

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](#)

Algebraic approach for analysis and control of a water tank system

Belikov, Juri; **Kotta, Ülle**; **Tepljakov, Aleksei** Information technology and control 2016 / p. 175-183 : ill
<https://doi.org/10.5755/j01.itc.45.2.13212> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Algebraic necessary and sufficient condition for difference flatness

Kaldmäe, Arvo International Journal of Control 2021 / 8 p <https://doi.org/10.1080/00207179.2021.1908598> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

An algorithm to transform discrete-time state equations into the extended observer form

Kaldmäe, Arvo; **Kotta, Ülle** Automatica 2024 / art. 111598 <https://doi.org/10.1016/j.automatica.2024.111598> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Computation of nonlinear eigenvalues based on the Ore determinant : preliminary results

Halás, Miroslav; **Kaldmäe, Arvo**; **Kotta, Ülle**; Slacka, Juraj Proceedings of the Estonian Academy of Sciences 2024 / p. 366 - 378
<https://doi.org/10.3176/proc.2024.4.06> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Extended observer form for nonlinear system with disturbances : Algorithm and application

Kaparin, Vadim; Simha, Ashutosh; Chowdhury, Nilanjan Roy; **Kotta, Ülle**; Levron, Yoash; **Belikov, Juri** 2024 18th International Conference on Control, Automation, Robotics and Vision (ICARCV) 2024 <https://doi.org/10.1109/ICARCV63323.2024.10821609>

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](#)

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](#)

Global linearization approach to nonlinear control systems : a brief tutorial overview

Belikov, Juri; **Kaldmäe, Arvo**; **Kotta, Ülle** Proceedings of the Estonian Academy of Sciences 2017 / p. 243-263
<https://doi.org/10.3176/proc.2017.3.01> http://www.ester.ee/record=b2355998*est https://artiklid.elnet.ee/record=b2824300*est [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Input-output decoupling of discrete-time nonlinear systems by dynamic measurement feedback

Kaldmäe, Arvo; **Kotta, Ülle** European journal of control 2017 / p. 31-38 : ill <https://doi.org/10.1016/j.ejcon.2016.12.004> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Linearization of discrete-time control system by state transformation

Mullari, Tanel; **Kotta, Ülle** Proceedings of the Estonian Academy of Sciences 2021 / p. 62–79 <https://doi.org/10.3176/proc.2021.1.09> https://kirj.ee/wp-content/plugins/kirj/pub/proc-1-2021-62-79_20210630094644.pdf?v=a57b8491d1d8 [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Measurement feedback disturbance decoupling in discrete-time nonlinear systems

Kaldmäe, Arvo; **Kotta, Ülle**; Shumsky, Alexey Ye.; Zhirabok, Alexey N. Automatica 2013 / p. 2887-2891 : ill
<https://doi.org/10.1016/j.automatica.2013.06.013> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Minimal realizations of nonlinear time-delay systems

Kaldmäe, Arvo; Zbigniew, Bartosiewicz; **Kotta, Ülle**; Wyrwas, Małgorzata IEEE transactions on automatic control 2023 / p. 6766 - 6772 <https://doi.org/10.1109/TAC.2023.3240124> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Model based control of a water tank system

Belikov, Juri; **Petlenkov, Eduard** Proceedings of the 19th IFAC World Congress, 2014 : Cape Town, South Africa, 24-29 August 2014 2014 / p. 10838-10843 : ill <https://doi.org/10.3182/20140824-6-za-1003.00695> [Journal metrics at Scopus](#) [Article at Scopus](#)

Model matching problem for discrete-time nonlinear systems

Belikov, Juri; Halas, Miroslav; **Kotta, Ülle**; Moog, Claude Proceedings of the Estonian Academy of Sciences 2015 / p. 457-472 : ill
https://artiklid.elnet.ee/record=b2750720*est <https://doi.org/10.3176/proc.2015.4.01> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

NN-SANARX model based control of a multi tank liquid-level system

Belikov, Juri; Petlenkov, Eduard International journal of computational intelligence systems 2015 / p. 265-277
<https://doi.org/10.1080/18756891.2015.1001950> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

On flatness of discrete-time nonlinear systems

Kaldmäe, Arvo; Kotta, Ülle 9th IFAC Symposium on Nonlinear Control Systems 2013 : Toulouse, France, 4 - 6 September 2013 2013 / p. 588 - 593 <https://doi.org/10.3182/20130904-3-FR-2041.00017> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

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

Kotta, Ülle; Tõnso, 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](#)

A polynomial approach to a nonlinear model matching problem

Belikov, Juri; Halas, Miroslav; **Kotta, Ülle**; Moog, Claude Proceedings of the Estonian Academy of Sciences 2016 / p. 330-344 : ill
<https://doi.org/10.3176/proc.2016.4.02> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Predictive smart thermostat controller for heating, ventilation, and air-conditioning systems

Soudari, Mallikarjun; **Kaparin, Vadim**; Srinivasan, Seshadhri; Seshadhri, Subathra; **Kotta, Ülle** Proceedings of the Estonian Academy of Sciences 2018 / p. 291-299 : ill http://www.kirj.ee/public/proceedings_pdf/2018/issue_3/proc-2018-3-291-299.pdf
<https://doi.org/10.3176/proc.2018.3.11> [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; Tõnso, Maris Automatica 2012 / p. 255-262 <https://www.sciencedirect.com/science/article/pii/S0005109811005413>

Realization of time-delay systems

Kaldmäe, Arvo; Kotta, Ülle Automatica 2018 / p. 317-320 <https://doi.org/10.1016/j.automatica.2018.01.001> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Realizations in feedforward forms of nonlinear input-output equations with time-delays

Kaldmäe, Arvo; Kawano, Yu; **Kotta, Ülle** International journal of robust and nonlinear control 2020 / p. 7560-7573
<https://doi.org/10.1002/rnc.5194> [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; **Tõnso, 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](#)

State feedback linearization of nonlinear control systems on homogeneous time scales

Bartosiewicz, Zbigniew; **Belikov, Juri; Kotta, Ülle**; Wyrwas, Małgorzata Nonlinear analysis: hybrid systems 2019 / p. 69-85
<https://doi.org/10.1016/j.nahs.2018.08.002> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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

Belikov, Juri; Kotta, Ülle; Tõnso, 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 linearization of nonlinear control systems on homogeneous time scales

Bartosiewicz, Zbigniew; **Kotta, Ülle; Tõnso, 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](#)