 2008.**

129. Khalil, A., Hasna, M., Benammar, M., Chaabane, M., Ben Amar, C.: Development of a Remote Lab for Electrical Engineering Program. V 2009 3rd Ieee International Conference on E-learning in Industrial Electronics (icelie 2009), str. 34-38, 2009.

130. Khalil, A., Hasna, M., Benammar, M., Chaabane, M., Ben Amar, C.: Development of a Remote Lab for Electrical Engineering Program. V 2009 3rd International Conference on Signals, Circuits and Systems (scs 2009), str. 598-602, 2009.

**M. Herceg, M. Kvasnica, and M. Fikar. Parametric approach to nonlinear model predictive control. In L. Magni, D. M. Raimondo, and F. Allgoewer, editors, *Nonlinear Model Predictive Control, Lecture Notes in Control and Information Sciences*, pages 381–389. Springer Verlag, 384 edition, 2009a.**

131. Dominguez, L. F., Pistikopoulos, E. N.: Recent Advances in Explicit Multiparametric Nonlinear Model Predictive Control. *Industrial & Engineering Chemistry Research*, 50(2), 609-619, 2011.

**M. Čižniar, M. Podmajerský, T. Hirmajer, M. Fikar, and M. A. Latifi. Global optimization for parameter estimation of differential-algebraic systems. *Chemical Papers*, 63(3):274–283, 2009.**

132. Scott, Joseph K., Stuber, Matthew D., Barton, Paul I.: Generalized McCormick relaxations. *Journal of Global Optimization*, 51 (4), 569-606, 2011.

133. Scott, J. K., Barton, P. I.: Convex and Concave Relaxations for the Parametric Solutions of Semi-explicit Index-One Differential-Algebraic Equations. *Journal of Optimization Theory and Applications*, 156(3), 617-649, 2013.

134. Scott, J. K., Barton, P. I.: Improved relaxations for the parametric solutions of ODEs using differential inequalities. *Journal of Global Optimization*, č. 57 (1), 143-176, 2013.

**M. Herceg, M. Kvasnica, and M. Fikar. Minimum-time predictive control of a servo engine with deadzone. *Control Engineering Practice*, 17(11):1349–1357, 2009b.**

135. Nguyen, Minh H. T., Liang, Wenyu, Teo, Chek-Sing, Tan, Kok-Kiong: Piecewise affine modeling and compensation in motion of linear ultrasonic actuators. *Mechatronics*, 27, 20-27, 2015.

**I. Rauová, M. Kvasnica, Ľ. Čirka, and M. Fikar. Real-time model predictive control of a laboratory liquid tanks system. In M. Fikar and M. Kvasnica, editors, *Proceedings of the 17th International Conference on Process Control 2009*, pages 304–308, Štrbské Pleso, Slovakia, June 9 – 12, 2009 2009. Slovak University of Technology in Bratislava.**

136. Alipouri, Y., Poshtan, J.: Optimal controller design using discrete linear model for a four tank benchmark process. *ISA Transactions*, 52, 644-651, 2013.

137. Grosenick, Logan, Marshel, James H., Deisseroth, Karl: Closed-Loop and Activity-Guided Optogenetic Control. *Neuron*, 1, 86, 106-139, 2015.

**Z. Kovács, M. Fikar, and P. Czermak. Mathematical modeling of diafiltration. *Hungarian Journal of Industrial Chemistry*, 37(2):159–164, 2009.**

138. Schiller, Stefan, Hanefeld, Andrea, Schneider, Marc, Lehr, Claus-Michael: Focused Ultrasound as a Scalable and Contact-Free Method to Manufacture Protein-Loaded PLGA Nanoparticles. *Pharmaceutical Research*, 32(9), 2995-3006, 2015.
139. Argyle, Iain S., Pihlajamaki, Arto, Bird, Michael R.: Ultrafiltration of black tea using diafiltration to recover valuable components. *Desalination and Water Treatment*, 53(6), 1532-1546, 2015.

**M. Fikar, Z. Kovács, and P. Czermak. Dynamic optimization of batch diafiltration processes. *Journal of Membrane Science*, 355(1-2):168–174, 2010. doi: 10.1016/j.memsci.2010.03.019.**

140. Foley, G.: Evaluation of variable volume diafiltration processes using the Logarithmic Integral. *Desalination and Water Treatment* 25 (1-3), 286-290, 2011.
141. Liu, X., Chen, L., Hu, Y.: An effective dynamic optimization method based on modified orthogonal collocation and reduced SQP. *International Symposium on Advanced Control of Industrial Processes, ADCONIP 2011*, Article number 5930480, 503-507, 2011.
142. Liu, X., Chen, L., Hu, Y.: Solution of Chemical Dynamic Optimization Using the Simultaneous Strategies. *Chinese Journal of Chemical Engineering*, 21(1), 55-63, 2013.
143. Zhao, L., Zhao, H., Phuongbinh, N., Li, A., Jiang, L., Xia, Q., Rong, Y., Qiu, Y., Zhou, J.: Separation performance of multi-components solution by membrane technology in continual diafiltration mode. *Desalination*, 322, 113-120, 2013.
144. Gerardo, M. L., Zacharof, M. P., Lovitt, R. W.: Strategies for the recovery of nutrients and metals from anaerobically digested dairy farm sludge using cross-flow microfiltration. *Water Research*, 47(14), 4833-4842, 2013.
145. Ortiz-Cerda, I. Elizabeth, Bonnin, Johanne, Bostyn, Stephane, Ruiz-Cabrera, Miguel A., Moscosa-Santillan, Mario: Experimental and CFD Modeling Study of Inulin-Type Fructan Purification from a Model Solution by Diafiltration on a Pilot-Scale Unit. *Separation Science and Technology*, 49(8), 1125-1134, 2014.
146. Prudencio, Elane Schwinden, Mueller, Carmen M. O., Fritzen-Freire, Carlise B., Castanho Amboni, Renata D. M., Cunha Petrus, Jose C.: Effect of whey nanofiltration process combined with diafiltration on the rheological and physicochemical properties of ricotta cheese. *Food Research International*, 56, 92-99, 2014.

**M. Kvasnica, M. Herceg, Ľ. Čirka, and M. Fikar. Model predictive control of a CSTR: A hybrid modelling approach. *Chemical Papers*, 64(3):301–309, 2010a.**

147. Dostál, P., Bakošová, M., Vojtešek, J., Bobál, V.: Adaptive nonlinear control of a continuous stirred tank reactor. *Chemical Papers*, 65 (5), 636-643, 2011.
148. Dostál, P., Vojtešek, J., Bobál, V., Babík, Z.: 2DOF adaptive control of a tubular chemical reactor. *World Scientific and Engineering Academy and Society (WSEAS) Stevens Point, Wisconsin, USA, Proceedings of the 15th WSEAS international conference on Circuits, systems and signals*, 39-44, 2011.
149. Perez, P.A.L. Gonzalez, M.I.N., Lopez, R.A.: Cadmium concentration stabilization in a continuous sulfate reducing bioreactor via sulfide concentration control. *Chemical Papers*, 67(3), 326-335, 2013.

150. Bakosova, M., Oravec, J., Matejickova, K.: Model predictive control-based robust stabilization of a chemical reactor. *Chemical Papers*, 67(9), 1146-1156, 2013.
151. Ping, X., Ding, B.: Off-line approach to dynamic output feedback robust model predictive control. *Systems & Control Letters*, 62(11), 1038-1048, 2013.
152. Kroll, Andreas, Schulte, Horst: Benchmark problems for nonlinear system identification and control using Soft Computing methods: Need and overview. *Applied Soft Computing*, zv. 25, str. 496-513, 2014.

**M. Kvasnica, I. Rauová, and M. Fikar. Automatic code generation for real-time implementation of model predictive control. In *Proceedings of the 2010 IEEE International Symposium on Computer-Aided Control System Design*, pages 993–998, Yokohama, Japan, 2010c.**

153. Huyck, Bart, De Brabanter, Jos, De Moor, Bart, Van Impe, Jan F., Logist, Filip: Online model predictive control of industrial processes using low level control hardware: A pilot-scale distillation column case study. *Control Engineering Practice*, 28, 34-48, 2014.
154. Hredzak, B., Agelidis, V.G., Demetriades, G.: Application of explicit model predictive control to a hybrid battery-ultracapacitor power source. *Journal of Power Sources*, 277, 84-94, 2015.
155. Kufoalor, D. K. M., Aaker, V., Johansen, T. A., Imsland, L., Eikrem, G. O.: Automatically generated embedded model predictive control: Moving an industrial PC-based MPC to an embedded platform. *Optimal Control Applications & Methods*, SI, 36(5), 705-727, 2015.
156. Danielson, Claus, Borrelli, Francesco: Symmetric Linear Model Predictive Control. *IEEE Transactions on Automatic Control*, 60(5), 1244-1259, 2015.

**R. Paulen, G. Foley, M. Fikar, Z. Kovacs, and P. Czermak. Minimizing the process time for ultrafiltration/diafiltration under gel polarization conditions. *Journal of Membrane Science*, 380(1-2):148–154, 2011b.**

157. Field, R.: Diafiltration under condition of quasi-constant membrane surface concentration. *Journal of Membrane Science*, 383(1-2), 301-302, 2011.
158. Wang, L., Wang, L., Xing, W., Xu, N.: Time-optimal diafiltration processes for Cephalosporin C separated from fermentation broth under constant yield and constant concentration. *Separation and Purification Technology*, 122, 256-261, 2014.

**M. Kvasnica, A. Szűcs, and M. Fikar. Automatic derivation of optimal piecewise affine approximations of nonlinear systems. In *Preprints of the 18th IFAC World Congress Milano (Italy) August 28 - September 2, 2011*, pages 8675–8680, 2011b.**

159. Groot, N., De Schutter, B., Hellendoorn, H.: Integrated model predictive traffic and emission control using a piecewise-affine approach. *IEEE Transactions on Intelligent Transportation Systems*, 14(2), 587-598, 2013.
160. Zhuge, Jinjun, Ierapetritou, Marianthi G.: An integrated framework for scheduling and control using fast model predictive control. *AIChE Journal*, 61(10), 3304-3319, 2015.

**R. Paulen, M. Fikar, Z. Kovacs, and P. Czermak. Process optimization of diafiltration with time-dependent water adding for albumin production. *Chemical Engineering and Processing: Process Intensification*, 50(8):815–821, 2011a.**

161. Wang, L., Wang, L., Xing, W., Xu, N.: Time-optimal diafiltration processes for Cephalosporin C separated from fermentation broth under constant yield and constant concentration. *Separation and Purification Technology*, 122, 256-261, 2014.

162. Zhao, L., Zhao, H., Nguyen, P., Li, A., Jiang, L., Xia, Q., Rong, Y., Qiu, Y., Zhou, J.: Separation performance of multi-components solution by membrane technology in continual diafiltration mode. *Desalination*, 322, 113-120, 2013.
163. Buonomenna, M. G.: Membrane processes for a sustainable industrial growth. *RSC Advances*, 3(17), 5694-5740, 2013.
164. Wang, Longyao, Yang, Zhengdong, Wang, Lan, Zhu, Rongshun: Minimizing the operation time for continuous feed diafiltration processes under constant concentration ratio. *Desalination*, 346, 100-106, 2014.
165. Foley, G.: When should batch ultrafiltration be stopped to maximise profit in the recovery of a non-rejected solute? *Journal of Food Engineering*, 153, 8-11, 2014.

**M. Kvasnica, J. Löfberg, and M. Fikar. Stabilizing polynomial approximation of explicit mpc. *Automatica*, 47(10):2292–2297, 2011a.**

166. Bayat, F., Johansen, T. A.: Multi-Resolution Explicit Model Predictive Control: Delta-Model Formulation and Approximation. *IEEE Transactions on Automatic Control*, 58(11), 2979-2984, 2013.
167. Rubagotti, Matteo, Barcelli, Davide, Bemporad, Alberto: Robust explicit model predictive control via regular piecewise-affine approximation. *International Journal of Control*, 87(12), 2583-2593, 2014.
168. Hredzak, B., Agelidis, V.G., Demetriades, G.: Application of explicit model predictive control to a hybrid battery-ultracapacitor power source. *Journal of Power Sources*, 277, 84-94, 2015.
169. Mohammadkhani, MohammadAli, Bayat, Farhad, Jalali, Ali Akbar: Two-stage observer based offset-free MPC. *Isa Transactions*, 57, 136-143, 2015.
170. Bayat, Farhad: On the performance of observer-based explicit model predictive control. *Transactions of the Institute of Measurement and Control*, 37(6), 769-779, 2015.

**I. Rauová, R. Valo, M. Kvasnica, and M. Fikar. Real-time model predictive control of a fan heater via plc. In Kvasnica, M. Fikar, M., editor, *Proceedings of the 18th International Conference on Process Control*, pages 388–393, Tatranská Lomnica, Slovakia, 2011. Slovak University of Technology in Bratislava.**

171. Gutierrez-Urquidez, R. C., Valencia-Palomo, G., Rodriguez-Elias, O. M., Trujillo, L.: Systematic selection of tuning parameters for efficient predictive controllers using a multiobjective evolutionary algorithm. *Applied Soft Computing*, 31, 326-338, 2015.

**A. Szűcs, M. Kvasnica, and M. Fikar. A memory-efficient representation of explicit mpc solutions. In *Proceedings of the 50th CDC and ECC*, pages 1916–1921, Orlando, Florida, 2011.**

172. Danielson, Claus, Borrelli, Francesco: Symmetric Linear Model Predictive Control. *IEEE Transactions on Automatic Control*, 5, 60, 1244-1259, 2015.

**J. Jäschke, M. Fikar, and S. Skogestad. Self-optimizing invariants in dynamic optimization. In *Proceedings of the 50th CDC and ECC*, pages 7753–7758, Orlando, Florida, 2011.**

173. Ye, Lingjian, Cao, Yi, Yuan, Xiaofeng: Global Approximation of Self-Optimizing Controlled Variables with Average Loss Minimization. *Industrial & Engineering Chemistry Research*, 54(48), 12040-12053, 2015.

**J. Števek, A. Szűcs, M. Kvasnica, M. Fikar, and Š. Kozák. Two steps piecewise affine identification of nonlinear systems. *Archives of Control Sciences*, 22(4):371–388, 2012.**

174. Zhuge, Jinjun, Ierapetritou, Marianthi G.: An integrated framework for scheduling and control using fast model predictive control. *AIChE Journal*, 61(10), 3304-3319, 2015.

**R. Paulen, M. Fikar, G. Foley, Z. Kovacs, and P. Czermak. Optimal feeding strategy of diafiltration buffer in batch membrane processes. *Journal of Membrane Science*, 411-412:160–172, 2012.**

175. Buonomenna, M. G.: Membrane processes for a sustainable industrial growth. *RSC Advances*, 3(17), 5694-5740, 2013.

176. Sala, L., Gautério, G.V., Younan, F.F., Brandelli, A., Moraes, C.C., Kalil, S.J.: Integration of ultrafiltration into an aqueous two-phase system in the keratinase purification. *Process Biochemistry*, 49(11), 2016-2024, 2014.

177. Wang, L., Yang, Z., Wang, L., Zhu, R.: Minimizing the operation time for continuous feed diafiltration processes under constant concentration ratio. *Desalination*, 346, 100-106, 2014.

178. Nestola, P., Peixoto, C., Silva, R.R.J.S., Alves, P.M., Mota, J.P.B., Carrondo, M.J.T.: Improved virus purification processes for vaccines and gene therapy. *Biotechnology and Bioengineering*, 112(5), 843-857, 2015.

**M. Kvasnica and M. Fikar. Clipping-based complexity reduction in explicit mpc. *IEEE Transactions on Automatic Control*, 57(7):1878–1883, 2012.**

179. Bayat, F., Johansen, T. A.: Multi-resolution explicit model predictive control: Delta-model formulation and approximation. *IEEE Transactions on Automatic Control*, 58 (11), 2979-2984, 2013.

180. Rubagotti, Matteo, Barcelli, Davide, Bemporad, Alberto: Robust explicit model predictive control via regular piecewise-affine approximation. *International Journal of Control*, 87(12), 2583-2593, 2014.

181. Zhao, Meng, Tang, Xiaoming: Robust Tube-Based MPC with Piecewise Affine Control Laws. *Abstract and Applied Analysis*, 358148, 2014.

182. Bayat, F.: On the performance of observer-based explicit model predictive control. *Transactions of the Institute of Measurement and Control*, 37(6), 769-779, 2015.

**R. Paulen, M. Jelemenský, M. Fikar, and Z. Kovacs. Optimal balancing of temporal and buffer costs for ultrafiltration/diafiltration processes under limiting flux conditions. *Journal of Membrane Science*, 444:87–95, 2013.**

183. Wei, X., Wang, S., Shi, Y., Xiang, H., Chen, J.: Application of positively charged composite hollow-fiber nanofiltration membranes for dye purification. *Industrial and Engineering Chemistry Research*, 53(36), 14036-14045, 2014.

184. Foley, G.: When should batch ultrafiltration be stopped to maximise profit in the recovery of a non-rejected solute?. *Journal of Food Engineering*, 153, 8-11, 2015.

**M. Podmajerský, M. Fikar, and B. Chachuat. Measurement-based optimization of batch and repetitive processes using an integrated two-layer architecture. *Journal of Process Control*, 23(7):943–955, 2013.**

185. Telen, D., Vallerio, M., Cabianca, L., Houska, B., Van Impe, J., Logist, F.: Approximate robust optimization of nonlinear systems under parametric uncertainty and process noise. *Journal of Process Control*, 33, 140-154, 2015.

**M. Kvasnica, J. Hledík, I. Rauová, and M. Fikar. Complexity reduction of explicit model predictive control via separation. *Automatica*, 49(6):1776–1781, 2013.**

186. Yan, Zheng, Wang, Jun: Nonlinear Model Predictive Control Based on Collective Neurodynamic Optimization. *IEEE Transactions on Neural Networks and Learning Systems*, 26(4), 840-850, 2015.



## 2 Other Citations

**A. Zemanovičová, M. Karšaiová, M. Bakošová, and M. Fikar. Riadenie sústavy s dopravným oneskorením. In S. Krejčí, editor, *Konf. ŘÍP*, pages 285–289, Horní Bečva, 1994.**

1. Gemza, E., Kašpar, J., Krejčí, S., Taufer, I., Kotyk, J.: Příspěvek k regulaci obtížně regulovatelných systémů. Proc. of Int. Conference Process Control'98, Kouty nad Desnou, 7-10.6.1998, Vol 2, 82-85, 1998.

**J. Mikleš, M. Fikar, and A. Mészáros. Unification of discrete-time and continuous-time pole-placement adaptive control algorithms. *Journal of Electrical Engineering*, 45(3):100–104, 1994.**

2. M' Saad, M.: *Commande Adaptive de Systemes. Techniques de l'Ingenieur*, Grenoble, 1997.

**M. Fikar. *Control of Multivariable Processes. Parametrization of all Stabilizing Controllers*. PhD thesis, Dep. of Process Control CHTF STU, Bratislava, 1994.**

3. Mikleš, J., Čirka, L., Kožka, Š.: Closed-loop identification with application to a chemical reactor, IFAC Symposium DYCOPS5, Corfu, Greece, 233-238, 1998.
4. Mikleš, J., Čirka, L., Kožka, Š.: Closed-loop system identification Proc. of Int. Conference Process Control'98, Kouty nad Desnou, 7-10.6.1998, Vol 1, 259-262, 1998.
5. Mikleš, J., Čirka, L., Kožka, Š.: Closed-loop identification and adaptive control. Proc. of Int. Conference on Process Control and Simulation'98, High Tatras, 8-11.9.1998, 419-422, 1998.
6. Mikleš, J., Čirka, L., Kožka, Š.: Identifikácia v uzavretom regulačnom obvode a adaptívne riadenie, AT&P Journal, 11, 58-59, 1998.
7. Čirka, L., Mikleš, J., Kožka, Š.: Relationship between reactor uncertainties and feedback controller. CD ROM of the 26th International Conference of Slovak Society of Chemical Engineering, P37, Jasná, May 24–28, 1999.
8. Lázničková, D., Dvoran, J.: Riadenie prietokového chemického reaktora. The 4th International Scientific - Technical Conference, Process Control 2000, CD-ROM Proceedings, 11 - 14 June 2000, Kouty nad Desnou, Czech Republic, rip1491.pdf.

**M. Fikar, J. Mikleš, and A. Seč. Design of the discrete decoupling controller. In B. Frankovič, editor, *Cybernetics and Informatics*, pages 20–29. Veda, Bratislava, 1995.**

9. Janča R., Prokop, R.: Decoupling control of the multivariable systems. Proceedings of International Carpathian Control Conference. High Tatras – Podbanské, May 23. – 26. 2000. SK. TU BERG Faculty, Košice, Slovak Republic. p. 423 – 426, (2000).

**M. Fikar and A. Draeger. Adaptive predictive control of a neutralization reactor. In J. Mikleš, editor, *Preprints of 10th Conf. Process Control'95, June 4 –7, Tatranské Matliare, Slovakia*, volume 1, pages 153–156, 1995.**

10. U. Halldorsson, A. Ali, H. Unbehauen and Chr. Schmid.: Adaptive Predictive Control of a Neutralization Plant Using Local Model Networks. IFAC World Congress Barcelona, Spain, July 21-26, 2002. CD-ROM Proceedings, Session: T-We-A03, File: 576.pdf.

**M. Fikar, P. Dostál, and J. Mikleš. Adaptive predictive control of tubular chemical reactor. *Petroleum and Coal*, 38(3):51–57, 1996.**

11. Bakošová, M., Ondrovičová, M., Karšaiová, M.: Adaptive Control of Distillation Columns using LV control configuration. Proc. of Int. Conference Process Control'98, Kouty nad Desnou, 7-10.6.1998, Vol 1, 15-18, 1998.
12. Bakošová, M., Ondrovičová, M.: Adaptive control of distillation columns - a case study, CD-ROM Proceedings of CHISA'98, Paper No. 527, August 23-28, 1998, Prague, Czech Republic.

**A. Rusnák, M. Fikar, K. Najim, and A. Mészáros. Generalized predictive control based on neural networks. *Neural Processing Letters*, 4(2):107 – 112, 1996.**

13. Eric Ronco and Peter J. Gawthrop, Neural networks for modelling and control. Centre for System and Control, Department of Mechanical Engineering, University of Glasgow, Technical Report: CSC97008, 1997.
14. Eric Ronco, Incremental polynomial controller networks: two self-organising non-linear controllers, PhD Thesis, Faculty of Mechanical Engineering of Glasgow University, September 1997.
15. Junxia Mu, Rees, D., Approximate Model Predictive Control for Gas Turbine Engines. Proceeding of the 2004 American Control Conference Boston, Massachusetts June 30 - July 2, 2004, Paper FrP16.3.
16. J.X. Mu, D. Rees, G.P. Liu: Design and Stability Analysis of Networked Predictive Control Systems, Proceedings Control 2004, University of Bath, UK, September 2004.
17. Kamalabady, A.S., Salahshoor, K.: New SISO and MISO Adaptive Nonlinear Predictive Controllers based on self organizing RBF neural networks, 3rd International Symposium on Communications, Control and Signal Processing, 2008. ISCCSP 2008, 703-708, St Julians, Malta. (IEEEExplore).
18. S. K. Arumugasamy, Z. Ahmad, Elevating Model Predictive Control Using Feedforward Artificial Neural Networks: A Review, Chemical Product and Process Modeling, 4(1), 2009.
19. Patino, D., Riedinger, P., Ruiz, F. A predictive control approach for DC-DC power converters and cyclic switched systems (2010) Proceedings of the IEEE International Conference on Industrial Technology, art. no. 5472624, pp. 1259-1264. (scopus)
20. A. H. Mazinan, M. Sheikhan, On the practice of artificial intelligence based predictive control scheme: a case study, Applied Intelligence, Springer, 2010, DOI: 10.1007/s10489-010-0253-0.
21. Mazinan, A.H., Kazemi, M.F., Notes on intelligence based model predictive control scheme: A case study, 2010 IEEE International Conference on Intelligent Systems, IS 2010 - Proceedings 2010, Article number 5548324, Pages 474-478. (scopus)
22. Abbas, G., Farooq, U., Asad, M. U.: Application of neural network based model predictive controller to power switching converters. Current Trends in Information Technology (CTIT), 2011 International Conference and Workshop, 132-136, 2011.
23. Abbas, G., Farooq, U., Gu, J., Asad, M. U.: Constrained Model-Based Predictive Controller for a High-Frequency Low-Power DC-DC Buck Converter. International Journal on Electrical Engineering and Informatics, 5(3), 316-339, 2013.
24. Mazinan, A. H.: A new algorithm to AI-based predictive control scheme for a distillation column system. International Journal of Advanced Manufacturing Technology, 66(9-12), 1379-1388, 2013.

**M. Fikar, S. Engell, and P. Dostál. Design of infinite horizon predictive LQ controller. In G. Bastin and M. Gevers, editors, *CD-ROM Proceedings of ECC'97, Bruxelles, Paper No. 698, 1997.***

25. J. A. Rossiter, L. Chisci, B., Kouvaritakis, Optimal Disturbance Rejection via Youla-Parameterisation in Constrained LQ Control, Mathematics Report Number A309, Loughborough University, January 1998.
26. J. A. Rossiter, B. Kouvaritakis, Youla-parameter and robust predictive control with constraint handling, Proc. of Int. Symposium on Nonlinear Model Predictive Control, Ascona, Switzerland, June 3-5, 1998.
27. J. A. Rossiter, Model-based Predictive Control, A practical Approach, CRC Press, 2003.

**M. Fikar and S. Engell. Receding horizon predictive control based upon Youla-Kučera parametrization. *European Journal of Control*, 3(4):304–316, 1997.**

28. Nečasová, A., Mészáros, A., Danko, J.: Adaptive Control of a Laboratory Storage Tank System. Proc. of Int. Conference Process Control'98, Kouty nad Desnou, 7-10.6.1998, Vol 1, 349-352, 1998.
29. Mészáros, A., Rusnák, A.: Neural Network Based Modelling for Predictive Control of Bio-processes, 2nd European Symposium on Biochemical Engineering Science ESBES2, Porto, 16-19 September, Portugal, 1998.
30. Mészáros, A.: Súčasné možnosti riadenia procesov biochemickej technológie, CD-ROM z medzinár. konf SSCHI, Jasná, 25.5 - 29.5.1998
31. Mészáros A.: Advanced methods in control of biochemical processes. Proc. of Regional Course of Trilateral Cooperation Austria, Hungary and Slovakia "Environmental Engineering, Bio-engineering and Risk Assessment". STU Press, Bratislava, 1998, 109-118.
32. Ebert, W., Meffert, B., Weller, W.: A new nominal controller with guaranteed nominal and robust stability. European Control Conference ECC99, Karlsruhe, Germany, 1999.
33. Prokop, R., Bakošová, M., Prokopová, Z.: PID Control of Unstable Time-delay Systems: Tuning and Robustness. Preprints of the IFAC Conference Control Systems Design, Bratislava, Slovak Republic, June 18-20, 2000, 420-425.

**K. Najim, A. Rusnák, A. Mészáros, and M. Fikar. Constrained long-range predictive control based on artificial neural networks. *Int. J. Sys. Sci.*, 28(12):1211–1226, 1997.**

34. Jibril, J., Cheng, S., Tian-You, C., Neural networks based adaptive predictive control algorithm of nonlinear non-minimum phase plants. Proc. ACC, San Diego, California, 1082-1085, 1999.
35. Sámek, D., Dostál, P., Zelinka, I.: Signal Prediction by neural networks. CD-ROM Proceedings of the 13th Int. Conference Process Control '01, Tatranske Matliare, Slovakia, 11-14.6.2001, paper 014.
36. Sámek, D., Dostál, P., Zelinka, I.: Prediction by Artificial Neural Networks. CD-ROM Proceedings of the 14th Int. Conference Process Control '03, Strbske Pleso, Slovakia, 8-11.6.2003, paper 067.
37. Maarten H. van der Vlerk, Stochastic Programming Bibliography, University of Groningen, World Wide Web, <http://mally.eco.rug.nl/spbib.html>, 1996-2003.

38. Shi, T., Jia, L., Bai, C., Research and development of integrated intelligent control system of coking stove combustion, Proceedings of the World Congress on Intelligent Control and Automation (WCICA) 3 pp. 2347-2352, 2002. (scopus.com)
39. Bouani, F., Abidi, K., Ben Abdennour, R., Ksouri, M., Neural networks and genetic algorithms for dynamic systems control, Proceedings of the IEEE International Conference on Systems, Man and Cybernetics 2 pp. 656-660, 2002. (scopus.com)
40. Faouzi, B., Abderrazak, C., Tarek, G., Internal model control using neural networks, Proceedings of the IEEE International Conference on Industrial Technology Volume 2, 2004, Pages 1121-1126 (scopus.com)
41. Tatjewski, P., Lawrynczuk, M., Soft computing in model-based predictive control, International Journal of Applied Mathematics and Computer Science 16 (1), 7-26, 2006. (scopus.com)
42. Wang, S.-H., Shen, J., Li, Y.-G., Neural networks predictive control using optimizing intervals of inverse models, Zhongguo Dianji Gongcheng Xuebao/Proceedings of the Chinese Society of Electrical Engineering Volume 27, Issue 26, 15 September 2007, Pages 115-120. (scopus.com)
43. G. I. Zhang, S. Y. Guo, L. Li, W. B. Zhou, M. Y. Cai, Neural networks for modelling and predicting the chlorella protothecoides cultivation processes. Algae and their biological potential, Proceedings of the 4th Asia-Pacific Conference on Algal Biotechnology, 3-6 July 2000, Hong Kong.
44. Zhang, Y., Li, L., Yang, P., Li, Y., Liu, P., Improved multivariable nonlinear system control based on differential predictive cost function, Proceedings of the World Congress on Intelligent Control and Automation (WCICA), art. no. 4594573, pp. 6968-6972, 2008 (scopus).
45. Samek, D., Manas, M., Adaptive prediction using adaline, Proceedings of the 17th International DAAAM Symposium - Intelligent Manufacturing and Automation: Focus on Mechatronics and Robotics, 359-360, Vienna, Austria, 2006. (WoS)
46. Bouani, F., Mensia, N., Ksouri, M., Fuzzy logic and genetic algorithms supervisors for internal model control strategy, Control and Intelligent Systems 37 (2), 78-86, 2009. (scopus)
47. C. Gorman, N. Slegers, Model Predictive Control of Continuous Nonlinear Systems Using Series Approximations, International Review of Automatic Control (I.R.E.A.CO.), 2 (3), 249-257, 2009.
48. Boiko, I.: Non-parametric Tuning of PID Controllers, Springer Verlag, 2013.

**M. Fikar, M. A. Latifi, F. Fournier, and Y. Creff. Application of Iterative Dynamic Programming to optimal control of a distillation column. *Can. J. Chem. Eng.*, 76 (12):1110–1117, 1998a.**

49. A.Yu. Torgashov, Nonlinear process model-based self-optimizing control of complex crude distillation column, Computer Aided Chemical Engineering, Volume 9, 2001, Pages 793-798 (SD)
50. R. Luus, Comparison of IDP and LJ Optimization Procedure for Establishing the Optimal Control of a Nonisothermal Fedbatch Reactor, Bioautomation, 13 (3), 1-14, 2009.
51. Luus, R. Choosing grid points in solving singular optimal control problems by iterative dynamic programming. In Proceedings of the 10th IASTED International Conference on Intelligent Systems and Control (ISC '07), Les M. Sztandera (Ed.). ACTA Press, Anaheim, CA, USA, 425-433, 2007.
52. Anand, P., Venkateswarlu, Ch., Bhagvanth Rao, M.: Multistage dynamic optimization of a copolymerization reactor using differential evolution. Asia-Pacific Journal of Chemical Engineering, 8(5), 687-698, 2013.

**M. Fikar, M. A. Latifi, F. Fournier, and Y. Creff. CVP versus IDP in dynamic optimisation of a distillation column. *Computers chem. Engng.*, 22:S625–S628, 1998b.**

53. Bakošová, M., Karšaiová, M., Ondrovičová, M., Maňko, J.: Adaptive lambda tracking of a distillation column. Proceedings of the 12th Int. Conference Process Control '99, Tatranske Matliare, Slovakia, 31.5–3.6.1999, Vol. 1, 276–279.
54. Bakošová, M., Ondrovičová, M., Karšaiová, M. : Riadenie rektifikačných kolón metódou adaptívneho lambda sledovania, ATP journal, 4, 76-77, 2000.
55. Bakošová, M., Karšaiová, M., Ondrovičová, M., Danko, J.: Adaptive lambda tracking for nonlinear processes. The 4th International Scientific - Technical Conference, Process Control 2000, CD-ROM Proceedings, 11 - 14 June 2000, Kouty nad Desnou, Czech Republic, rip112.pdf.
56. Bakošová M., Mészáros A., Ondrovičová M., Karšaiová M.: Control of distillation columns via adaptive lambda-tracking method. CD ROM of full texts of the 27th International Conference of SSCHI. Tatranské Matliare, May 22. – 26. 2000. SK. SSCHI, Bratislava. CD ROM P201 (2000).
57. Bakošová M., Karšaiová M., Ondrovičová M.: Application of high-gain adaptive lambda-tracking for nonlinear chemical processes. CD ROM of full texts of the 14th International Congress of Chemical and Process Engineering CHISA 2000. Praha, Aug. 27.- 31. 2000. CZ. Magicware, s.r.o. Praha. CD ROM 0099 (2000).
58. Bakošová M., Ondrovičová M., Karšaiová M.: Decentralized adaptive control of distillation columns. CD-ROM Proceedings of the 13th Int. Conference Process Control '01, Strbske Pleso, Slovakia, 11-14.6.2001, paper 316.
59. Bakošová M., Mészáros A.: Decentralized Adaptive Control of Distillation Columns - A Case Study. In: Proc. World MultiConf. on Systemics, Cybernetics and Informatics SCI 2001. Orlando (USA), July 22-25, 2001. Int. Institute of Informatics and Systemics, Orlando, p. 563-568 (2001).
60. Bakošová M., Karšaiová M., Ondrovičová M.: Adaptive Lambda Tracking Using Variable Sampling Rate. Preprint of the 5th Int. Scientific-Technical Conference Process Control 2002. Kouty nad Děsnou, 9-12 June 2002, paper R-052.
61. Bakošová M., Karšaiová M., Ondrovičová M.: Decentralized adaptive control of MIMO systems. CD-ROM Proceedings of the 15th Int. Congress of Chemical and Process Engineering CHISA 2002, Prague, Czech Republic, 25-29 august 2002, paper 0428.
62. Bakošová M., Karšaiová M., Ondrovičová M.: Decentralized adaptive control of distillation columns. In: J. Mikleš, V. Veselý (Eds.) Selected Topics in Modelling and Control. Slovak University of Technology Press, Bratislava, Vol. 3, 132–137, 2002.
63. Ekpo, E.E., Mujtaba, I.M., Dynamic optimisation of styrene polymerisation in batch reactors, European Symposium on Computer-Aided Process Engineering - 14, Book Series: Computer-Aided Chemical Engineering, Vol. 18, 649-654, 2004, Lisbon, Portugal. (WoS)

**M. Fikar. Predictive control—an introduction. Technical report KAMF9801, Department of Process Control, FCT STU, Bratislava, Slovakia, 1998.**

64. Rohaľ-Ilkiv, B.: On stability of constrained continuous-time predictive control. Proceedings of the 12th Int. Conference Process Control '99, Tatranske Matliare, Slovakia, 31.5–3.6.1999, Vol. 1, 249–253.

65. Rohaľ-Ilkiv, B.: On stability of constrained continuous-time predictive control. In: J. Mikleš, V. Veselý (Eds.) Selected Topics in Modelling and Control. Slovak University of Technology Press, Bratislava, Vol. 2, 39-43, 1999.
66. Chachuat, B., Methodologie d'optimisation dynamique et de commande optimale des petites stations d'epuration a boues activees, PhD Thesis, Institut National Polytechnique de Lorraine, 2001.
67. Jajčišín, Š., Jadlovská, A.: Simulačné overenie prediktívneho riadenia modelov dynamických systémov v navrhnutom grafickom používateľskom prostredí, Conference Technical Computing Bratislava 2010, RT Systems s.r.o., 2010.
68. Jajčišín, Š., Jadlovská, A.: Generalized Predictive Control Design for a Nonlinear Hydraulic System, Acta Electrotechnica et Informatica, 11(2), 26-32, 2011.

**Ľ. Čirka and M. Fikar. Identification tool for Simulink. Technical report KAMF9803, Department of Process Control, FCT STU, Bratislava, Slovakia, 1998.**

69. Š. Kožka, A. Zemanovičová, H. Hofbauer, G. Bachmann: Identification of the experimental multi-kilogram capacity calorimeter. CD-ROM Proceedings of the 13th Int. Conference Process Control '01, Tatranske Matliare, Slovakia, 11-14.6.2001, paper 307.
70. Andrášik, A., Šperka, Ľ., Mészáros, A., Smetana, S.: Identification of a Fermentation Process - Hybrid Modelling vs. Recursive LSM. CD-ROM Proceedings of the 14th Int. Conference Process Control '03, Strbske Pleso, Slovakia, 8-11.6.2003, paper 221.
71. Navrátil, P., Bobál, V.: Innovation of Recursive Identification Algorithms Library. CD-ROM Proceedings of the 16th Int. Conference Process Control, Strbske Pleso, Slovakia, 11-14.6.2007, paper 109f.pdf.
72. Bobál, V.: Innovation of Recursive Identification Algorithms Library. CD-ROM Proceedings of the 16th Int. Conference Process Control, Strbske Pleso, Slovakia, 11-14.6.2007, paper 109f.pdf.
73. Navrátil, P., Recursive Identification Algorithms Library in Matlab and Simulink, Proceedings of the 9th International Conference Process Control 2010, Kouty nad Desnou, Czech Republic, C102a, 2010.

**M. A. Latifi, M. Fikar, and J-P. Corriou. Dynamic optimisation of chemical processes. Trends in Chemical Engineering, 4:189–201, 1998.**

74. Chachuat, B., Methodologie d'optimisation dynamique et de commande optimale des petites stations d'epuration a boues activees, PhD Thesis, Institut National Polytechnique de Lorraine, 2001.

**A. Mészáros, A. Rusnák, and M. Fikar. Adaptívne ladenie PID regulátora pomocou umelých neurónových sietí. AT&P Journal, 6(3):51–53, 1999a.**

75. Sámek, D., Dostál, P., Zelinka, I.: Prediction by Artificial Neural Networks. CD-ROM Proceedings of the 14th Int. Conference Process Control '03, Strbske Pleso, Slovakia, 8-11.6.2003, paper 067.

**A. Mészáros, A. Rusnák, and M. Fikar. Adaptive neural PID control case study: Tubular chemical reactor. Computers chem. Engng., 23:S297–S300, 1999c.**

76. Bakošová M., Kostendová M., Karšaiová M., Ondrovičová M.: Adaptive Lambda-tracking of a Laboratory Fan Heater. CD-ROM Proceedings of the 14th Int. Conference Process Control '03, Strbske Pleso, Slovakia, 8-11.6.2003, paper 219.

77. D. Sámek, P. Dostál, I. Zelinka: Nonlinear MPC using Adaptive Artificial Neural Networks. CD-ROM Proceedings of the 15th Int. Conference Process Control '05, Strbske Pleso, Slovakia, 7-10.6.2005, paper 008f.
78. Puna, D., Bakošová M., Mészáros, A., Závacká, J.: Control of a Chemical Reactor with Uncertainties in an Unstable Steady State. CD-ROM Proceedings of the 33rd Int. Conference SSCHE, Tatranske Matliare, Slovakia, 22-26.5.2006, paper 045.
79. Bakošová M., Baleja, J., Vasičkaninová, A., Puna, D.: MODELTOOL 1.0 - A Model Toolbox for MATLAB/Simulink. CD-ROM Proceedings of the 33rd Int. Conference SSCHE, Tatranske Matliare, Slovakia, 22-26.5.2006, paper 044.
80. Bakošová M., Puna, D., Závacká, J.: Robust Control of a Chemical Using Static Output Feedback. CD-ROM Proceedings of the 17th International Congress of Chemical and Process Engineering, CHISA 2006, August 27-31, Prague, Czech Republic. Paper 0816.
81. Sámek, D., Dostál, P.: Modelling and control of nonlinear system, AT&P PLUS 2, 2007, 1-5.
82. Sámek, D., Chalupa, P., Two adaptive approaches of nonlinear system control, Proceedings 3rd International Symposium on Communications, Control, and Signal Processing, ISCCSP 2008, Article number 4537245, 334-339. (scopus)
83. Sámek, D., Elman Neural Networks in Model Predictive Control, Editors: Javier Otamendi, Andrzej Bargiela, Jose Luis Montes, Luis Miguel Doncel Pedrera, Proceedings of 23rd European Conference on Modelling and Simulation (ECMS 2009), Jun 9-12, 2009 Madrid, Spain, 577-584, 2009.

**M. Fikar and J. Mikleš. *Identifikácia systémov*. STU Press, 1999. ISBN 80-227-1177-2. 114 pp.**

84. Vasičkaninová, A., Zemanovičová, A.: Identification gaseous mixture system. Proc. of Int. Conference Process Control'98, Kouty nad Desnou, 7-10.6.1998, Vol 1, 458-461, 1998.
85. Mészáros A.: Determination of optimal feed rate profile in fed-batch bioreactors. CD ROM of the 26th International Conference of Slovak Society of Chemical Engineering, P107, Jasná, May 24-28, 1999.
86. Danko, J., Ondrovičová, M.: Computer control of a drying chamber. The 4th International Scientific - Technical Conference, Process Control 2000, CD-ROM Proceedings, 11 - 14 June 2000, Kouty nad Desnou, Czech Republic, rip151.pdf.
87. Š. Kožka, A. Zemanovičová, H. Hofbauer, G. Bachmann: Identification of the experimental multi-kilogram capacity calorimeter, CD-ROM Proceedings of the 13th Int. Conference Process Control '01, Tatranske Matliare, Slovakia, 11-14.6.2001, paper 307.
88. T. Svantnerová, J.Kršák: Návrh regulátora pre lineárny diskretný intervalový systém, CD-ROM Proceedings of the 13th Int. Conference Process Control '01, Strbske Pleso, Slovakia, 11-14.6.2001, paper 158.
89. Danko, J., Ondrovičová, M.: PID controller tuning for cascade control of a chemical reactor. The 6th International Scientific - Technical Conference, Process Control 2004, CD-ROM Proceedings, 8 - 11 June 2004, Kouty nad Desnou, Czech Republic, r119.pdf.
90. Bakošová M., Vasičkaninová, A., Puna, D., Ondrovičová, M.: Cascade Control of a Chemical Reactor. CD-ROM Proceedings of the 32nd Int. Conference SSCHE, Tatranske Matliare, Slovakia, 24-27.5.2005, paper 060.

91. J. Vojtěšek, P. Dostál: Adaptive Control of the CSTR Using ARX and ARMAX Model for Identification. CD-ROM Proceedings of the 15th Int. Conference Process Control '05, Strbske Pleso, Slovakia, 7-10.6.2005, paper 082f.
92. Vasičkaninová, A., Bakošová M.: Cascade Fuzzy Logic Control of a Chemical Reactor. CD-ROM Proceedings of the 15th Int. Conference Process Control '05, Strbske Pleso, Slovakia, 7-10.6.2005, paper 175f.
93. M. Rakovský, B. Tomašík: Podporný systém pre optimalizáciu parametrov dvojslučkových regulátorov. CD-ROM Proceedings of the 15th Int. Conference Process Control '05, Strbske Pleso, Slovakia, 7-10.6.2005, paper 215f.
94. Vasičkaninová, A., Bakošová M., Dvoran, J.: Využitie fuzzy regulátorov pri kaskádovom riadení chemického reaktora (1). AT&P Journal, 12(12), 66–68, 2005.
95. Vasičkaninová, A., Bakošová M., Dvoran, J.: Využitie fuzzy regulátorov pri kaskádovom riadení chemického reaktora (2). AT&P Journal, 13(1), 65–66, 2006.
96. J. Vojtěšek, P. Dostál: Program for Simulation of a Continuous Stirred Tank Reactor in MATLAB's GUI. V Technical Computing Prague 2005.
97. J. Vojtěšek, P. Dostál: Knihovna rekurzívnych identifikačných algoritmu. CD-ROM Proceedings of the 7th International Scientific–Technical Conference Process Control 2006, June 13-16, Kouty nad Desnou, Czech Republic. Paper R034b.
98. J. Vojtěšek, P. Dostál: Tubular Chemical Reactor: Simulation of the Adaptive Control. CD-ROM Proceedings of the 34th Int. Conference SSCHE, Tatranske Matliare, Slovakia, 21-25.5.2007, paper 260.
99. Vaneková, K., Bakošová M., Závacká, J.: Robust PI Control of a Laboratory Process using Control System SIMATIC. CD-ROM Proceedings of the 16th Int. Conference Process Control, Strbske Pleso, Slovakia, 11-14.6.2007, paper 030.
100. J. Vojtěšek, P. Dostál, V. Bobál: The Continuous Stirred Tank Reactor: Adaptive LQ Control. 8th International IFAC Symposium on Dynamics and Control of Process Systems, Preprints Vol. 1, June 6-8, 2007, Cancun, Mexico, 201-206.
101. Vaneková, K., Závacká, J., Bakošová, M., Puna, D.: Robustné riadenie laboratórneho procesu riadiacim systémom Simatic. Automatizace, č. 1, zv. 51, str. 34-37, 2008.
102. J. Vojtěšek, P. Dostál, R. Matušů: Conductivity Control Inside Continuous Stirred Tank Reactor. CD-ROM Proceedings of the 8th International Scientific–Technical Conference Process Control 2008, June 9-12, Kouty nad Desnou, Czech Republic. Paper C079a.
103. J. Vojtěšek, P. Dostál: Adaptive LQ Approach Used in Conductivity Control Inside Continuous-Stirred Tank Reactor. Proceedings of the 17th World Congress The International Federation of Automatic Control Seoul, Korea, July 6-11, 2008, paper 1311, 12929-12934.
104. Vojtesek, J., Gazdos, F., Dostal, P., Adaptive control of isothermal reactor with complex reaction, 21st European Conference on Modelling and Simulation (ECMS), Jun 04-06, 2007 Prague, Czech Republic, 410-414. (WoS)
105. Vojtesek, J., Dostal, P., Adaptive control of the CSTR using polynomial approach, 16th International Symposium of the Danube-Adria-Association-for-Automation-and-Manufacturing, Oct 19-22, 2005 Opatija, Croatia, 371-372. (WoS)
106. Vojtesek, J., Dostal, P., Bobal, V., Tubular chemical reactor: From simulation to adaptive control, Proceedings of the 15th IASTED International Conference on Applied Simulation and Modelling, 39-44, 2006, Rhodes, Greece. (WoS)



107. Vojtesek, J., Dostal, P., Simulation Analyses of Continuous Stirred Tank Reactor, Proceedings of 22nd European Conference on Modelling and Simulation (ECMS 2008), jun 03-06, 2008 Univ Cyprus, Nicosia, Cyprus, 506-511, 2008. (WoS)
108. Boržíková, J., Efektivita rekurzívnej MNŠ pri identifikácii systémov a riadení procesov, ARTEP 2009, Stará Lesná, Slovensko, paper 05.
109. Vaneková, K., Bakošová, M., Závacká, J.: Robust Control of a Laboratory Time Delay Process, Proc. of the 36th International Conference of SSCHE May 25-29, 2009, Tatranské Matliare, Slovakia, paper 117.
110. Vojtěšek, J., Dostál, P., Bobál, V.: Adaptive LQ Control of Conductivity Inside CSTR, Proc. of the 36th International Conference of SSCHE May 25-29, 2009, Tatranské Matliare, Slovakia, paper 068.
111. Boržíková, J., Rekurzívne metódy využívané pri identifikácii systémov a riadení procesov, Strojárstvo 5, 4/1-4/2, 2009.
112. Vojtěšek, J., Dostál, P., Adaptive Control of the Tubular Reactor with Co- and Counter-Current Cooling in the Jacket , Editors: Javier Otamendi, Andrzej Bargiela, Jose Luis Montes, Luis Miguel Doncel Pedrera, Proceedings of 23rd European Conference on Modelling and Simulation (ECMS 2009), Jun 9-12, 2009 Madrid, Spain, 544-550, 2009.
113. Vojtěšek, J., Dostál, P., Bobál, V.: Control of Nonlinear System - Adaptive and Predictive Control, Proc. of the IFAC Symposium on Advanced Control of Chemical Processes ADCHEM09, July 12-15, 2009, Istanbul, Turkey, 950-955.
114. Lojko B., Fuchs P., A Contribution to the VCO modeling and simulation, Proceedings of 19th International Conference Radioelektronika, 2009, 231-234. (WoS)
115. J. Vojtesek, P. Dostal, Adaptive Control of Chemical Reactor, Proceedings of the International Conference Cybernetics and Informatics, Vyšná Boca, Slovak Republic, 2010.
116. M. Karšaiová, M. Bakošová, A. Vasičkaninová, Control of Chemical Processes using Complex Control Structures, Proceedings of the 9th International Conference Process Control 2010, Kouty nad Desnou, Czech Republic, C120a, 2010.
117. P. Navrátil, J. Ivanka, Recursive Identification Algorithms Library, Conference Technical Computing Bratislava 2010, RT Systems s.r.o., 2010.
118. J. Oravec, M. Bakošová, PIDTOOL - Software for PID Controller Tuning, Conference Technical Computing Bratislava 2010, RT Systems s.r.o., 2010.
119. Oravec, J., Bakošová, M.: PIDTOOL 2.0 - Software for Identification and PID Controller Tuning, Editors: Fikar, M., Kvasnica, M., In Proceedings of the 18th International Conference on Process Control, Tatranská Lomnica, Slovakia, 125-130, 2011.
120. Bakošová, M., Oravec, J.: Visual and Useful Software for PID Controller Design. Editor: Petr Byron, 19th Annual Conference Proceedings: Technical Computing Prague 2011, Humusoft s.r.o., 2011.
121. Dolinsky, K., Jadlovska, A.: Application of Results of Experimental Identification in Control of Laboratory Helicopter Model. Mechatronics, 9(4), 157-166, 2011.
122. Vozak, D., Chamraz, S.: Simple Identification and Robust Controller Design for Magnetic Levitation Model. International Conference Cybernetics and Informatics, Skalka pri Kremnici, Slovak Republic, 2012.

123. Boržíková, J., Mižák, J., Pitel, J.: Modelling of filter used for biomass combustion process control. 10th International Conference Process Control, Kouty nad Desnou, Czech Republic, C034b: 1-4, 2012.
124. Vesely, I., Sir, M., Zamecnik, D.: Simplification of improved frequency analysis for online identification. 16th IEEE International Conference on Intelligent Engineering Systems, 185-189, 2012.

**M. Fikar, M. A. Latifi, and Y. Creff. Optimal changeover profiles for an industrial depropanizer. *Chem. Eng. Sci.*, 54(13-14):2715–2720, 1999a.**

125. Singer, A. B. and P. I. Barton, Convex Underestimators for Dynamic Optimization Problems, Technical Report, Dept. of Chemical Engineering, MIT, 2001.
126. Chachuat, B., Methodologie d'optimisation dynamique et de commande optimale des petites stations d'épuration a boues activees, PhD Thesis, Institut National Polytechnique de Lorraine, 2001.
127. Singer, A. B., Global Dynamic Optimization, PhD Thesis, Dept. of Chemical Engineering, MIT, 2004.

**J. Mikleš and M. Fikar. *Modelovanie, identifikácia a riadenie procesov I*. STU Press, Bratislava, 1999. 192 pp.**

128. Dvoran J., Hudáček P.: Simulačné overenie hybridného neuro-fuzzy riadiaceho systému. AT&P Journal 8 (plus1), 18 –21 (2001).
129. Dostál P., Bobál, V., Böhm, J.: Návrh spojitého řízení mnoharozměrových systémů. Preprint of the 5th Int. Scientific-Technical Conference Process Control 2002. Kouty nad Děsnou, 9-12 June 2002, paper R-125.
130. Bakošová M., Baleja, J., Ondrovičová, M.: MODELTOOL 1.0 – toolbox matematických modelov chemickotechnologických procesov. AT&P Journal, 12(12), 59–60, 2005.
131. Kuník, S., Mudrončík, D., Tanuška, P.: Virtuálne chemické procesy riadené virtuálnym regulátorom. CD-ROM Proceedings of the 7th International Scientific–Technical Conference Process Control 2006, June 13-16, Kouty nad Desnou, Czech Republic. Paper R154a.
132. Pišan, R., Gazdoš, F., Knihovna modelů technologických procesů, 16th Annual Conference Proceedings: Technical Computing Prague, 84, 2008.
133. Pišan, R., Gazdoš, F., Knihovna modelů technologických procesů, ARTEP 2009, Stará Lesná, Slovensko, paper 51.
134. Pišan, R., Gazdoš, F., Knihovna modelů technologických procesů, Strojárstvo 5, 41/1–41/3, 2009.
135. J. Kukurugya, J. Terpak, Simulation Models of Processes from the Area of Raw Materials Processing Created in MATLAB/Simulink, Conference Technical Computing Bratislava 2010, RT Systems s.r.o., 2010.
136. Žecová, M., Terpák, J.: Mathematical Modeling of Gasification and Combustion of Biomass in MATLAB. Interational Conference Technical Computing Prague, 133, 2011.
137. Korenčíak, D., Gutten, M.: Opportunities for integration of modern systems into control processes in intelligent buildings. Electrical Review (Przegląd Elektrotechniczny), 88(2), 266-269, 2012.
138. Korenčíak, D.: Application of LONWORKS technology in intelligent buildings. ELEKTRO, 319-322, 2012.

A. Mészáros, A. Rusnák, and M. Fikar. Adaptive neural PID control case study: Tubular chemical reactor. In Z. Fonyó, editor, *Proceedings of European Symposium on Computer Aided Process Engineering-9, May 31-June 1, 1999*, pages S847–S850, Budapest, Hungary, 1999b.

139. Bakošová M., Ondrovičová M., Karšaiová M.: Application of adaptive lambda-tracking for control of a fan heater. CD-ROM Proceedings of the 16th Int. Congress of Chemical and Process Engineering CHISA 2004, Prague, Czech Republic, 22-26 august 2004, paper 1149.

M. Fikar and V. Kučera. On minimum finite length control problem. *Int. J. Control*, **73(2):152–158**, 2000.

140. Mošna J., Melichar. J., Pešek. P.: Polynomial Parametrization of Multirate Dead-beat Ripple-free Controllers. IFAC Conference CSD 2003, September 7-10, Bratislava, Slovakia.

Š. Kožka, J. Mikleš, M. Fikar, F. Jelenčíak, and J. Dzivák. Closed-loop identification of a laboratory chemical reactor. In M. Šebek, editor, *IFAC Conference ROCOND 2000, June 21-23, Prague, Czech Republic, 2000*. CD-ROM: EUR-03.PDF.

141. F. Gajdoš, P. Dostál, Parametrizací k adaptivnímu řízení technologických procesů, ATP Journal, 10, 56-58, 2000.

142. F. Gajdoš, P. Dostál: Adaptive control of multivariable systems. Plant-parametrization approach. CD-ROM Proceedings of the 13th Int. Conference Process Control '01, Strbske Pleso, Slovakia, 11-14.6.2001, paper 015.

143. F. Gajdoš, P. Dostál: P. Navrátil, Adaptive control based on plant-parametrization using of  $\delta$ -models. CD-ROM Proceedings of the 11th Mediterranean Conference on Control & Automation, June 18-20, 2003 Rhodes, Greece, iv04-02.pdf.

J. Mikleš and M. Fikar. *Process Modelling, Identification, and Control I*. STU Press, Bratislava, Slovakia, 2000. 192 pp.

144. Zemanovičová A., Bachmann, G., Hofbauer, H., Danko, J., Vasičkaninová A.: Control of Experimental Calorimeter. Preprint of the 5th Int. Scientific-Technical Conference Process Control 2002. Kouty nad Děsnou, 9-12 June 2002, paper R-224.

145. F. Gajdoš, P. Dostál: P. Navrátil, Adaptive control based on plant-parametrization using of  $\delta$ -models. CD-ROM Proceedings of the 11th Mediterranean Conference on Control & Automation, June 18-20, 2003 Rhodes, Greece, iv04-02.pdf.

146. Wang, J., Control strategy and implementation for polymerase chain reaction device, ICALIP 2008 - 2008 International Conference on Audio, Language and Image Processing, Proceedings 2008, Article number 4590004, Pages 825-828. (scopus)

M. Fikar, M. A. Latifi, J. P. Corriou, and Y. Creff. CVP-based optimal control of an industrial depropanizer column. *Computers chem. Engng.*, **24(2–7):909–915**, 2000.

147. Chachuat, B., Methodologie d'optimisation dynamique et de commande optimale des petites stations d'épuration a boues activees, PhD Thesis, Institut National Polytechnique de Lorraine, 2001.

148. Bakošová M., Mészáros A., Ondrovičová M., Karšaiová M.: Application of adaptive lambda-tracking for control of MIMO nonlinear chemical processes. In: CD ROM of full texts of the 28th Int. Conf. of SSCHI. Tatranské Matliare (Slovakia), May 21–25, 2001. SSCHI Bratislava, CD ROM P123 (2001).

149. Bakošová M., Kostendová M., Karšaiová M., Ondrovičová M.: Adaptive Lambda-tracking of a Laboratory Fan Heater. CD-ROM Proceedings of the 14th Int. Conference Process Control '03, Strbske Pleso, Slovakia, 8-11.6.2003, paper 219.
150. Bakošová M., Mészáros, A.: Control of Nonlinear Chemical Processes by an Adaptive Lambda-tracker with Variable Sampling Rate. CD-ROM Proceedings of the 30th Int. Conference SSCHE, Tatranske Matliare, Slovakia, 26-30.5.2003, paper 142.
151. Bakošová M., Mészáros, A., Kostendová M.: Control of a Laboratory Fan Heater by an Adaptive Lambda-Tracker. CD-ROM Proceedings of the 31st Int. Conference SSCHE, Tatranske Matliare, Slovakia, 24-28.5.2004, paper 120.
152. Bakošová M., Ondrovičová M., Karšaiová M.: Application of adaptive lambda-tracking for control of a fan heater. CD-ROM Proceedings of the 16th Int. Congress of Chemical and Process Engineering CHISA 2004, Prague, Czech Republic, 22-26 august 2004, paper 1149.

**A. Rusnák, M. Fikar, M. A. Latifi, and A. Mészáros. Receding horizon iterative dynamic programming with discrete time models. *Computers chem. Engng.*, 25(1): 161–167, 2001.**

153. Armaou, A., Kevrekidis, I. G.: Optimal switching policies using coarse timesteppers. Proceedings of the 42nd IEEE Conference on Decision and Control, Maui, Hawaii USA, December 2003, Paper FrM11-3.
154. Kwon, W.H., From infinite horizon to receding horizon for controls, estimations and optimizations, Proceedings of the 26th Chinese Control Conference, 2007, Article number 4346756, Pages 12-20. (scopus.com)
155. Wook Hyun Kwon, Soohye Han: Receding horizon schemes for controls, estimations, and optimizations, International Conference Control, Automation and Systems, 2007. ICCAS '07., pp. xlv-lv, Seoul, Korea, 2007 (scopus.com).
156. Hyun, Kwon Woo: From Infinite Horizon to Receding Horizon for Controls, Estimations and Optimizations, Chinese Control Conference, 2007. CCC 2007, 12-20, Zhangjiajie, China/. (scopus.com)
157. R. Luus, Comparison of IDP and LJ Optimization Procedure for Establishing the Optimal Control of a Nonisothermal Fedbatch Reactor, Bioautomation, 13 (3), 1-14, 2009.
158. Luus, R. Choosing grid points in solving singular optimal control problems by iterative dynamic programming. In Proceedings of the 10th IASTED International Conference on Intelligent Systems and Control (ISC '07), Les M. Sztandera (Ed.). ACTA Press, Anaheim, CA, USA, 425-433, 2007.
159. Anand, P., Venkateswarlu, Ch., Bhagvanth Rao, M.: Multistage dynamic optimization of a copolymerization reactor using differential evolution. Asia-Pacific Journal of Chemical Engineering, 8(5), 687-698, 2013.

**M. Fikar and M. A. Latifi. User's guide for FORTRAN dynamic optimisation code DYNO. Technical Report mf0201, LSGC CNRS, Nancy, France; STU Bratislava, Slovak Republic, 2002.**

160. Xu, Y.J., Path-constrained optimal trajectory design for the upper stage of a vertical takeoff vertical landing launch vehicle, AAS/AIAA 17th Space Flight Mechanics Meeting, Jan 28-Feb 01, 2007, Sedona, AZ, 287-300. (WoS)

**Ľ. Čirka, J. Mikleš, and M. Fikar. A deterministic LQ tracking problem: Parametrisation of controller. *Kybernetika*, 38(4):469–478, 2002b.**

161. Pradin, B., Garcia, G.: *Modelisation, Analyse et Commande des Systemes Lineaires*, Presses Univ Mirail, Univ Toulouse Mirail, 5 Allees Antonio Machado, 31058 Toulouse, France, 2010.

**J. Mikleš, Ľ. Čirka, and M. Fikar. Adaptive LQ control of a CSTR via YK parametrisation of the controller and the plant model. In I. Taufer, editor, *Preprint of the 5th Int. Scientific-Technical Conference Process Control 2002*, pages R–115, Kouty nad Děsnou, 2002.**

162. Bakošová M., Mészáros, A.: Control of Nonlinear Chemical Processes by an Adaptive Lambda-tracker with Variable Sampling Rate. CD-ROM Proceedings of the 30th Int. Conference SSCHE, Tatranske Matliare, Slovakia, 26-30.5.2003, paper 142.

**Ľ. Čirka, M. Fikar, and J. Mikleš. A deterministic LQ tracking problem: Parametrisation of the controller and the plant. *Journal of Electrical Engineering*, 53(5–6): 126–131, 2002a.**

163. Bakošová M., Mészáros, A., Kostendová M.: Control of a Laboratory Fan Heater by an Adaptive Lambda-Tracker. CD-ROM Proceedings of the 31st Int. Conference SSCHE, Tatranske Matliare, Slovakia, 24-28.5.2004, paper 120.

164. Bakošová M., Ondrovičová M., Karšaiová M.: Application of adaptive lambda-tracking for control of a fan heater. CD-ROM Proceedings of the 16th Int. Congress of Chemical and Process Engineering CHISA 2004, Prague, Czech Republic, 22-26 august 2004, paper 1149.

**U. Halldorson, M. Fikar, and H. Unbehauen. Multirate nonlinear predictive control. In *American Control Conference 2002*, pages FM06–5, paper 743.pdf, Anchorage, Alaska, 2002.**

165. Anderson, D., McGookin, M., Brignall, N., Fast model predictive control of the nadir singularity in electro-optic systems, *Journal of Guidance, Control, and Dynamics* 32(2), 626-632, 2009.

166. Vachon, A., Desbiens, A., Gagnon, E., Berard, C.: Space launcher guidance based on discrete nonlinear model predictive control. Proceedings of the International Astronautical Congress, IAC, 5207-5215, 2012.

**M. Bakošová, M. Fikar, and Ľ. Čirka. *Základy automatizácie. Laboratórne cvičenia zo základov automatizácie*. STU Press, Bratislava, 2003.**

167. Blahová, L., Dvoran, J., Kmeťová, J.: Intelligent control of the three tank system. Proceedings of the 38th International Conference of Slovak Society of Chemical Engineering, Tatranské Matliare, Slovakia, 100-107, 2011.

168. Blahová, L., Dvoran, J.: Neuro-Fuzzy Control of the Three Tank System, Editors: Fikar, M., Kvasnica, M., In Proceedings of the 18th International Conference on Process Control, Tatranská Lomnica, Slovakia, 356-359, 2011.

**M. Fikar, B. Chachuat, and M. A. Latifi. Dynamic optimisation of alternating activated sludge processes. In J. Maciejowski, editor, *ECC03, 1-4 September 2003, University of Cambridge, UK*, 2003. File: 536.pdf.**

169. Aschemann, H., Rauh, A., Kletting, M., Hofer, E.P., Flatness-based control of a simplified wastewater treatment plant, Proceedings of the 2006 IEEE International Conference on Control Applications, 1422-1427, 2006, Munich, Germany. (WoS)

**M. Svetíková, J. Annus, Ľ. Čirka, and M. Fikar. Real time control of a laboratory fan heater using dSPACE tools. In J. Mikleš, editor, *Proceedings of the 14th Int. Conference Process Control '03, Strbske Pleso, June 8–11, 2003, Slovakia, 2003. T-Tu-M4, pc211.pdf.***

170. Bakošová M., Kostendová M., Karšaiová M., Ondrovičová M.: Adaptive Lambda-tracking of a Laboratory Fan Heater. CD-ROM Proceedings of the 14th Int. Conference Process Control '03, Strbske Pleso, Slovakia, 8-11.6.2003, paper 219.
171. Bakošová M., Mészáros, A., Kostendová M.: Control of a Laboratory Fan Heater by an Adaptive Lambda-Tracker. CD-ROM Proceedings of the 31st Int. Conference SSCHE, Tatranske Matliare, Slovakia, 24-28.5.2004, paper 120.
172. Bakošová M., Ondrovičová M., Karšaiová M.: Application of adaptive lambda-tracking for control of a fan heater. CD-ROM Proceedings of the 16th Int. Congress of Chemical and Process Engineering CHISA 2004, Prague, Czech Republic, 22-26 august 2004, paper 1149.

**J. Mikleš and M. Fikar. *Process Modelling, Identification, and Control II.* STU Press, Bratislava, Slovakia, 2004a. 257 pp.**

173. Bakošová M., Puna, D., Mészáros, A.: Control of a Chemical Reactor in an Unstable Steady State Using Robust Static Output Feedback. CD-ROM Proceedings of the 32nd Int. Conference SSCHE, Tatranske Matliare, Slovakia, 24-27.5.2005, paper 060.
174. Puna, D., Bakošová M., Mészáros, A., Závacká, J.: Control of a Chemical Reactor with Uncertainties in an Unstable Steady State. CD-ROM Proceedings of the 33rd Int. Conference SSCHE, Tatranske Matliare, Slovakia, 22-26.5.2006, paper 045.
175. Bakošová M., Baleja, J., Vasičkaninová, A., Puna, D.: MODELTOOL 1. 0 - A Model Toolbox for MATLAB/Simulink. CD-ROM Proceedings of the 33rd Int. Conference SSCHE, Tatranske Matliare, Slovakia, 22-26.5.2006, paper 044.
176. Bakošová M., Baleja, J., Vasičkaninová, A.: MODELTOOL 1. 0 - A Model Toolbox for MATLAB/Simulink. CD-ROM Proceedings of the 7th International Scientific–Technical Conference Process Control 2006, June 13-16, Kouty nad Desnou, Czech Republic. Paper R074a.
177. Závacká, J., Bakošová M., Prokop, R., Puna, D.: Robust Control of a Chemical Reactor with Uncertainties. CD-ROM Proceedings of the 7th International Scientific–Technical Conference Process Control 2006, June 13-16, Kouty nad Desnou, Czech Republic. Paper R075.
178. Bakošová M., Puna, D., Závacká, J., Ondrovičová, M.: Robust Controller Design of a Chemical Reactor Using LMIs. CD-ROM Proceedings of the 7th International Scientific–Technical Conference Process Control 2006, June 13-16, Kouty nad Desnou, Czech Republic. Paper R074b.
179. Bakošová M., Puna, D., Závacká, J.: Robust Control of a Chemical Using Static Output Feedback. CD-ROM Proceedings of the 17th International Congress of Chemical and Process Engineering, CHISA 2006, August 27-31, Prague, Czech Republic. Paper 0816.
180. Závacká, J., Bakošová M., Vaneková, K.: Robust PI Controller Design for Control of Systems with Parametric Uncertainties. CD-ROM Proceedings of the 34th Int. Conference SSCHE, Tatranske Matliare, Slovakia, 21-25.5.2007, paper 038.
181. Vaneková, K., Bakošová M., Závacká, J.: Robust Control of a Laboratory Process Using Control System SIMATIC. CD-ROM Proceedings of the 34th Int. Conference SSCHE, Tatranske Matliare, Slovakia, 21-25.5.2007, paper 061.

182. Puna, D., Bakošová M.: Control of Systems with Parametric Uncertainties using a Robust PI Controller. CD-ROM Proceedings of the 16th Int. Conference Process Control, Strbske Pleso, Slovakia, 11-14.6.2007, paper 027.
183. Vaneková, K., Bakošová M., Závacká, J.: Robust PI Control of a Laboratory Process using Control System SIMATIC. CD-ROM Proceedings of the 16th Int. Conference Process Control, Strbske Pleso, Slovakia, 11-14.6.2007, paper 030.
184. Závacká, J., Bakošová M., Vaneková, K.: Control of systems with parametric uncertainties using a robust PI controller, AT&P PLUS 2, 2007, 79-83.
185. Vaneková, K., Bakošová M., Závacká, J., Jančová, K.: Robust Control of a Laboratory Process Time-Delay Process. CD-ROM Proceedings of Int. Conference Cybernetics and Informatics, Ždiar, Slovakia, 10-14.2.2008.
186. Vaneková, K., Závacká, J., Bakošová, M., Puna, D.: Robustné riadenie laboratórneho procesu riadiacim systémom Simatic. Automatizace, č. 1, zv. 51, str. 34-37, 2008.
187. Vaneková, K., Bakošová M., Závacká, J.: Robust Control of a Laboratory Time-Delay Process Using Control System SIMATIC. CD-ROM Proceedings of the 35th Int. Conference SSCHE, Tatranske Matliare, Slovakia, 26-30.5.2007, paper 024.
188. Závacká, J., Vaneková, K., Bakošová M.: Design of PI, PID Controllers for Control of Systems with Parametric Uncertainties. CD-ROM Proceedings of the 35th Int. Conference SSCHE, Tatranske Matliare, Slovakia, 26-30.5.2007, paper 050.
189. Závacká, J., Vaneková, K., Bakošová M.: Robust PI, PID Controllers for Control of Systems with Parametric Uncertainty. CD-ROM Proceedings of the 8th International Scientific-Technical Conference Process Control 2008, June 9-12, Kouty nad Desnou, Czech Republic. Paper C033a.
190. Vaneková, K., Bakošová M., Závacká, J., Jančová, K.: Robust PI Control of a Time-Delay Process Using Industrial Control System SIMATIC. CD-ROM Proceedings of the 8th International Scientific-Technical Conference Process Control 2008, June 9-12, Kouty nad Desnou, Czech Republic. Paper C078a.
191. Vaneková, K., Bakošová M., Závacká, J., Jančová, K.: Robust Control of a Laboratory Time-Delay Process Using an Industrial Control System. CD-ROM Proceedings of the 18th International Congress of Chemical and Process Engineering, CHISA 2008, August 24-28, Prague, Czech Republic. Paper 0524.
192. Závacká, J., Bakošová M., Vaneková, K.: Design of Robust PI, PID Controllers for Control of Systems with Parametric Uncertainty. CD-ROM Proceedings of the 18th International Congress of Chemical and Process Engineering, CHISA 2008, August 24-28, Prague, Czech Republic. Paper 0457.
193. Vasičkaninová, A., Bakošová M., Mészáros, A., Závacká, J.: Model-based predictive control of a chemical reactor. CD-ROM Proceedings of the 18th International Congress of Chemical and Process Engineering, CHISA 2008, August 24-28, Prague, Czech Republic. Paper 0623.
194. Závacká, J., Bakošová M., Vaneková, K.: Riadenie laboratórneho chemického reaktora robustným PI regulátorom. Automatizace, 52(6), 362-365, 2009.
195. Vaneková, K., Bakošová, M., Závacká, J.: Robust PI controller design, Editor: Markoš, J., In Proceedings of the 37th International Conference of Slovak Society of Chemical Engineering, Tatranské Matliare, Slovakia, 78-86, 2010.
196. Dostál, P., Bobál, V., Vojtešek, J.: Control Design of a Nonlinear Multivariable Process. WSEAS Transactions on Systems and Control, 8(4), 131-140, 2013.

197. Dostál, P., Vojtěšek, J., Bobál, V.: Adaptive LQ Control of a Shell and Tube Heat Exchanger. *International Journal of Mathematics and Computer in Simulation*, 7(5), 389-397, 2013.

**J. Mikleš and M. Fikar. *Modelovanie, identifikácia a riadenie procesov II*. STU Press, Bratislava, 2004b. 266 pp.**

198. M. Ondrovičová, M. Bakošová, M. Karšaiová, O. Palacka: Control of a Reboiler by Control System SIMATIC. CD-ROM Proceedings of the 32nd Int. Conference SSCHE, Tatranske Matliare, Slovakia, 24-27.5.2005, paper 138f.

199. Maca, M., Kubalčík, M.: Software Environment for Adaptive Multivariable GPC. CD-ROM Proceedings of the 7th International Scientific–Technical Conference Process Control 2006, June 13-16, Kouty nad Desnou, Czech Republic. Paper R072.

200. Ondrovičová, M., Bakošová M., Puna, D.: Control of a Reboiler by SIMATIC 300. CD-ROM Proceedings of the 17th International Congress of Chemical and Process Engineering, CHISA 2006, August 27-31, Prague, Czech Republic. Paper 0700.

201. J. Vojtěšek, P. Dostál, M. Navrátil: Adaptive Control of CSTR with van der Vusse Reaction. CD-ROM Proceedings of the 35th Int. Conference SSCHE, Tatranske Matliare, Slovakia, 26-30.5.2007, paper 025.

202. Anderle, M., Augusta, P., Reháč, B., Simulace systémů s rozloženými parametry v Simulinku, 16th Annual Conference Proceedings: Technical Computing Prague, 13, 2008.

203. Vaneková, K., Bakošová, M., Závacká, J.: Robust Control of a Laboratory Time Delay Process, Proc. of the 36th International Conference of SSCHE May 25-29, 2009, Tatranské Matliare, Slovakia, paper 117.

204. Závacká, J., Bakošová, M., Vaneková, K.: Control of Laboratory Chemical Reactor with Robust PI Controller, Proc. of the 36th International Conference of SSCHE May 25-29, 2009, Tatranské Matliare, Slovakia, paper 121.

**Ľ. Čírka and M. Fikar. Idtool 3.0 – a dynamical system identification toolbox for MATLAB/Simulink. In J. Mikleš, J. Dvoran, and M. Fikar, editors, *Proceedings of the 15th Int. Conference Process Control '05, Štrbské Pleso, June 7–10, 2005, Slovakia, 2005*. 001f.pdf.**

205. Bakošová M., Baleja, J., Vasičkaninová, A., Puna, D.: MODELTOOL 1. 0 - A Model Toolbox for MATLAB/Simulink. CD-ROM Proceedings of the 33rd Int. Conference SSCHE, Tatranske Matliare, Slovakia, 22-26.5.2006, paper 044.

206. Bakošová, M., Puna, D., Závacká, J., Vaneková, K., Robust Static Output Feedback Control of a Mixing Unit, Proceedings of the European Control Conference 2009, Budapest, Hungary, 4139-4144, 2009.

**M. Fikar, B. Chachuat, and M. A. Latifi. Optimal operation of alternating activated sludge processes. *Control Engineering Practice*, 13(7):853–861, 2005.**

207. Sui, H., Li, X.-G., Xu, S.-M., Huang, G.-Q.: Optimization of One Reactor Activated Sludge Wastewater Treatment System, 2006, Journal of Tianjin University Science and Technology 39 (SUPPL.), pp. 13-19 (scopus).

208. Koumboulis, F.N., Kouvakas, N.D., King, R.E., Stathaki, A.: Two-stage robust control of substrate concentration for an activated sludge process, ISA Transactions 47 (3), pp. 267-278, 2008 (scopus).



209. Tzoneva, R.: Optimal PID control of the dissolved oxygen concentration in the wastewater treatment plant, AFRICON 2007, 1-7, Windhoek, Namibia. (IEEEExplore)
210. Tzoneva, R., Method for real time optimal control of the activated sludge process, Mediterranean Conference on Control and Automation, Jun 27-29, 2007, Athens, Greece. (WoS)
211. Beraud, B., Lemoine, C., Steyer, J.-P., Multiobjective genetic algorithms for the optimisation of wastewater treatment processes, *Studies in Computational Intelligence* 218, pp. 163-195, 2009. (Scopus)
212. B. Beraud, C. Lemoine, J.-P. Steyer, Multiobjective Genetic Algorithms for the Optimisation of Wastewater Treatment Processes, In: M. C. Nicoletti, L. C. Jain (Editors), *Computational Intelligence Techniques for Bioprocess Modelling, Supervision and Control (Studies in Computational Intelligence)*, Springer Berlin, Vol. 218/2009, 163-195, 2009.
213. M. Mulas, A. C. B. de Araujo, R. Baratti, S. Skogestad, Optimized Control Structure for a Wastewater Treatment Benchmark, *Proceedings of the 9th International Symposium on Dynamics and Control of Process Systems (DYCOPS 2010)*, Leuven, Belgium, July 5-7, 2010, Paper WeMT4.4.
214. E. V. Grigorieva, E. N. Khailov, Minimization of Pollution Concentration on a Given Time Interval for the Waste Water Cleaning Plant, *Journal of Control Science and Engineering* Volume 2010 (2010), Article ID 712794, 10 pages doi:10.1155/2010/712794
215. E. V. Grigorieva, E. N. Khailov, Optimal Control of a Waste Water Cleaning Plant, Eighth Mississippi State - UAB Conference on Differential Equations and Computational Simulations, *Electronic Journal of Differential Equations*, Conf. 19 (2010), pp. 161–175.
216. Makinia, J.: *Mathematical Modelling and Computer Simulation of Activated Sludge Systems*. IWA Publishing, London, 2010.
217. Canete, J. F., Saz-Orozco, P., Garcia-Moral, I.: Aeration Control and Parameter Soft Estimation for a Wastewater Treatment Plant Using a Neurogenetic Design. IWANN 2011, Part I, LNCS 6691, Springer, 315-322, 2011.
218. Li, P., Shen, L., Li, F., Jiang, Y., Zhang, H.: Optimal design and operation of settling tank in alternating activated sludge process based on 3-D model simulation. 5th International Conference on Bioinformatics and Biomedical Engineering, iCBBE 2011, art. no. 5781059, 2011.
219. Chen, Q., Li, W., Lu, Z.: Analysis of energy saving routes for sewage treatment systems based on flexibility theory. 2011 International Conference on Electric Information and Control Engineering, ICEICE 2011 - Proceedings , art. no. 5777479, pp. 4786-4789, 2011.
220. Grigorieva, E., Bondarenko, N., Khailov, E., Korobeinikov, A.: Industrial Waste, Chapter: Finite-Dimensional Methods for Optimal Control of Autothermal Thermophilic Aerobic Digestion. InTech, 91-120, 2012.
221. Diehl, S.: Chapter: Shock-Wave Behaviour of Sedimentation in Wastewater Treatment: A Rich Problem. Springer, Analysis for Science, Engineering and Beyond, 175-214, 2012.
222. Makowska, M., Sychala, M., Mazur, R.: Removal of Carbon and Nitrogen Compounds in Hybrid Bioreactors, In: *Biomass Now – Cultivation and Utilization*. Intech Open, 213-236, 2013.
223. Serhani, M., Boutanfit, H., Boutoulout, A.: Sensitivity and Strong Controllability of a Non-linear Chemostat Model. *ESAIM: Proceedings and Surveys*, 49, 115-129, 2015.

**U. Halldorsson, M. Fikar, and H. Unbehauen. Nonlinear predictive control with multirate optimization step lengths. *IEE Proc.-Control Theory Appl.*, 152(3):273 – 285, 2005.**

224. Siller-Alcala, I.I., Liceaga-Castro, J.U., Jaimes-Ponce, Generalized predictive control for nonlinear systems with ill-defined relative degree: The ball and beam example, 2007, WSEAS Transactions on Systems 6 (1), pp. 76-81 (scopus).
225. Ali, A., Blath, J.P., Application of modern techniques to SI-engine torque control, Proceedings of the IEEE International Conference on Control Applications, art. no. 4067486, pp. 2405-2410, 2007. (scopus).
226. Zhu, N., Zhou, L., The study of predictive control system based on coincidence points technology, Chinese Control and Decision Conference, CCDC 2009, 4157-4161, 2009. (scopus, wos)
227. W. Chen, X. Li, M. Chen, Suboptimal Nonlinear Model Predictive Control Based on Genetic Algorithm, iitaw, 119-124, 2009 Third International Symposium on Intelligent Information Technology Application Workshops, 2009.
228. Barlow, J.S., Data-based predictive control with multirate prediction step, Proceedings of the 2010 American Control Conference, ACC 2010 2010, Article number 5530991, Pages 5513-5519. (scopus)
229. Beikzadeh, H., Marquez, H. J.: Preservation of dissipativity under multirate sampling with application to nonlinear Hinf control. Proceedings of the American Control Conference, 6751-6756, 2012.

**M. Čižniar, M. Fikar, and M. A. Latifi. Matlab dynamic optimisation code dynopt. user's guide. Technical report, KIRP FCHPT STU Bratislava, Slovak Republic, 2005a.**

230. Tong, K., Zhou, J., He, L., Legendre-gauss pseudospectral method for solving optimal control problem, Hangkong Xuebao/Acta Aeronautica et Astronautica Sinica 29 (6), 2008, 1531-1537. (scopus)
231. Rao, A. V., Benson, D. A., Darby, C., Patterson, M. A., Francolin, C., Sanders, I., Huntington, G. T.: Algorithm 902: GPOPS, A MATLAB software for solving multiple-phase optimal control problems using the gauss pseudospectral method. ACM Trans. Math. Softw., č. 2, zv. 37, str. 22:1–22:39, 2010.
232. Luo, J., Biegler, L. T.: Dynamic Optimization of Aeration Operations for a Benchmark Wastewater Treatment Plant. Preprints of the 18th IFAC World Congress Milano, Italy, August 28 - September 2, 2011, 14189-14194, 2011.
233. Wang, Z., Shao, Z., Wan, J., Fang, X.: A simultaneous strategy for dynamic optimization based on symbolic derivation. Control and Decision Conference (CCDC), 2011 Chinese, 2050-2055, 2011.
234. Ozana, S., Pies, M., Hajovsky, R., Nowakova, J.: Swing-up Problem of Inverted Pendulum Designed by DYNOPT Toolbox. Proceedings of the World Congress on Engineering and Computer Science, 23-25 October 2013, San Francisco, USA.

M. Čížniar, D. Salhi, M. Fikar, and M.A. Latifi. A MATLAB package for orthogonal collocations on finite elements in dynamic optimisation. In J. Mikleš, J. Dvoran, and M. Fikar, editors, *Proceedings of the 15th Int. Conference Process Control '05, Štrbské Pleso, June 7–10, 2005, Slovakia, 2005c*. 058f.pdf.

235. Moreno-Benito, M., Espuna, A.: Facing New Products Demand through Simultaneous Structural and Operational Decisions in the Design of the Control Recipe, Proc. of the 14th Conference on Process Integration, Modelling and Optimisation for Energy Saving and Pollution Reduction, Florence, Italy, 2011.
236. Khardi, S., Houacine, M.: Trajectory Design Method for Less Noise and Fuel Consumption from Aircraft Operations. 10eme Congres Francais d'Acoustique, Lyon, France, 2010.
237. Bayón, L., Grau, J., Ruiz, M., Suárez, P.: Initial guess of the solution of dynamic optimization of chemical processes. *Journal of Mathematical Chemistry*, 48(1), 28-37, 2010.
238. Miro, A., Pozo, C., Guillen-Gosalbez, G., Egea, J. A., Jimenez, J.: Deterministic global optimization algorithm based on outer approximation for the parameter estimation of nonlinear dynamic biological systems. *BMC Bioinformatics*, 13(90), 2012.
239. Barreto-Rodriguez, Carol Milena, Ramirez-Angulo, Jessica Paola, Ramirez, Jorge Mario Gomez, Achenie, Luke, Molina-Bulla, Harold, Barrios, Andrés Fernando González: Dynamic Flux Balance Analysis for Predicting Gene Overexpression Effects in Batch Cultures. *Journal of Biological Systems*, 22(3), 327-338, 2014.

**T. Hirmajer and M. Fikar. Optimálne riadenie sústavy chemických reaktorov. *AT&P Journal*, 13(11):69–72, 11 2006a.**

240. Hladký, V., Popovič, L., Sarnovský, J.: Modeling of a System with Hybrid Dynamics. *Acta Electrotechnica et Informatica*, 11(1), 14-19, 2011.

**T. Hirmajer and M. Fikar. Dynamic optimization of a hybrid coupled tanks system. *Journal of Electrical Engineering*, 57(3):166–171, 2006c.**

241. Hladký, V., Popovič, L., Sarnovský, J.: Modeling of a System with Hybrid Dynamics. *Acta Electrotechnica et Informatica*, 11(1), 14-19, 2011.

**J. Mikleš, Ľ. Čírka, M. Fikar, and L. Dermíšek. A decoupling lq controller for a chemical reactor. In *Proceedings of 7th International Carpathian Control Conference*, pages 369–372, Ostrava, Czech Republic, May 29-31 2006b.**

242. Puna, D., Bakošová M.: Robust PI Controller Design for a CSTR with Uncertainties. CD-ROM Proceedings of the 34th Int. Conference SSCHE, Tatranske Matliare, Slovakia, 21-25.5.2007, paper 043.
243. Puna, D., Bakošová M.: Algorithms for Robust Controller Design: Application to CSTR. CD-ROM Proceedings of the 16th Int. Conference Process Control, Strbske Pleso, Slovakia, 11-14.6.2007, paper 026.
244. Puna, D., Bakošová M. Algorithms for robust controller design: application to CSTR, AT&P PLUS 2, 2007, 79-83.
245. Puna, D., Bakošová M. Robust control of a mixing unit. CD-ROM Proceedings of the 8th International Scientific–Technical Conference Process Control 2008, June 9-12, Kouty nad Desnou, Czech Republic. Paper C008a.

**J. Mikleš, Ľ. Čirka, and M. Fikar.**  $H_2$  optimal controller with integral action for a chemical reactor. In *Proceedings of the 2006 IEEE International Conference on Control Applications*, pages 2127–2131, Munich, Germany, 2006a.

246. Puna, D., Bakošová M.: Robust PI Controller Design for a CSTR with Uncertainties. CD-ROM Proceedings of the 34th Int. Conference SSCHE, Tatranske Matliare, Slovakia, 21-25.5.2007, paper 043.
247. Puna, D., Bakošová M.: Algorithms for Robust Controller Design: Application to CSTR. CD-ROM Proceedings of the 16th Int. Conference Process Control, Strbske Pleso, Slovakia, 11-14.6.2007, paper 026.
248. Puna, D., Bakošová M. Algorithms for robust controller design: application to CSTR, AT&P PLUS 2, 2007, 79-83.
249. Bakošová M., Puna, D.: Robust PI and PID Control of a Mixing Device. CD-ROM Proceedings of the 35th Int. Conference SSCHE, Tatranske Matliare, Slovakia, 26-30.5.2008, paper 056.
250. Bakošová M., Puna, D.: Robust PI and PID Control of a Mixing Unit. CD-ROM Proceedings of the 18th International Congress of Chemical and Process Engineering, CHISA 2008, August 24-28, Prague, Czech Republic. Paper 1043.
251. Bakošová, M., Vasičkaninová, A., Karšaiová, M.: Robust PI and PID Stabilization of a CSTR, Proc. of the 36th International Conference of SSCHE May 25-29, 2009, Tatranské Matliare, Slovakia, paper 122.
252. Bakošová, M., Vasičkaninová, A., Simulation of Robust Stabilization of a Chemical Reactor, Editors: Javier Otamendi, Andrzej Bargiela, Jose Luis Montes, Luis Miguel Doncel Pedrera, Proceedings of 23rd European Conference on Modelling and Simulation (ECMS 2009), Jun 9-12, 2009 Madrid, Spain, 570-576, 2009.
253. Bakošová, M., Puna, D., Závacká, J., Vaneková, K., Robust Static Output Feedback Control of a Mixing Unit, Proceedings of the European Control Conference 2009, Budapest, Hungary, 4139-4144, 2009.
254. Bakošová, M., Vasičkaninová, A., Karšaiová, M.: Stabilization of Chemical Reactors Using Robust PID Controllers, CHISA 2010 & ECCE 7, Process Engineering Publisher, Praha, Czech Republic, paper 1249, 2010.

**M. Huba, M. Kamenský, P. Bisták, and M. Fikar.** Blended learning course: Constrained pid control. In S. Dormido, A. Fernandez, F. Morilla, and R. Pastor, editors, *Preprints of the 7th IFAC Symposium on Advances in Control Education*, page 161.pdf, 2006.

255. Kolenčík, M., Žáková, K.: A Contribution to Remote Control of Inverted Pendulum, Proc. of the 17th Mediterranean Conference on Control & Automation, June 24-26, 2009, Thessaloniki, Greece, 1433-1438.
256. Janík, Z., Žáková, K.: Online design of SciLab/Xcos block schemes, Editors: Fikar, M., Kvasnica, M., In Proceedings of the 18th International Conference on Process Control, Tatranská Lomnica, Slovakia, 583-586, 2011.
257. Janík, Z., Žáková, K.: Online design of Matlab/Simulink block schemes. 8th Int. Conference Virtual University VU'09, December 10-11, 2009, Bratislava, Slovakia, paper 70.
258. Z. Magyar, T. Starý, L. Szolík, Ľ. Vörös, K. Žáková: Modeling of linear dynamical systems using open tools. 8th Int. Conference Virtual University VU'09, December 10-11, 2009, Bratislava, Slovakia, paper 134.

259. K. Žáková, Experiments with Inverted Pendulum: from Simulations to Remote Control, *International Journal of Education and Information Technologies*, 3(1), 142-147, 2007.
260. Žáková, K., Kohút, M., Matlab Based Remote Control of Thermo-Optical Plant, 3rd International Conference on Integrity, Reliability and Failure, Porto/Portugal, 20-24 July 2009, paper S0231\_P0518.

**M. Bakošová and M. Fikar. Using the lms moodle in process dynamics education. In M. Huba, editor, *Proc. of 7th International Conference Virtual university 2006*, pages 224–228, Bratislava, December 14-15 2006. E-academia Slovaca.**

261. Huba, M., Steps to Quality in E-learning, Proceedings of the 6th International Conference of Emerging e-learning Technologies and Applications, Stara Lesna, High Tatras, 2008, 211-214.

**M. Bakošová, Ľ. Čírka, M. Fikar, and T. Hirmajer. Automatic control fundamentals - an interactive online course. In M. Huba, editor, *Proc. of 7th International Conference Virtual university 2006*, pages 47–52, Bratislava, December 14-15 2006. E-academia Slovaca.**

262. Huba, M., Steps to Quality in E-learning, Proceedings of the 6th International Conference of Emerging e-learning Technologies and Applications, Stara Lesna, High Tatras, 2008, 211-214.

**M. Čížniar, M. Fikar, and M.A. Latifi. A MATLAB package for dynamic optimisation code of processes. In I. Taufer, editor, *Preprint of the 7th Int. Scientific-Technical Conference Process Control 2006*, page R118, Kouty nad Děsnou, 2006.**

263. Wang, Z., Shao, Z., Wan, J., Fang, X.: A simultaneous strategy for dynamic optimization based on symbolic derivation. *Control and Decision Conference (CCDC)*, 2011 Chinese, 2050-2055, 2011.
264. Ye L., Song Z., Ma X.: Batch-to-batch self-optimizing control for batch processes. *Huagong Xuebao/CIESC Journal*, 66(7), 2573-2580, 2015.

**Ľ. Čírka, M. Fikar, and P. Petruš. Idtool 4.0 - a dynamical system identification toolbox for matlab/simulink. In *14th Annual Conference Proceedings: Technical Computing Prague 2006*, page 29. The MathWorks, Inc. & HUMUSOFT s.r.o. & Ústav počítačové a řídicí techniky VŠCHT v Praze, 26.10.2006 2006.**

265. Matušů, R., Prokop, R.: Software Implementation of Discrete-Time Adaptive Control. 13th International Research/Expert Conference Trends in the Development of Machinery and Associated Technology TMT 2009, Hammamet, Tunisia, 785-788, 2009.
266. Matušů, R., Prokop, R.: Polynomial Approach to Digital Self-Tuning Control: Industrially Motivated Application. WSEAS Press, *Mathematical Methods and Techniques in Engineering and Environmental Science*, Catania, Sicily, Italy, 237-242, 2011.
267. Matušů, R., Prokop, R.: Software Implementation of Self-Tuning Controllers. *New Trends in Technologies: Control, Management, Computational Intelligence and Network Systems*, Editor: Meng J. E., Kapitola: 3. InTech, 39-52, 2010.
268. Matušů, R., Prokop, R.: Various Approaches to Solving an Industrially Motivated Control Problem: Software Implementation and Simulation. *International Journal of Mathematics and Computers in Simulation*, 6(1), 161-168, 2012.
269. Horla, D., Krolkowski, A.: Continuous-Time Adaptive LQG/LTR Control. *Preprints of the 7th IFAC Symposium on Robust Control Design*, 553-557, 2012.

**M. Bakošová, M. Fikar, and Ľ. Čírka. E-learning in process control education. In *Proceedings of European Congress of Chemical Engineering (ECCE-6)*, page CDROM 1015.pdf, Copenhagen, 16-20 September 2007 2007a. EFCE.**

270. Huba, M., Steps to Quality in E-learning, Proceedings of the 6th International Conference of Emerging e-learning Technologies and Applications, Stara Lesna, High Tatras, 2008, 211-214.
271. Tsoulkas, V. N., Pantelous, A. A., Dritsas, P. L., Papachristos, C.: Hybrid Satellite-Terrestrial Architecture for Control Systems Education, 2011 UKSim 13th International Conference on Modelling and Simulation, 171-176.
272. Tsoulkas, V. N., Pantelous, A. A., Dritsas, P. L., Papachristos, C.: Technical Characteristics of an Innovative E-learning Platform for Mathematical Control Education and Future Perspectives, International Journal of Simulation Systems, Science & Technology, 12(1), 10-19, 2011.

**M. Fikar, Ľ. Čírka, M. Bakošová, and T. Hirmajer. Automatic generation of assignments and quizzes in control engineering education. In S. G. Tzafestas and P. J. Antsaklis, editors, *Proc. of of the European Control Conference 2007*, pages 2714–2720, 2007.**

273. Huba, M., Steps to Quality in E-learning, Proceedings of the 6th International Conference of Emerging e-learning Technologies and Applications, Stara Lesna, High Tatras, 2008, 211-214.

**M. Huba, P. Bisták, and M. Fikar. *Príprava na e-vzdelávanie. Modul č. 3. Autori e-vzdelávania*. STU Bratislava, Slovenská e-akadémia, n. o., 2007a.**

274. Horváthová, D., E-learning support in video production, 8th Int. Conference Virtual University VU'07, December 13-14, 2007, Bratislava, Slovakia, 101-104.
275. Ondrejková, A.: E-learning v predmete Počítačové právo. Recenzovaný zborník príspevkov z medzinárodnej konferencie „Inovačný poces v e-learningu“, EU v Bratislave, marec 2008, 68-73.
276. Trochanová, H.: Adaptabilita a rôznorodosť e-learningových kurzov. Recenzovaný zborník príspevkov z medzinárodnej konferencie „Inovačný poces v e-learningu“, EU v Bratislave, marec 2008, 121-123.
277. Horváthová, D., Škrinárová, J., Hanzel, P., Gubalová, J.: Modern Technology in Education. V Proceedings of the 14th International Conference on Interactive Collaborative Learning, Piešťany, Slovakia, 373-377, 2011.
278. Škrinárová, J., Krnáč, M.: E-learning course for scheduling of computer grid. V Proceedings of the 14th International Conference on Interactive Collaborative Learning, Piešťany, Slovakia, 352-356, 2011.
279. Horváthová, D., Brodenec, I.: E-learning Environment in Multimedia and Internet Technologies Teaching. DIVAI 2012 – 9th International Scientific Conference on Distance Learning in Applied Informatics, 137-145, 2012.
280. Škrinárová, J., Horváthová, D., Gubalová, J.: Feedback influence to development of pedagogical competencies of doctoral students. GRANT Journal, 2(1), 46-51, 2013.

**M. Huba, P. Bisták, and M. Fikar. *Príprava na e-vzdelávanie. Modul č. 2. Systémy na riadenie výučby (LMS)*. STU Bratislava, Slovenská e-akadémia, n. o., 2007b.**

281. Kristová, Ľ., Košútová, T.: Testy v Moodle. Recenzovaný zborník príspevkov z medzinárodnej konferencie „Inovačný poces v e-learningu“, EU v Bratislave, marec 2008, 56-59.

282. Szivósová, M.: Využitie e-learningu vo vzdelávacom procese. Recenzovaný zborník príspevkov z medzinárodnej konferencie „Inovačný proces v e-learningu“, EU v Bratislave, marec 2008, 113-120.

283. Bakošová, M.: Využitie e-vzdelávania v pedagogickom procese, Pokroky v chémii a v biológii, Editor(i): Ondrejkočová, I., Izakovič, M., Vydavateľstvo STU, str. 91-98, 2008.

**M. Bakošová, M. Fikar, and Ľ. Čirka. E-learning in course on process control. In J. Sedláček, editor, *Sborník příspěvku konference a soutěže eLearning 2007*, pages 191–197, Univerzita Hradec Králové, 2007b. Gaudeamus.**

284. M. Gangur, E. Kvašňák, Generování unikátních testů v LMS Moodle. Zborník z 1. celostátní konference lékařských fakult ČR, MEFANET, Masarykova univerzita, 182-184, 2008.

**M. Fikar. On automatic generation of quizzes using MATLAB and XML in control engineering education. Technical Report fik07xml, OIRP UIAM FCHPT STU, 2007.**

285. M. Gangur, E. Kvašňák, Generování unikátních testů v LMS Moodle. Zborník z 1. celostátní konference lékařských fakult ČR, MEFANET, Masarykova univerzita, 182-184, 2008.

**J. Mikleš and M. Fikar. *Process Modelling, Identification, and Control*. Springer Verlag, Berlin, 2007.**

286. Maouche, A.R., Attari, M., Neural network-based adaptive control of a two-link flexible manipulator, Mediterranean Journal of Measurement and Control 4 (2), 2008, 66-75. (scopus)

287. Bobál, V., Kubalčík, M., Chalupa, P., Dostál, P.: Self-tuning Predictive Control of Through-flow Heat Exchanger, Proc. of the 36th International Conference of SSCHE May 25-29, 2009, Tatranské Matliare, Slovakia, paper 089.

288. Blahová, L., Dvoran, J.: Intelligent Control of Chemical-technological Processes, Proc. of the 36th International Conference of SSCHE May 25-29, 2009, Tatranské Matliare, Slovakia, paper 146.

289. Bobál, V., Kubalčík, M., Chalupa, P., Dostál, P.: Self-tuning Control of Nonlinear Servo System, Proc. of the 17th Mediterranean Conference on Control & Automation, June 24-26, 2009, Thessaloniki, Greece, 240-245.

290. M. Bakošová, J. Oravec, Ľ. Čirka, Software for PID Controller Tuning, Proceedings of the 17th Annual Conference Technical Computing Prague 2009, Paper 015, Kongresové centrum ČVUT Praha, 2009.

291. L. Blahová, J. Dvoran, Riadenie chemického reaktora v prítomnosti porúch pomocou neuro-fuzzy systému riadenia, Proceedings of the International Conference Cybernetics and Informatics, Vyšná Boca, Slovak Republic, 2010.

292. K. Vaneková, M. Bakošová, J. Závacká, Robust PI Controllers for Systems with Transport Delay, Proceedings of the International Conference Cybernetics and Informatics, Vyšná Boca, Slovak Republic, 2010.

293. A. R. Maouche, M. Attari, Hybrid adaptive neural control for flexible manipulators, International Journal of Intelligent Systems Technologies and Applications, 7(4), 396-413, 2009.

294. Závacká, J., Bakošová, M., Vaneková, K.: Robust PI controller design for exothermic chemical reactor, Editor: Markoš, J., In Proceedings of the 37th International Conference of Slovak Society of Chemical Engineering, Tatranské Matliare, Slovakia, 68-76, 2010.

295. Blahová, L., Dvoran, J.: Control design of chemical technological processes by intelligent methods, Editor: Markoš, J., In Proceedings of the 37th International Conference of Slovak Society of Chemical Engineering, Tatranské Matliare, Slovakia, 88-95, 2010.
296. K. Vaneková, M. Bakošová, J. Závacká, Robust PI Controller Design for a Laboratory Process, Proceedings of the 9th International Conference Process Control 2010, Kouty nad Desnou, Czech Republic, C054a, 2010.
297. M. Bakošová, J. Závacká, K. Vaneková, Design of Robust PI Controllers for Exothermic Chemical Reactor, Proceedings of the 9th International Conference Process Control 2010, Kouty nad Desnou, Czech Republic, C017a, 2010.
298. Blahová, L., Dvoran, J.: Control design of chemical technological processes by neuro-fuzzy methods, Proceedings of the 9th International Conference Process Control 2010, Kouty nad Desnou, Czech Republic, C014a, 2010.
299. M. Bakošová, K. Vaneková, J. Závacká, PI Controller Design for Time Delay Systems, Proceedings of IFAC Workshop on Time Delay Systems, Prague, Czech Republic, FP-BM-514, 2010.
300. K. Vaneková, M. Bakošová, R. Matušů, R. Prokop, J. Závacká, Robust PI controller design for a laboratory time delay process, Proceedings of the 18th Mediterranean Conference on Control and Automation, Congress Palace Hotel, Marrakech, Morocco, June 23-25, 2010, 1000–1005.
301. P. Chalupa, V. Bobál, M. Kubalčík, J. Novák, Adaptive Predictive Control of Through-flow Heat Exchanger, Proceedings of the 18th Mediterranean Conference on Control and Automation, Congress Palace Hotel, Marrakech, Morocco, June 23-25, 2010, 616–621.
302. Závacká, J., Bakošová, M., Vaneková, K.: Design of robust PI controllers for control of an exothermic chemical reactor, Proceedings of the 14th WSEAS International Conference on Systems (Volume II), Corfu Island, Greece, 387-392, 2010.
303. Blahová, L., Dvoran, J.: Neuro-Fuzzy Control of Chemical Reactor with Disturbances, Proceedings of the 14th WSEAS International Conference on Systems (Volume I), Corfu Island, Greece, 336-340, 2010.
304. Závacká, J., Bakošová, M., Vaneková, K.: Robust PI Controller Design for Technological Processes. CHISA 2010 & ECCE 7, Summaries 3, Hydrodynamic processes and system engineering, Process Engineering Publisher, Praha, Czech Republic, paper 0855, 2010.
305. Vasičkaninová, A., Bakošová, M., Mészáros, A., Klemeš, J. Neural network predictive control of a heat exchanger, CHISA 2010 & ECCE 7, Process Engineering Publisher, Praha, Czech Republic, paper 2151, 2010.
306. Nguyen Trong Tai, Nguyen Bao Kha and Kyoung Kwan Ahn, Predictive position and force control for shape memory alloy cylinders, Journal of Mechanical Science and Technology 24 (8) (2010) 1717-1728 [www.springerlink.com/content/1738-494x](http://www.springerlink.com/content/1738-494x) DOI 10.1007/s12206-010-0504-3
307. J. Oravec, M. Bakošová, PIDTOOL - Software for PID Controller Tuning, Conference Technical Computing Bratislava 2010, RT Systems s.r.o., 2010.
308. F. B. Argomedeo, E. Witrant, C. Prieur, D. Georges, S. Brémond Model-based Control of the Magnetic Flux Profile in a Tokamak Plasma Proc. of the 49th IEEE Conference on Decision and Control December 15-17, 2010, Hilton Atlanta Hotel, Atlanta, GA, USA, 6926-6931, 2010.
309. Peng Zhang, Advanced Industrial Control Technology, Elsevier, 2010.



310. Isermann, R., Münchhof, M.: Identification of Dynamic Systems. An Introduction with Applications. Springer, 2011.
311. Máša, V., Pavlas, V., Švarc, I.: Mathematical Model of Biomass Boiler for Control Purposes, Proc. of the 14th Conference on Process Integration, Modelling and Optimisation for Energy Saving and Pollution Reduction, Florence, Italy, 2011.
312. Bakošová, M., Mészáros, A., Klemeš, J., Oravec, J.: Comparison of Robust and Optimal Approach to Stabilisation of CSTRs, Proc. of the 14th Conference on Process Integration, Modelling and Optimisation for Energy Saving and Pollution Reduction, Florence, Italy, 2011.
313. Bakošová, M., Oravec, J., Kačur, M., Závacká, J.: Stabilization of chemical reactors using robust and optimal controllers. Proceedings of the 38th International Conference of Slovak Society of Chemical Engineering, Tatranské Matliare, Slovakia, 988-997, 2011.
314. Blahová, L., Dvoran, J., Kmeťová, J.: Intelligent control of the three tank system. Proceedings of the 38th International Conference of Slovak Society of Chemical Engineering, Tatranské Matliare, Slovakia, 100-107, 2011.
315. Oravec, J., Bakošová, M.: PIDTOOL 2.0 - Software for Identification and PID Controller Tuning, Editors: Fikar, M., Kvasnica, M., In Proceedings of the 18th International Conference on Process Control, Tatranská Lomnica, Slovakia, 125-130, 2011.
316. Závacká, J., Bakošová, M.: Robust Controller Design for a Laboratory Process with Uncertainties, Editors: Fikar, M., Kvasnica, M., In Proceedings of the 18th International Conference on Process Control, Tatranská Lomnica, Slovakia, 72-76, 2011.
317. Blahová, L., Dvoran, J.: Neuro-Fuzzy Control of the Three Tank System, Editors: Fikar, M., Kvasnica, M., In Proceedings of the 18th International Conference on Process Control, Tatranská Lomnica, Slovakia, 356-359, 2011.
318. Bakošová, M., Kačur, M., Oravec, J.: Control of a Tubular Heat Exchanger, Editors: Fikar, M., Kvasnica, M., In Proceedings of the 18th International Conference on Process Control, Tatranská Lomnica, Slovakia, 338-343, 2011.
319. Bakošová, M., Oravec, J.: Visual and Useful Software for PID Controller Design. Editor: Petr Byron, 19th Annual Conference Proceedings: Technical Computing Prague 2011, Humusoft s.r.o., 2011.
320. Vasičkaninová, A., Bakošová, M., Karšaiová, M.: Neural Network Predictive Control and Neuro-Fuzzy Control of Heat Exchanger, Selected Topics in Modelling and Control, Editors: J.Mikleš, V.Veselý, Slovak University of Technology Press Bratislava, 7, 28-34, 2011.
321. Závacká, J., Bakošová, M.: Robust PI Controller for Control of a Laboratory Process with Uncertainties, Selected Topics in Modelling and Control, Editors: J.Mikleš, V.Veselý, Slovak University of Technology Press Bratislava, 7, 35-39, 2011.
322. Londono J.A., Alvarez, H.: Model based flow control using two final control elements. IEEE Conference ANDESCON, 1-6, 2010.
323. Wang C., Liu H., Du Q.: Research and realization on control system of reactor, 2nd International Conference on Industrial Mechatronics and Automation (ICIMA), 142-145, 2010.
324. Komadina, P., Vinko, T., Valčí, M.: Combinatorial Neural Networks Based Model for Identification of Marine Steam Turbine Clustered Parameters. PROMET - Traffic&Transportation, 23(1), 1-9, 2011.

325. Oravec, J., Bakošová, M.: PIDDESIGN - Software for PID Control Education. Editors: R. Vilanova, A. Visioli, IFAC Conference on Advances in PID Control, Brescia, Italy, 2012.
326. Kubalčík, M., Bobál, V.: Predictive Control of Time-delay Processes. Proceedings 26th European Conference on Modelling and Simulation, 2012.
327. Krause, J., Kabitzsch, K.: A generic Approach for Reliability Predictions considering non-uniformly Deterioration Behaviour. Journal of Physics: Conference Series, 364 (1), 012094, 2012.
328. Neaga, A. O., Festila, C., Dulf, E. H., Szelitzky, T., Both, R., Inoan, I., Gligan, M.: Operational model of the  $^{13}\text{C}$  isotope separation column. IEEE International Conference on Automation Quality and Testing Robotics (AQTR), 97-102, 2012.
329. Alsogkier, I., Bohn, C.: Identification and control of periodic disturbances. 20th Mediterranean Conference on Control Automation (MED), 265 -271, 2012.
330. Blahová, L., Dvoran, J., Kmeťová, J.: Neuro-fuzzy control design of processes in chemical technologies. Archives of Control Sciences, 22(2), 233250, 2012. (scopus)
331. Sarhadi, P., Salahshoor, K., Khaki-Sedigh, A.: An Indirect Adaptive Predictive Control with Augmented UD Identifier for Linear Time Varying Systems. International Journal of Computer and Electrical Engineering, 4(5), 733-738, 2012.
332. Kubalčík, M., Bobál, V.: Predictive Control of Higher Order Systems Approximated by Lower Order Time-Delay Models. WSEAS Transactions on Systems, 11 (10), 607-616, 2012.
333. Deng, C., Colin, G., Chamailard, Y., Gruel, D.N.: Sequential robust control design methodology application to the MIMO air path of a diesel engine. IECON 2012 - 38th Annual Conference on IEEE Industrial Electronics Society, 2138 - 2143, 2012.
334. Vasičkaninová, A., Bakošová, M., Karšaiová, M., Kmeťová, J.: Robust Control of the Chemical Reactor Using H<sub>2</sub> and Hinf Approach. Editor: Markoš, J., V Proceedings of the 40th International Conference of Slovak Society of Chemical Engineering, Slovak Society of Chemical Engineering, Tatranské Matliare, Slovakia, str. 826-835, 2013.
335. Kubalčík, M., Bobál, V.: Control Algorithms with Suppression of Measurable Disturbances: Comparison of Two Methods. WSEAS Transactions on Systems and Control, 8(3), 94-104, 2013.
336. Osulale, F., Zhang, J.: Energy Efficient Control of Distillation Process. Annual AIChE Meeting, San Francisco, USA, 2013.
337. Briones, J. F., Paz, M. A., Gallegos, J. L., Rodriguez, J. I. O., Aguilar, M. O.: Design and Implementation of Nonlinear Control Strategies: A Tutorial. V: Emerging Trends in Computing, Informatics, Systems Sciences, and Engineering, Springer Verlag, 877-889, 2013.
338. Vasičkaninová, A., Bakošová, M.: Control of a Heat Exchanger Using Neural Network Predictive Controller and Auxiliary Fuzzy Controller. Chemical Engineering Transactions, 39, 331-336, 2014.
339. Vasičkaninová, A., Bakošová, M.: Control of a Heat Exchanger Using Takagi-Sugeno Fuzzy Model. Editors: Ivo Petráš, Igor Podlubny, Ján Kačur, Radim Farana, Proceedings of 15th International Carpathian Control Conference, Velke Karlovice, Czech Republic, 646-651, 2014.
340. Jha, K. S., Yadav, K. A., Gupta, J. R. P., Parthasarathy, H.: Robust and Optimal Control Analysis of Sun Seeker System. Journal of Control Engineering and Applied Informatics, 16(1), 70-79, 2014.

341. Bobál, V., Kubalčík, M., Dostál, P., Novák, J.: Adaptive predictive control of laboratory heat exchanger. *WSEAS Transactions on Systems*, 13, 470-481, 2014.
342. Erguzel, T.T.: A hybrid PSO-PID approach for trajectory tracking application of a liquid level control process. *An International Journal of Optimization and Control: Theories & Applications*, 2, 5, 63-73, 2015.
343. Navrátil, P., Ivanka, J.: Multiestimation Scheme for Identification and Adaptive Control of Nonlinear Laboratory Model DTS200. *Applied Mechanics and Materials*, 816, 451-460, 2015.
344. Chalupa, P., Prikryl, J., Novak, J.: Adaptive Control of Twin ROTOR MIMO System, *Process Control (PC)*, 2015 20th International Conference on, 314-319, 2015.
345. Kubalcik, M., Bobal, V.: Predictive Control with Filtering of Input and Output Variables. *Proceedings 29th European Conference on Modelling and Simulation*, 2015.
346. Holis, R., Bobal, V.: Model Predictive Control of Time-delay Systems with Measurable Disturbance Compensation, *Process Control (PC)*, 2015 20th International Conference on, 209-214, 2015.
347. Vasickaninova, A., Bakosova, M.: Controller Design for a Heat Exchanger, *Process Control (PC)*, 2015 20th International Conference on, 113-118, 2015.
348. Clitan, I., Muresan, V., Moga, D., Sita, V., Lungoci, C.: Measured signal identification and temperature controller design for a HIPEC device. *Telecommunications and Signal Processing (TSP)*, 2015 38th International Conference on, 304-308, 2015.
349. Mittal, Rahul, Bhandari, Manisha: Design of robust PI controller for active suspension system with uncertain parameters. *Signal Processing, Computing and Control (ISPCC)*, 2015 International Conference on, 333-337, 2015.
350. Clitan, I., Muresan, V., Abrudean, M., Moga, D., Valean, H., Lungoci, C., Mironiuc, I.A.: Flow and temperature control for an innovative hyperthermic intraperitoneal chemotherapy equipment. *System Theory, Control and Computing (ICSTCC)*, 2015 19th International Conference on, 162-167, 2015.

**Ľ. Čírka and M. Fikar. *Selected Topics in Modelling and Control*, volume 5, chapter A Dynamical System Identification Toolbox, pages 58–62. Slovak University of Technology Press, 2007.**

351. Závacká, J., Bakošová, M., Vaneková, K.: Control of Laboratory Chemical Reactor with Robust PI Controller, *Proc. of the 36th International Conference of SSCHE May 25-29, 2009, Tatranské Matliare, Slovakia*, paper 121.
352. Závacká, J., Bakošová M., Vaneková, K.: Riadenie laboratórneho chemického reaktora robustným PI regulátorom. *Automatizace*, 52(6), 362-365, 2009.
353. Závacká, J., Bakošová, M.: Robust control of a laboratory process with uncertainty. *Proceedings of the 38th International Conference of Slovak Society of Chemical Engineering, Tatranské Matliare, Slovakia*, 68-74, 2011.
354. Závacká, J., Bakošová, M.: Robust Controller Design for a Laboratory Process with Uncertainties, Editors: Fikar, M., Kvasnica, M., In *Proceedings of the 18th International Conference on Process Control, Tatranská Lomnica, Slovakia*, 72-76, 2011.
355. Závacká, J., Bakošová, M.: Robust PI Controller for Control of a Laboratory Process with Uncertainties, *Selected Topics in Modelling and Control*, Editors: J.Mikleš, V.Veselý, Slovak University of Technology Press Bratislava, 7, 35–39, 2011.
356. Závacká, J., Blahová, L., Bakošová, M., Dvoran, J.: Advanced Control of a Mixing Process. *Acta Chimica Slovaca*, 4 (2), 1832, 2011.

M. Kvasnica, F. J. Christophersen, M. Herceg, and M. Fikar. Polynomial approximation of closed-form MPC for piecewise affine systems. In *Proceedings of the 17th World Congress of the International Federation of Automatic Control*, pages 3877–3882, Seoul, Korea, July 6-11 2008.

357. Ameen, N. A., Galal, B. S., Kennel, R. M., Kanchan, R. S.: The polynomial approximation of the explicit solution of model-based predictive controller for drive applications. PRECEDE 2011 - Workshop on Predictive Control of Electrical Drives and Power Electronics, 76-81, 2011.

M. Fikar, Ľ. Čirka, M. Herceg, and M. Podmajerský. E-learning in course operating systems. In M. Huba, editor, *Proceedings of the 9th International Conference Virtual University 2008*, page fid000091.pdf. E-academia Slovaca, 2008.

358. Bakošová, M.: E-learning in the Course Integrated Control in the Process Industry. 8th Int. Conference Virtual University VU'09, December 10-11, 2009, Bratislava, Slovakia, paper 70.

Ľ. Čirka, M. Kvasnica, and M. Fikar. Weblab module for the moodle learning management system. In M. Huba, editor, *Proceedings of the 9th International Conference Virtual University 2008*, page fid000131.pdf. E-academia Slovaca, 2008.

359. Gallardo, A., Richter, T., Debicki, P., Bellido, L., Mateos, V., Villagra, V.: A rig booking system for on-line laboratories. V Global Engineering Education Conference (EDUCON), 2011 IEEE, Amman, Jordan, str. 643-648, 2011.

I. Rauová, M. Kvasnica, Ľ. Čirka, and M. Fikar. Real-time model predictive control of a laboratory liquid tanks system. In M. Fikar and M. Kvasnica, editors, *Proceedings of the 17th International Conference on Process Control 2009*, pages 304–308, Štrbské Pleso, Slovakia, June 9 – 12, 2009 2009. Slovak University of Technology in Bratislava.

360. Honc, D., Dušek, F.: Multivariable Explicit Predictive Control of a Laboratory Process, Proceedings of the 9th International Conference Process Control 2010, Kouty nad Desnou, Czech Republic, C001a, 2010.

361. F. Bayat, A. A. Jalali, Constant Reference Tracking for Fast Linear Constrained Systems, 2010 IEEE Multi-Conference on Systems and Control, Yokohama, Japan, September 8-10, 2010, 2308-2313.

M. Herceg, M. Kvasnica, M. Fikar, and Ľ. Čirka. Real-time control of a thermo-optical device using polynomial approximation of mpc scheme. In M. Fikar and M. Kvasnica, editors, *Proceedings of the 17th International Conference on Process Control 2009*, pages 332–340, Štrbské Pleso, Slovakia, June 9 – 12, 2009 2009c. Slovak University of Technology in Bratislava.

362. Ameen, N. A., Galal, B. S., Kennel, R. M., Kanchan, R. S.: The polynomial approximation of the explicit solution of model-based predictive controller for drive applications. PRECEDE 2011 - Workshop on Predictive Control of Electrical Drives and Power Electronics, 76-81, 2011.

M. Herceg, M. Kvasnica, and M. Fikar. Minimum-time predictive control of a servo engine with deadzone. *Control Engineering Practice*, 17(11):1349–1357, 2009b.

363. Bobál, V., Chalupa, P., Dostál, P., Novák, J.: Disturbance rejection of nonlinear servo system by self-tuning control. International Journal of Mathematical Models and Methods in Applied Sciences, č. 8, zv. 5, str. 1431-1438, 2011.

364. Bobál, V., Chalupa, P., Dostál, P., Kubalčík, M.: Adaptive Control of Nonlinear Servo System with Measured Disturbance. International Conference Cybernetics and Informatics, Skalka pri Kremnici, Slovak Republic, 2012.
365. Nguyen, M. H., Tan, K. K., Liang, W., Teo, C. S.: Robust precision positioning control on linear ultrasonic motor. IEEE/ASME International Conference on Advanced Intelligent Mechatronics: Mechatronics for Human Wellbeing, 170-175, 2013.
366. Bobál, V., Chalupa, P., Dostál, P., Novák, J.: Self-tuning control of nonlinear servomotor with disturbance rejection. Recent Researches in Circuits, Systems and Signal Processing - Proc. of the 15th WSEAS Int. Conf. on Circuits, Part of the 15th WSEAS CSCC Multiconference, Proc. of the 5th Int. Conf. on CSS, 29-34, 2011.

**R. Paulen, M. Fikar, M. Čížniar, and M. A. Latifi. Global optimization for parameter estimation of dynamic systems. *AT&P Journal Plus*, 16(2):71–78, 2009.**

367. Macek, Karel, Kukul, Jaromir, Bostik, Josef: On Reinforcement Learning in Optimization Heuristics and Optimal Method Switching. 16th International Conference on Soft Computing Mendel 2010, 22-28, 2010.

**M. Herceg, M. Kvasnica, and M. Fikar. Parametric approach to nonlinear model predictive control. In L. Magni, D. M. Raimondo, and F. Allgoewer, editors, *Nonlinear Model Predictive Control, Lecture Notes in Control and Information Sciences*, pages 381–389. Springer Verlag, 384 edition, 2009a.**

368. Sahed, Oussama Ait, Kara, Kamel, Hadjili, Mohamed Laid: Constrained Fuzzy Predictive Control Using Particle Swarm Optimization. Applied Computational Intelligence and Soft Computing, 437943, 2015.

**M. Čížniar, M. Podmajerský, T. Hirmajer, M. Fikar, and M. A. Latifi. Global optimization for parameter estimation of differential-algebraic systems. *Chemical Papers*, 63(3):274–283, 2009.**

369. Scott, J., Barton, P.: Reachability Analysis and Deterministic Global Optimization of DAE Models. Surveys in Differential-Algebraic Equations III, Editor(i): Ilchmann, Achim and Reis, Timo, Springer, 61-116, 2015.

**M. Kvasnica, M. Herceg, Ľ. Čirka, and M. Fikar. Model predictive control of a CSTR: A hybrid modelling approach. *Chemical Papers*, 64(3):301–309, 2010a.**

370. Dostál, P., Vojtěšek, J., Bobál, V., Babík, Z.: One Approach to Adaptive Control of a Tubular Chemical Reactor. WSEAS Transactions on Fluid Mechanics, 7 (1), 13-22, 2012.
371. Dostál, P., Vojtěšek, J., Bobál, V.: Simulation of adaptive temperature control in a tubular chemical reactor. International Review on Modelling and Simulations, 5(2), 1049-1058, 2012. (scopus)
372. Blahová, L., Dvoran, J., Kmeťová, J.: Neuro-fuzzy control design of processes in chemical technologies. Archives of Control Sciences, 22(2), 233250, 2012. (scopus)
373. Ivanescu, A.M., Albin, T., Abel, D., Seidl, T.: Employing the Principal Hessian Direction for Building Hinging Hyperplane Models. Data Mining Workshops (ICDMW), 2012 IEEE 12th International Conference on, 481–485, 2012. (scopus)
374. Dostál, P., Bobál, V., Vojtěšek, J., Chramcov, B.: Adaptive control of nonlinear processes using two methods of parameter estimation. WSEAS Transactions on Systems, 13, 292-301, 2014.

375. Bakošová, M., Oravec, J.: Robust MPC of an Unstable Chemical Reactor Using the Nominal System Optimization. *Acta Chimica Slovaca*, 7(2), 87-93, 2014.

**M. Kvasnica and M. Fikar. Design and implementation of model predictive control using multi-parametric toolbox and yalmip. In *Proceedings of the 2010 IEEE International Symposium on Computer-Aided Control System Design*, pages 999–1004, Yokohama, Japan, 2010a.**

376. Bakošová, M., Oravec, J., Kačur, M.: Solution of a Robust Stabilization Problem Using YALMIP and Robust Control Toolboxes, Editors: Fikar, M., Kvasnica, M., In *Proceedings of the 18th International Conference on Process Control*, Tatranská Lomnica, Slovakia, 326-332, 2011.
377. Ameen, N. A., Galal, B. S., Kennel, R. M., Kanchan, R. S.: The polynomial approximation of the explicit solution of model-based predictive controller for drive applications. *PRECEDE 2011 - Workshop on Predictive Control of Electrical Drives and Power Electronics*, 76-81, 2011.

**M. Kvasnica, I. Rauová, and M. Fikar. Automatic code generation for real-time implementation of model predictive control. In *Proceedings of the 2010 IEEE International Symposium on Computer-Aided Control System Design*, pages 993–998, Yokohama, Japan, 2010c.**

378. Strmčnik, S., Juriči, .: *Case Studies in Control. Putting Theory to Work*, Kapitola: Tracking Explicit Model Predictive Controllers for Low-Level Control Applications. Springer Verlag, 2013.
379. Huyck, B., Ferreau, H. J., Diehl, M., De Brabanter, J., Van Impe, J. F. M., De Moor, B., Logist, F.: Towards online model predictive control on a programmable logic controller: Practical considerations. *Mathematical Problems in Engineering*, 2012.
380. Huyck, B., Callebaut, L., Logist, F., Ferreau, H. J., Diehl, M., De Brabanter, J., Van Impe, J., De Moor, B.: Implementation and experimental validation of classic MPC on Programmable Logic Controllers. *20th Mediterranean Conference on Control and Automation (MED)*, 679–684, 2012.
381. Alexis, K., Huerzeler, C., Siegwart, R.: Hybrid modeling and control of a coaxial unmanned rotorcraft interacting with its environment through contact. *Proceedings - IEEE International Conference on Robotics and Automation*, 5417-5424, 2013.
382. Huerzeler, C., Alexis, K., Siegwart, R.: Explicit constrained optimal trajectory control of an unmanned coaxial rotorcraft. *21st Mediterranean Conference on Control and Automation, MED 2013 - Conference Proceedings*, 363-368, 2013.
383. Gerksic, S.: Tracking Explicit Model Predictive Controllers for Low-Level Control Applications. *Case Studies in Control*, 77-100, 2013.
384. Oettershagen, P., Melzer, A., Leutenegger, S., Alexis, K., Siegwart, R.: Explicit model predictive control and L1-navigation strategies for fixed-wing UAV path tracking. *22nd Mediterranean Conference on Control and Automation, MED 2014*, 1159-1165, 2014.
385. Alexis, K., Papachristos, C., Siegwart, R., Tzes, A.: Robust explicit model predictive flight control of unmanned rotorcrafts: Design and experimental evaluation. *European Control Conference, ECC 2014*, 498-503, 2014.
386. Alexis, K., Darivianakis, G., Burri, M., Siegwart, R.: Aerial robotic contact-based inspection: planning and control. *Autonomous Robots*, 1-25, 2015.

387. Alexis, K., Papachristos, C., Siegwart, R., Tzes, A.: Robust Model Predictive Flight Control of Unmanned Rotorcrafts. *Journal of Intelligent & Robotic Systems*, 1-27, 2015.
388. Papachristos, C., Alexis, K., Tzes, A.: Dual-Authority Thrust-Vectoring of a Tri-TiltRotor employing Model Predictive Control. *Journal of Intelligent & Robotic Systems*, 1-34, 2015.

**M. Kvasnica, J. Löfberg, M. Herceg, Ľ. Čírka, and M. Fikar. Low-complexity polynomial approximation of explicit mpc via linear programming. In *Proceedings of the American Control Conference*, pages 4713–4718, Baltimore, USA, 2010b.**

389. Bayat, F., Johansen, T. A., Jalali, A. A.: Combining Truncated Binary Search Tree and Direct Search for Flexible Piecewise Function Evaluation for Explicit MPC in Embedded Microcontrollers. Preprints of the 18th IFAC World Congress Milano, Italy, August 28 - September 2, 2011, 1332-1337, 2011.
390. Axehill, D., Besselmann, T., Raimondo, D. M., Morari, M.: Suboptimal Explicit Hybrid MPC via Branch and Bound. Preprints of the 18th IFAC World Congress Milano, Italy, August 28 - September 2, 2011, 10281-10286, 2011.
391. Domahidi, A., Zeilinger, M. N., Morari, M., Jones, C. N.: Learning a Feasible and Stabilizing Explicit Model Predictive Control Law by Robust Optimization. V Proceedings of 50th CDC and ECC, Orlando, Florida, str. 513-519, 2011.
392. Ameen, N. A., Galal, B. S., Kennel, R. M., Kanchan, R. S.: The polynomial approximation of the explicit solution of model-based predictive controller for drive applications. PRECEDE 2011 - Workshop on Predictive Control of Electrical Drives and Power Electronics, 76-81, 2011.
393. Wang, X., Grip, H. F., Saberi, A., Johansen, T. A.: A new low-and-high gain feedback design using MPC for global stabilization of linear systems subject to input saturation. Proceedings of the American Control Conference, 2337-2343, 2012.
394. Belda, K., Vosmik, D.: Speed control of PMSM drives by generalized predictive algorithms. IECON 2012 - 38th Annual Conference on IEEE Industrial Electronics Society, Montreal, QC, Canada, 2012-2017, 2012.
395. Jiang, Y., Zou, Y., Niu, Y.: An efficient explicit algorithm for multi-rate predictive control systems. *International Journal of Modelling, Identification and Control*, 20(3), 208-214, 2013.
396. Belda, K.: Mathematical Modelling and Predictive Control of Permanent Magnet Synchronous Motor Drives. *Transactions on Electrical Engineering*, 2(4), 114-120, 2013.
397. Nguyen, H.-N.: Constrained control of uncertain, time-varying, discrete-time systems: An interpolation-based approach. *Lecture Notes in Control and Information Sciences*, 451, 2014.

**Ľ. Čírka, M. Kalúz, M. Kvasnica, and M. Fikar. Virtual laboratory. In *Proceedings of the 9th International Scientific - Technical Conference Process Control 2010*, pages C029a – 1–C029a – 8, Kouty nad Desnou, Czech Republic, June 7-10, 2010 2010. University of Pardubice.**

398. Malarvizhi, R., Veena, S. T.: Web-based power flow analysis using Matlab Builder JA. International Conference on Recent Advancements in Electrical, Electronics and Control Engineering, 156-159, 2011.

**M. Kvasnica and M. Fikar. Performance-lossless complexity reduction in explicit MPC. In *Proceedings of the 49th IEEE Conference on Decision and Control 2010*, pages 5270–5275, Atlanta, USA, 2010b.**

399. Grancharova, A., Johansen, T. A.: *Explicit Nonlinear Model Predictive Control*, Springer, 2012.

400. Suardi, A., Longo, S., Kerrigan, E. C., Constantinides, G. A.: *European Control Conference*, 3608-3613, 2013.

**M. Fikar, Z. Kovács, and P. Czermak. Dynamic optimization of batch diafiltration processes. *Journal of Membrane Science*, 355(1-2):168–174, 2010. doi: 10.1016/j.memsci.2010.03.019.**

401. Schlosser, Š.: *Engineering Aspects of Food Biotechnology*, In: *Membrane filtration*. CRC Press, 165-180, 2013.

402. Chen, J., Liu, L., Sun, Y., Su, Y., Zhang, S., Kong, F., Jiang, S., Lü, J.: Pilot scale production process of micellar casein concentrate powder. *Nongye Gongcheng Xuebao/Transactions of the Chinese Society of Agricultural Engineering*, 29(9), 256-266, 2013.

403. Hu, Y., Liu, X.: Methods to deal with control variable path constraints in dynamic optimization problems. *Zidonghua Xuebao/Acta Automatica Sinica*, 39(4), 440-449, 2013.

**M. Kvasnica, J. Löfberg, and M. Fikar. Stabilizing polynomial approximation of explicit mpc. *Automatica*, 47(10):2292–2297, 2011a.**

404. Grancharova, A., Johansen, T. A.: *Explicit Nonlinear Model Predictive Control*, Springer, 2012.

405. Oishi, Y.: Direct design of a polynomial model predictive controller. *IFAC Proceedings RO-COND 2012*, 633-638, 2012.

406. Knyazev, A., Zhu, P., Di Cairano, S.: Explicit model predictive control accuracy analysis. *54th Annual Conference on Decision and Control*, Osaka, Japan, 2389-2394, 2015.

**A. Szűcs, M. Kvasnica, and M. Fikar. A memory-efficient representation of explicit mpc solutions. In *Proceedings of the 50th CDC and ECC*, pages 1916–1921, Orlando, Florida, 2011.**

407. Grancharova, A., Johansen, T. A.: *Explicit Nonlinear Model Predictive Control*, Springer, 2012.

**J. Jäschke, M. Fikar, and S. Skogestad. Self-optimizing invariants in dynamic optimization. In *Proceedings of the 50th CDC and ECC*, pages 7753–7758, Orlando, Florida, 2011.**

408. Lingjian Ye, Kariwala, V., Yi Cao: Dynamic optimization for batch processes with uncertainties via approximating invariant, *8th IEEE Conference on Industrial Electronics and Applications (ICIEA)*, 1786-1791, 2013.

409. Ye L., Song Z., Ma X.: Batch-to-batch self-optimizing control for batch processes. *Huagong Xuebao/CIESC Journal*, 7, 66, 2573-2580, 2015.



M. Kalúz, Ľ. Čirka, and M. Fikar. Virtual and remote laboratories in education process at fcft stu. In Michael E. Auer and Mikuláš Huba, editors, *Proceedings of the 14th International Conference on Interactive Collaborative Learning*, pages 134–139, Piešťany, Slovakia, 2011a. International Association of Online Engineering, Wien, Austria.

410. Tawfik, M., Sancristobal, E., Martin, S., Gil, R., Diaz, G., Peire, J., Castro, M.: On the design of remote laboratories. IEEE Global Engineering Education Conference (EDUCON), 1-6, 2012.

411. Palkovič, L., Rodina, J., Chovanec, Ľ., Hubinský, P.: Integration of Inertial Measuring Unit Platform into MATLAB Simulink. 9th IFAC Symposium Advances in Control Education, Nizhny Novgorod, Russia, 200-205, 2012.

412. Palkovič, L., Rodina, J., Chovanec, Ľ., Chovancová, A., Hubinský, P.: Remote Laboratory with Modular Inertial Measuring Unit Platform. Procedia Engineering, 96, 345 - 354, 2014.

M. Kalúz, Ľ. Čirka, and M. Fikar. Virtual laboratory of process control. In Kvasnica. M. Fikar, M., editor, *Proceedings of the 18th International Conference on Process Control*, pages 348–351, Tatranská Lomnica, Slovakia, 2011b. Slovak University of Technology in Bratislava.

413. Palkovič, L., Rodina, J., Chovanec, Ľ., Chovancová, A., Hubinský, P.: Remote Laboratory with Modular Inertial Measuring Unit Platform. Procedia Engineering, 96, 345 - 354, 2014.

M. Huba, S. Skogestad, M. Fikar, M. Hovd, T. A. Johansen, and B. Rohal-Ilkiv, editors. *Selected Topics on Constrained and Nonlinear Control. Textbook. STU Bratislava – NTNU Trondheim, 2011.*

414. Brasel, M., Dworak, P.: The Course-keeping Adaptive Control System for the Nonlinear MIMO Model of a Container Vessel, Editor(i): Weintrit, A., CRC Press, Marine Navigation and Safety of Sea Transportation: Navigational Problems, str. 13-18, 2013.

415. Recalde, L.F., Katebi, R., Tauro, H.: IEEE International Conference on Control Applications (CCA), 1075-1080, 2013.

416. Brasel, M., Dworak, P.: Multivariable Adaptive Controller for the Nonlinear MIMO Model of a Container Ship. International Journal on Marine Navigation and Safety of Sea Transportation, 8(1), 41-47, 2014.

R. Paulen, G. Foley, M. Fikar, Z. Kovacs, and P. Czermak. Minimizing the process time for ultrafiltration/diafiltration under gel polarization conditions. *Journal of Membrane Science*, 380(1-2):148–154, 2011b.

417. Wang, L., Wang, L.: Estimation and control of process time for membrane separation of cephalosporin C from fermentation broth. Huagong Xuebao/CIESC Journal, 64(9), 3256-3261, 2013.

I. Rauová, R. Valo, M. Kvasnica, and M. Fikar. Real-time model predictive control of a fan heater via plc. In Kvasnica. M. Fikar, M., editor, *Proceedings of the 18th International Conference on Process Control*, pages 388–393, Tatranská Lomnica, Slovakia, 2011. Slovak University of Technology in Bratislava.

418. Purohit, A., Buch, J.: Evaluation of optimization solvers on programmable logic controller. Control Applications (CCA), 2015 IEEE Conference on, 533-538, 2015.

M. Kalúz, Ľ. Čirka, and M. Fikar. Remote control software for thermo-optical plant. In Kvasnica. M. Fikar, M., editor, *Proceedings of the 18th International Conference on Process Control*, pages 587–592, Tatranská Lomnica, Slovakia, 2011c. Slovak University of Technology in Bratislava.

419. Gula, M., Žáková, K.: Java Based Development of Online Experiments. Distance Learning, Simulation and Communication 2015, 51-57, 2015.

420. Bosak, T., Zakova, K.: Node.js based remote control of thermo-optical plant. Remote Engineering and Virtual Instrumentation (REV), 2015 12th International Conference on, 209-213, 2015.

M. Fikar, Ľ. Malíková, K. Staroňová, Ľ. Vávrová, E. Beblavá, Ľ. Čirka, Z. Bajúszová, P. Halák, and Z. Hanout. *Výskum potrieb a možností online vzdelávania verejnej správy v stredoeurópskom kontexte a príručka pre lektorov Moodle 2*. FSEV UK v Bratislave, 2012.

421. Hvorecky, J.: IEEE 11th International Conference on Emerging eLearning Technologies and Applications (ICETA), 159-164, 2013.

R. Paulen, M. Fikar, G. Foley, Z. Kovacs, and P. Czermak. Optimal feeding strategy of diafiltration buffer in batch membrane processes. *Journal of Membrane Science*, 411-412:160–172, 2012.

422. Schlosser, Š.: Engineering Aspects of Food Biotechnology, In: Membrane filtration. CRC Press, 165-180, 2013.

423. Nestola, P., Martins, D. L., Peixoto, C., Roederstein, S., Schleuss, T., Alves, P. M., Mota, J. P. B., Carrondo, M. J. T.: Evaluation of Novel Large Cut-Off Ultrafiltration Membranes for Adenovirus Serotype 5 (Ad5) Concentration. PLoS ONE, 9(12), e115802, 2014.

424. Nestola, P., Peixoto, C., Silva, R.R.J.S., Alves, P.M., Mota, J.P.B., Carrondo, M.J.T.: Improved virus purification processes for vaccines and gene therapy. Biotechnology and Bioengineering, 112(5), 843-857, 2015.

M. Kvasnica, R. Gondhalekar, A. Szűcs, and M. Fikar. Stabilizing refinement of low-complexity mpc controllers. In *Preprints of 4th IFAC Nonlinear Model Predictive Control Conference*, pages 400–405, 2012.

425. Sredojev, S., Eaton, R.: Stabilizing predictive controller for singular systems. 21st Mediterranean Conference on Control and Automation, MED 2013 - Conference Proceedings, 1386-1392, 2013.

M. Fikar and K. Kostúr. Optimal process control. In *Proceedings of 13th International Carpathian Control Conference*, pages 153–172, Podbanske, Slovakia, May 28-31 2012.

426. Špička, I., Heger, M.: Utilization mathematical and physical models derived therefrom real-time models for the optimization of heating processes. Archives of Metallurgy and Materials, 58(3), 981-985, 2013.

427. Laciak, M., Kačur, J., Durdán, M., Flegner, P.: Application of optimization method for optimal control of the steelmaking process. Proceedings of the 2014 15th International Carpathian Control Conference, ICC 2014, 296-300, 2014.

**M. Kvasnica and M. Fikar. Clipping-based complexity reduction in explicit mpc. *IEEE Transactions on Automatic Control*, 57(7):1878–1883, 2012.**

428. Nguyen, N. A., Oлару, S., Rodriguez-Ayerbe, P., Hovd, M., Necoara, I.: Developments in Model-Based Optimization and Control, Springer, 2015.
429. Knyazev, A., Zhu, P., Di Cairano, S.: Explicit model predictive control accuracy analysis. 54th Annual Conference on Decision and Control, Osaka, Japan, 2389-2394, 2015.
430. Nguyen, N.A., Oлару, S., Rodriguez-Ayerbe, P.: Any discontinuous PWA function is optimal solution to a parametric linear programming problem. 54th Annual Conference on Decision and Control, Osaka, Japan, 5926-5931, 2015.
431. Gulan, M., Nguyen, N., Oлару, S., Rodriguez-Ayerbe, P., Rohal-Ilkiv, B.: Implications of Inverse Parametric Optimization in Model Predictive Control. Developments in Model-Based Optimization and Control, Editor(i): Oлару, Sorin and Grancharova, Alexandra and Lobo Pereira, Fernando, Springer, 49-70, 2015.
432. Chen, Y., Li, S., Li, N.: Complexity reduced explicit model predictive control by solving approximated mp-QP program. Control Conference (ASCC), 2015 10th Asian, 1-6, 2015.

**M. Kalúz, Ľ. Čirka, and M. Fikar. Simplifying the implementation of remote laboratories in educational environments using industrial hardware. In M. Fikar and M. Kvasnica, editors, *Proceedings of the 19th International Conference on Process Control*, pages 522–527, Štrbské Pleso, Slovakia, 2013a. Slovak University of Technology in Bratislava.**

433. Barros, C., Leao, C. P., Soares, F., Minas, G., Machado, J.: Issues in remote laboratory developments for biomedical engineering education. International Conference on Interactive Collaborative Learning (ICL), 290-295, 2013.
434. Chen, Y., Ma, L., Meng, X., Yan, H.: Virtual Digital Control Experimental System. The Open Cybernetics & Systemics Journal, 329-334, 2015.
435. Bistak, P., Zakova, K.: IEEE 11th International Conference on Emerging eLearning Technologies and Applications (ICETA), 41-45, 2013.

**M. Kvasnica, J. Hledík, I. Rauová, and M. Fikar. Complexity reduction of explicit model predictive control via separation. *Automatica*, 49(6):1776–1781, 2013.**

436. Nguyen, N. A., Oлару, S., Rodriguez-Ayerbe, P., Hovd, M., Necoara, I.: Developments in Model-Based Optimization and Control, Springer, 2015.
437. Nguyen, N.A., Oлару, S., Rodriguez-Ayerbe, P.: Any discontinuous PWA function is optimal solution to a parametric linear programming problem. 54th Annual Conference on Decision and Control, Osaka, Japan, 5926-5931, 2015.
438. Gulan, M., Nguyen, N., Oлару, S., Rodriguez-Ayerbe, P., Rohal-Ilkiv, B.: Implications of Inverse Parametric Optimization in Model Predictive Control. Developments in Model-Based Optimization and Control, Editor(i): Oлару, Sorin and Grancharova, Alexandra and Lobo Pereira, Fernando, Springer, 49-70, 2015.
439. Chen, Y., Li, S., Li, N.: Complexity reduced explicit model predictive control by solving approximated mp-QP program. Control Conference (ASCC), 2015 10th Asian, 1-6, 2015.

**J. Drgoňa, M. Kvasnica, M. Klaučo, and M. Fikar. Explicit stochastic mpc approach to building temperature control. In *IEEE Conference on Decision and Control*, pages 6440–6445, Florence, Italy, 2013.**

440. Lesic, V., Vasak, M., Martincevic, A., Gulin, M., Starcic, A., Novak, H.: Computer-Assisted Management of Building Climate and Microgrid with Model Predictive Control. *International Journal of Computer, Electrical, Automation, Control and Information Engineering*, 9(10), 2036-2047, 2015.

**M. Kalúz, J. García-Zubía, P. Ordua, M. Fikar, and Ľ. Čirka. Sharing control laboratories by remote laboratory management system weblab-deusto. In Sebastián Dormido, editor, *Proceedings of 10th IFAC Symposium on Advances in Control Education*, volume 10 of *Advances in Control Education*, pages 345–350, Sheffield, UK, 2013b. International Federation of Automatic Control.**

441. May, D., Sadiki, A., Pleul, C., Erman Tekkaya, A.: Teaching and learning globally connected using live online classes for preparing international engineering students for transnational collaboration and for studying in Germany. *Remote Engineering and Virtual Instrumentation (REV)*, 2015 12th International Conference on, 118-126, 2015.

**M. Kalúz, Ľ. Čirka, R. Valo, and M. Fikar. Arpi lab: A low-cost remote laboratory for control education. In *Preprints of the 19th IFAC World Congress*, Cape Town (South Africa), 2014.**

442. Mbihi, J.: A Flexible Multimedia Workbench for Digital Control of Input-Delay Servo Systems. *Journal of Computer Science and Control Systems*, 2015.

443. Reguera, P., García, D., Domínguez, M., Prada, M.A., Alonso, S.: A Low-Cost Open Source Hardware in Control Education. Case Study: Arduino-Feedback MS-150. *IFAC-PapersOnLine Journal*, 29, 48, 117-122, 2015.

**M. Kalúz, J. García-Zubía, M. Fikar, and Ľ. Čirka. A flexible and configurable architecture for automatic control remote laboratories. *IEEE Transactions on Learning Technologies*, 8(3):299–310, July 2015 2015. doi: 10.1109/TLT.2015.2389251.**

444. Costa, R. J., Pinho, D. E., Alves, G. R.: Using embedded instruments to design weblabs. 3rd Experiment at International Conference (exp.at15), 2015.

445. Vogel-Heuser, B., Rehberger, S., Gramss, S., Mayer, F.: Integrating Lab-size Automation Plants into a Web-based E-learning Environment for Teaching C Programming in Teams. *IFAC-PapersOnLine Journal (IBCE15 Brescia)*, 29, 48, 295 - 300, 2015.

446. Mbihi, J.: A Flexible Multimedia Workbench for Digital Control of Input-Delay Servo Systems. *Journal of Computer Science and Control Systems*, 2015.