

Accessibility conditions of MIMO nonlinear control systems on homogeneous time scales

Bartosiewicz, Zbigniew; **Kotta, Ülle**; **Tönso, Maris**; Wyrwas, Małgorzata Mathematical control and related fields 2016 / p. 217-250
<https://doi.org/10.3934/mcrf.2016002> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Accessibility conditions for discrete time nonlinear multiinput multioutput systems

Kotta, Ülle; **Tönso, Maris** 5th Junior European Meeting on Control & Information Technology : September 20-22, 2006, Tallinn, Estonia : book of abstracts 2006 / p. 25

Adjoint polynomial formulas for nonlinear state-space realization

Belikov, Juri; **Kotta, Ülle**; **Tönso, Maris** IEEE transactions on automatic control 2014 / p. 256-261

<https://doi.org/10.1109/TAC.2013.2270868> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Algebraic formalism of differential p-forms and vector fields for nonlinear control systems on homogeneous time scales

Bartosiewicz, Zbigniew; **Kotta, Ülle**; Pawluszewicz, Ewa; **Tönso, Maris**; Wyrwas, Małgorzata Proceedings of the Estonian Academy of Sciences 2013 / p. 215-226 <https://doi.org/10.3176/proc.2013.4.02> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Comparison of LPV and nonlinear system theory : a realization problem

Belikov, Juri; **Kotta, Ülle**; **Tönso, Maris** Systems & control letters 2014 / p. 72-78 <https://doi.org/10.1016/j.sysconle.2013.10.009>

[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Computer algebra tools for modelling, analysis and synthesis for nonlinear control systems = Arvutialgebra vahendid mittelineaarsete juhtimissüsteemide modelleerimiseks, analüüsiks ja sünteesiks

Tönso, Maris 2010 https://www.ester.ee/record=b2552427*est

Effective algebraic analysis approach to linear systems over Ore algebras

Cluzeau, T.; Koutschan, C.; Quadrat, A.; **Tönso, Maris** Algebraic and symbolic computation methods in dynamical systems 2020 / p. 3-52 https://doi.org/10.1007/978-3-030-38356-5_1

Feedback linearization and lattice theory

Kotta, Ülle; **Tönso, Maris**; Shumsky, Alexey Ye.; Zhirabok, Alexey N. Systems & control letters 2013 / p. 248-255

<https://doi.org/10.1016/j.sysconle.2012.11.014> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Feedback linearization of an active magnetic bearing system operated with a zero-bias flux

Mystkowski, Arkadiusz; **Kaparin, Vadim**; **Kotta, Ülle**; Pawluszewicz, Ewa; **Tönso, Maris** International journal of applied mathematics and computer science 2017 / p. 539-548 : ill <https://doi.org/10.1515/amcs-2017-0038> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Functions' algebra in nonlinear control : computational aspects and software

Belikov, Juri; **Kaldmäe, Arvo**; **Kaparin, Vadim**; **Kotta, Ülle**; Shumsky, Alexey Ye.; **Tönso, Maris**; Zhirabok, Alexey Proceedings of the Estonian Academy of Sciences 2017 / p. 89-107 <https://doi.org/10.3176/proc.2017.1.06> http://www.ester.ee/record=b2355998*est [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Minimal realizations of nonlinear systems

Kotta, Ülle; Moog, Claude; **Tönso, Maris** Automatica 2018 / p. 207-212 <https://doi.org/10.1016/j.automatica.2018.05.007> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

The minimal time-varying realization of a nonlinear time-invariant system?

Kotta, Ülle; Moog, Claude H.; **Tönso, Maris** 9th IFAC Symposium on Nonlinear Control Systems 2013 : Toulouse, France, 4 - 6 September 2013 2013 / p. 518 - 523 <https://doi.org/10.3182/20130904-3-FR-2041.00080> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

Nabla derivatives associated with nonlinear control systems on homogeneous time scales

Bartosiewicz, Zbigniew; **Kotta, Ülle**; **Mullari, Tanel**; **Tönso, Maris**; Pawluszewicz, Ewa; Wyrwas, Małgorzata Nonlinear analysis : modelling and control 2016 / p. 547-563 <https://doi.org/10.15388/NA.2016.4.8> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

NLControl - a mathematica package for nonlinear control systems

Kotta, Ülle; **Tönso, Maris** IFAC-PapersOnLine 2017 / p. 681-686 <https://doi.org/10.1016/j.ifacol.2017.08.122> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

On accessibility conditions for state space nonlinear control systems on homogeneous time scales

Bartosiewicz, Zbigniew; **Kotta, Ülle**; **Mullari, Tanel**; **Tönso, Maris**; Wyrwas, Małgorzata Systems & control letters 2016 / p. 8-13
<https://doi.org/10.1016/j.sysconle.2016.09.018> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

On the transformation of a nonlinear discrete-time input-output system into the strong row-reduced form

Bartosiewicz, Zbigniew; Belikov, Juri; Kotta, Ülle; Tönso, Maris; Wyrwas, Małgorzata Proceedings of the Estonian Academy of Sciences 2016 / p. 220-236 <https://doi.org/10.3176/proc.2016.3.02> https://artiklid.elnet.ee/record=b2798394*est [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Polynomial accessibility condition for the multi-input multi-output nonlinear control system

Kotta, Ülle; Tönso, Maris; Kawano, Yu Proceedings of the Estonian Academy of Sciences 2014 / p. 136-150 https://artiklid.elnet.ee/record=b2673962*est <https://doi.org/10.3176/proc.2014.2.04> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Port-Hamiltonian framework in power systems domain : a survey

Tönso, Maris; Kaparin, Vadim; Belikov, Juri Energy Reports 2023 / p. 2918 - 2930 <https://doi.org/10.1016/j.egyr.2023.09.077> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Realisation of linear time-varying systems

Kotta, Ülle; Tönso, Maris International journal of control 2017 / p. 1951-1956 <https://doi.org/10.1080/00207179.2016.1230891> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Realization of discrete-time nonlinear input-output equations : polynomial approach

Kotta, Ülle; Tönso, Maris Automatica 2012 / p. 255-262 <https://www.sciencedirect.com/science/article/pii/S0005109811005413>

Realization of nonlinear input-output equations using polynomial approach : preliminary ideas

Kotta, Ülle; Tönso, Maris Info- ja kommunikatsioonitehnoloogia doktorikooli IKTDK kolmanda aastakonverentsi artiklite kogumik : 25.-26. aprill 2008, Voore külalistemaja 2008 / p. 21-24

Realization of nonlinear MIMO system on homogeneous time scales

Belikov, Juri; Kotta, Ülle; Tönso, Maris European journal of control 2015 / p. 48-54 <https://doi.org/10.1016/j.ejcon.2015.01.006> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Realization of nonlinear time-delay input-output equations

Kaldmäe, Arvo; Kotta, Ülle; Tönso, Maris IEEE Control Systems Letters 2018 / p. 369-374 <https://doi.org/10.1109/LCSYS.2018.2838456> [Journal metrics at Scopus](#) [Article at Scopus](#)

Reducibility condition for nonlinear discrete-time systems : behavioral approach

Bartosiewicz, Zbigniew; Kotta, Ülle; Pawłuszewicz, Ewa; Tönso, Maris; Wyrwas, Małgorzata Control and Cybernetics 2013 / p. 329-346 <https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=d858f3fd9c2acd98e41f35a0bed4c0cb9efab59c> [Journal metrics at Scopus](#) [Article at Scopus](#)

Relaxing realizability conditions for discrete-time nonlinear systems

Kotta, Ülle; Schlahter, Kurt; Tönso, Maris Automatica 2015 / p. 67-71 <https://doi.org/10.1016/j.automatica.2015.05.007> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Remarks on the realization of time-varying systems

Kotta, Ülle; Moog, Claude; Tönso, Maris Proceedings of the Estonian Academy of Sciences 2018 / p. 208-216 http://www.kirj.ee/public/proceedings_pdf/2018/issue_3/proc-2018-3-207-216.pdf <https://doi.org/10.3176/proc.2018.3.02> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Removing the input derivatives in the generalized bilinear state equations

Mullari, Tanel; Kotta, Ülle; Kotta, Palle; Tönso, Maris; Zinober, Alan Proceedings of the Estonian Academy of Sciences 2009 / 2, p. 98-107 <https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=b053956e3600449843044b1022ebefc6d5d19df8>

State-space realization of nonlinear control systems : unification and extension via pseudo-linear algebra

Belikov, Juri; Kotta, Ülle; Tönso, Maris Kybernetika 2012 / p. 1100-1113 https://www.researchgate.net/publication/269024076_State-space_realization_of_nonlinear_control_systems_Unification_and_extension_via_pseudo-linear_algebra

Static state feedback linearizability : relationship between two methods

Mullari, Tanel; Kotta, Ülle; Tönso, Maris Proceedings of the Estonian Academy of Sciences 2011 / 2, p. 121-135 https://artiklid.elnet.ee/record=b2413961*est

Static state feedback linearization of nonlinear control systems on homogeneous time scales

Bartosiewicz, Zbigniew; Kotta, Ülle; Tönso, Maris; Wyrwas, Małgorzata Mathematics of control, signals, and systems 2015 / p. 523-550 <https://doi.org/10.1007/s00498-015-0150-5> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

The connection between different static state feedback linearizability conditions of discrete time nonlinear control systems

Mullari, Tanel; Kotta, Ülle; Tönso, Maris Proceedings of the European Control Conference 2007, Kos, Greece, July 2-5, 2007

2007 / p. 4268–4275 <http://ieeexplore.ieee.org/document/7068444/>

The strong Popov form of nonlinear input–output equations

Bartosiewicz, Zbigniew; Pawluszewicz, Ewa; Wyrwas, Małgorzata; **Kotta, Ülle; Tönso, Maris** Proceedings of the Estonian Academy of Sciences 2018 / p. 193–206 <https://doi.org/10.3176/proc.2018.3.01> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Transforming a set of nonlinear input-ouput equations into Popov form

Bartosiewicz, Zbigniew; **Kotta, Ülle**; Pawluszewicz, Ewa; **Tönso, Maris**; Wyrwas, Małgorzata 2015 54th IEEE Conference on Decision and Control (CDC) : date: 15-18 Dec. 2015 2015 / p. 7131 - 7136 <https://doi.org/10.1109/CDC.2015.7403344> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

WebMathematica-based tools for discrete-time nonlinear control systems

Tönso, Maris; Rennik, Heli; Kotta, Ülle Proceedings of the Estonian Academy of Sciences 2009 / 4, p. 224-240