

NAME: *Dávid Csercsik, PhD*

BOOKS, BOOK CHAPTERS

G. Szederkényi, K.M. Hangos and D. Csercsik, "Computing Realizations of Reaction Kinetic Networks with Given Properties" In: A.N. Gorban, D. Roose, T.J. Barth et al (ed.) *Coping with Complexity: Model Reduction and Data Analysis*. Berlin: Springer, 2011. pp. 253-267.

ARTICLES

D. Csercsik and B. Sziklai, „Traffic routing oligopoly,” *Central European Journal of Operations Research*, DOI: 10.1007/s10100-013-0316-5 IF:0.629

D. Csercsik, K.M. Hangos and G. Szederkényi, "Identifiability analysis and parameter estimation of a single Hodgkin-Huxley type voltage dependent ion channel under voltage step measurement conditions," *Neurocomputing*, vol 77, pp. 178-188, 2012, DOI: 10.1016/j.neucom.2011.09.006 IF:1.429

D. Csercsik, G. Szederkényi and K.M. Hangos, "Parametric uniqueness of deficiency zero reaction networks," *Journal of Mathematical Chemistry*, 2011, vol 50, issue 1, pp. 1-8, 2012 DOI:10.1007/s10910-011-9902-8 IF: 1.259

D. Csercsik, I. Farkas, E. Hrabovszky and Zs. Liposits
"A simple integrative electrophysiological model of bursting GnRH neurons," *Journal of Computational Neuroscience*, vol 32, pp 119-136, 2012, DOI: 10.1007/s10827-011-0343-y IF:2.325

D. Csercsik, I. Farkas, G. Szederkényi, E. Hrabovszky, Zs. Liposits and K.M. Hangos, "Hodgkin-Huxley type modelling and parameter estimation of GnRH neurons," *BioSystems*, vol 100, pp. 198-207, 2010, DOI:10.1016/j.biosystems.2010.03.004 IF: 1.267

D. Csercsik, K.M. Hangos and G.M. Nagy, "A simple reaction kinetic model of rapid (G protein dependent) and slow (β -Arrestin dependent) transmission," *Journal of Theoretical Biology*, vol 255(7), pp. 119-128, 2008, DOI:10.1016/j.jtbi.2008.07.032 IF: 2.574

In Hungarian:

D. Csercsik, L.Á. Kóczy, "Hatékonyság és stabilitás nagyfeszültségű elektromos hálózatokban: Egy játékelméleti megközelítés", *Sigma*, vol 43, pp 43-58, 2012 (in Hungarian)

DISCUSSION PAPERS

D. Csercsik, „Competition and Cooperation in a PFF Game Theoretic Model of Electrical Energy Trade” Discussion Paper MT-DP – 2013/10 Institute of Economics, Research Centre for Economic and Regional Studies, Hungarian Academy of Sciences, Hungary, 2013, <http://econ.core.hu/file/download/mtdp/MTDP1310.pdf>

D. Csercsik and B. Sziklai „Traffic Routing Oligopoly” Discussion Paper MT-DP – 2013/10 Institute of Economics, Hungary, 2013/9, Institute of Economics, Research Centre for Economic and Regional Studies, Hungarian Academy of Sciences, Hungary, 2013, <http://econ.core.hu/file/download/mtdp/MTDP1309.pdf>

H.Habis and D. Csercsik „Cooperation with Externalities and Uncertainty,” Discussion Paper MT-DP – 2012/29, Institute of Economics, Research Centre for Economic and Regional Studies, Hungarian Academy of Sciences, Hungary, 2012, <http://econ.core.hu/file/download/mtdp/MTDP1229.pdf>

D. Csercsik and L.Á. Kóczy, “Externalities in the games over electrical power transmission networks.” Discussion Paper MT-DP – 2011/25 Institute of Economics, Hungary, May 2011, <http://econ.core.hu/file/download/mtdp/MTDP1125.pdf> p.28

D. Csercsik, and K.M. Hangos, ”Nonlinear lumping of cascade activation reactions.” Technical Report of the Systems and Control Research Laboratory, Computer and Automation Institute, Hungary, October 2007. SCL-003/2007. www.daedalus.scl.sztaki.hu p. 47.

D. Csercsik, ”Construction of Simple Dynamic Models of the Gamma-loop mechanism.” Technical Report of the Systems and Control Research Laboratory, Computer and Automation Institute, Hungary, May 2006. SCL-001/2006. www.daedalus.scl.sztaki.hu p. 37.

D. Csercsik, G. Szederkényi, ”Cascade stabilization of a simple nonlinear limb model.” Technical report of the Systems and Control Laboratory SCL-004/2006. Budapest, MTA SZTAKI, 2006. www.daedalus.scl.sztaki.hu p. 21.

OTHER PUBLICATIONS

Papers in conference proceedings:
(peer reviewed)

D. Csercsik and S. Imre, „Comparison of router intelligent and cooperative host intelligent algorithms in a continuous model of fixed telecommunication networks” Proceedings of the International Conference on Telecommunications and Network Engineering, September 12-13, Singapore, 2013, pp. 719-727, ISSN: 1307-6892

D. Csercsik and G. Szederkényi, „Realization Theory as a Tool for Stability Analysis for Kinetic Systems” Proceedings of the 15th IASTED International Conference on Control and Applications, August 26-28, Honolulu, USA, 2013, pp. 122-127, ISBN: 978-0-88986-958-5

D. Csercsik and G. Szederkényi, „ATP Production Optimization in Biochemical Mass Action Models with Protein Turnover” Proceedings of the IFAC Workshop on Thermodynamic Foundations of Mathematical Systems Theory, July 13-16, Lyon, France, 2013

D. Csercsik and K.M. Hangos, „Model Structure Validation of Cell Signaling Pathways Using Colored Petri Nets” Proceedings of the 8th IFAC Symposium on Advanced Control of Chemical Processes, July 10-13, Furama Riverfront, Singapore, 2012

D. Csercsik and I. Farkas, ”Calcium coupled bursting in an integrative model of GnRH neuronal electrophysiology” Proceedings of the 5th European Conference of the International Federation for Medical and Biological Engineering, September 14-18, Budapest, Hungary, 2011

D. Csercsik, ”Impulsive model of bursting GnRH neurons” Proceedings of the 10th International Phd. workshop: Young Generation Viewpoint, September 1 - 3, Veszprém, Hungary, 2010 .

D. Csercsik, G. Szederkényi. and K.M. Hangos, ”Identifiability of a Hodgkin-Huxley type ion channel under voltage step measurement conditions,” 9th International Symposium on Dynamics and Control of Process Systems, July 5-7, Leuven, Belgium, 2010

D. Csercsik , G. Szederkényi., K.M. Hangos and I. Farkas, ”Model Synthesis and Identification of a Hodgkin-Huxley-Type GnRH neuron model,” ECC’09 European Control Conference, August 23-26, Budapest, Hungary, 2009

D. Csercsik , G. Szederkényi., K.M. Hangos and I. Farkas, ”Dynamical Modeling and Identification of a GnRH neuron,” MCBMS’09 7th IFAC symposium on Modelling and Control in Biomedical Systems, August 12-14, Aalborg, Denmark, 2009

D. Csercsik , G. Szederkényi., K.M. Hangos and I. Farkas, ”Parameter Estimation of Hodgkin-Huxley model of GnRH neurons,” Proceedings of the 9th International Phd. workshop: Young Generation Viewpoint, October 1 - 3, Izola, Slovenia, 2008.

D. Csercsik, G. Szederkényi., and K.M. Hangos, ”Determining flat outputs of MIMO nonlinear systems using directed graphs,” Proc. Control 2008 8th Portuguese Conference on Automatic Control, ISBN: 978-972-669-877-7 21-23 July Vila Real, Portugal, 2008.

Cs. Fazekas, D. Csercsik, G. Szederkényi., K.M. Hangos, ”Simulator for multi-scale musculoskeletal models with reflex circuits,” Proc. EUROSIM 2007 (B. Zupanic, R. Karba, S. Blazic), no. TH-1-P4-5, ISBN: 978-3-901608-32-2, September 9-13, Ljubljana, Slovenia, on CD, 2007.

D. Csercsik, G. Szederkényi., and K.M. Hangos, "Cascade Stabilization and Reference Tracking of a Simple Nonlinear Limb Model," Proceedings of the 26th IASTED International Conference Modelling, Identification and Control, February 12 - 14, - Innsbruck, Austria p. 369-374, 2007.

D. Csercsik and G. Szederkényi, "Using graph-theoretic methods to find flat outputs," Proceedings of the 8th International Phd. workshop: Young Generation Viewpoint, September 16 - 20, Balatonfüred, Hungary, 2007.

D. Csercsik, "Simple Dynamical Gamma-loop Models," Proceedings of the 2nd Biomedical Engineering Conference of Young Biomedical Engineers and Researchers, July 19 - 21, 2006 - Kladno, Czech Republic. Lekar a Technika 2:308-314, 2006.

D. Csercsik, G. Szederkényi, "Cascade Control Methods of a Simple Nonlinear Limb Model," Proceedings of the 7th International Ph.D. Workshop: Young Generation Viewpoint, Hruha Skala, Czech Republic, September 25 - 29, 2006.

D. Csercsik, Cs. Fazekas. and K.M. Hangos, "Dynamical Analysis and Control of a Simple Nonlinear Limb Model," Proceedings of the 3rd European Medical and Biological Engineering Conference, Prague, Czech Republic , November 20 - 25, 2005.

INVITED LECTURES

Cell signaling models of various complexity, University of Pécs, Szentágothai Research Centre, XI Szentágothai seminar, Pécs, Hungary, 2013, February

Competition and Cooperation in a simple PFF game theoretic model of electrical enery trade University of Pannonia, Veszprém, Hungary, 2012, November

A partition function form game over routing networks, Game Theory Seminars at the Corvinus University, Budapest, Hungary, 2012, October

Applications of partition function form transferable utility cooperative games, Department of Mathematics and Statistics, University of Otago, Dunedin, New Zealand, 2012 March

Dynamical modelling and model analysis in neuroendocrinolgy, Centre for Neuroendocrinology, University of Otago, Dunedin, New Zealand, 2012 February

Externalities in the game of generator rescheduling on electrical power transmission networks, Game Theory Seminars at the Corvinus University, Budapest, Hungary, 2011, October

Energy Transmission Networks and Cooperative Game Theory I-II, Institute of Economics, HAS, Budapest, Hungary, 2011 January, March

Mathematical Models in Cell Signaling: Scales and Approaches, Centre for Neuroendocrinology, University of Otago, Dunedin, New Zealand, 2009 November

Parameter Estimation of a Hodgkin-Huxley type GnRH Neuron Model, Institute of Experimental Medicine, HAS, Budapest, Hungary, 2009 April

On Mathematical Modelling of GnRH neurons, IIM-CSIC Instituto de Investigaciones Marinas, Vigo, Spain, 2008 July