

**A note on the relationship between single- and multi-experiment observability for discrete-time nonlinear control systems**  
Kaparin, Vadim; Kotta, Ülle; Shumsky, Alexey Ye.; Zhirabok, Alexey N. Proceedings of the Estonian Academy of Sciences 2011 / 3, p. 174-178

**A transfer function approach to the realisation problem of nonlinear systems**  
Halas, Miroslav; Kotta, Ülle International journal of control 2012 / p. 320-331

**Accessibility and orbits for discrete-time nonlinear control systems**  
Bartosiewicz, Zbigniew; Kotta, Ülle; Wyrwas, Małgorzata 60th IEEE Conference on Decision and Control, CDC 2021, Austin, 13-17 December 2021 2021 / p. 4594-4601 <https://doi.org/10.1109/CDC45484.2021.9682853> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

**Accessibility and system reduction of nonlinear time-delay control systems**  
Bartosiewicz, Zbigniew; Kaldmäe, Arvo; Kawano, Yu; Kotta, Ülle; Pawluszewicz, Ewa; Simha, Ashutosh; Wyrwas, Małgorzata IEEE Transactions on Automatic Control 2021 / p. 3781-3788 <https://doi.org/10.1109/TAC.2020.3028566> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**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](#)

**Accommodation to defects in the discrete dynamic systems**  
Zhirabok, Alexey N.; Kotta, Ülle; Shumsky, A. E. Automation and remote control 2014 / p. 997-1009 : ill <https://doi.org/10.1134/S0005117914060010> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Accessability 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

**Adaptive controller for networked control systems subjected to random communication delays**  
Srinivasan, Seshadri; Saravanakumar, G.; Subathra, B.; Kotta, Ülle Soft computing applications : proceedings of the 7th International Workshop Soft Computing Applications (SOFA 2016). Vol. 1 2018 / p. 78-94 [https://doi.org/10.1007/978-3-319-62521-8\\_8](https://doi.org/10.1007/978-3-319-62521-8_8) [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

**Adaptive LQR controller for Networked Control Systems subjected to random communication delays**  
Srinivasan, Seshadri; Vallabhan, Mishiga; Ramaswamy, Srin; Kotta, Ülle American Control Conference (ACC), 2013 : 17 - 19 June 2013, Washington, DC, USA (2013) 2013 / p. 783 - 787 <https://doi.org/10.1109/acc.2013.6579931> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

**Adaptive output feedback linearization for a class of NN-based ANARX models**  
Petlenkov, Eduard; Nõmm, Sven; Kotta, Ülle 5th Junior European Meeting on Control & Information Technology : September 20-22, 2006, Tallinn, Estonia : book of abstracts 2006 / p. 10

**Adaptive output feedback linearization for a class of NN-based ANARX models**  
Petlenkov, Eduard; Nõmm, Sven; Kotta, Ülle Proceedings of the 6th IEEE International Conference on Control and Automation : Guangzhou, China, May 30 - June 1, 2007 2007 / p. 3173-3178 <https://ieeexplore.ieee.org/document/4376947>

**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](#)

**Advanced design of nonlinear discrete-time and delayed systems = Diskreetsete ja hilistumistega mittelineaarsete juhtimisüsteemide süntees**  
Kaldmäe, Arvo 2016 <https://digi.lib.ttu.ee/ii/?5215> [https://www.ester.ee/record=b4569894\\*est](https://www.ester.ee/record=b4569894*est)

**Algebraic approach for analysis and control of a water tank system**  
Belikov, Juri; Kotta, Ülle; Tepļakov, 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 formalism of differential one-forms for nonlinear control systems on time scales**  
Bartosiewicz, Zbigniew; Kotta, Ülle; Pawluszewicz, Ewa; Wyrwas, Małgorzata Proceedings of the Estonian Academy of Sciences. Physics. Mathematics 2007 / 3, p. 264-282

**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](#)

### **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](#)

### **Any dynamical system is fully accessible through one single actuator and related problems**

Kawano, Yu; Kotta, Ülle; Moog, Claude International journal of robust and nonlinear control 2016 / p. 1748-1754 <https://doi.org/10.1002/rnc.3379> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **A brief tutorial overview of disturbance observers for nonlinear systems : application to flatness-based control**

Kaldmäe, Arvo; Kotta, Ülle Proceedings of the Estonian Academy of Sciences 2020 / p. 57-73 : ill <https://doi.org/10.3176/proc.2020.1.07> [http://www.kirj.ee/33035/?tpl=1061&c\\_tpl=1064](http://www.kirj.ee/33035/?tpl=1061&c_tpl=1064) [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Challenges and perspectives in control of ionic polymer-metal composite (IPMC) actuators : a survey**

Aabloo, Alvo; Belikov, Juri; Kaparin, Vadim; Kotta, Ülle IEEE Access 2021 / art. 9133056, p. 121059-121073 <https://doi.org/10.1109/ACCESS.2020.3007020> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Comments on 'A new kind of nonlinear disturbance observer for nonlinear systems with applications to cruise control of air-breathing hypersonic vehicles'**

Kaldmäe, Arvo; Kotta, Ülle International journal of control 2020 / p. 1725 <https://doi.org/10.1080/00207179.2018.1529436> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Comments on "PBH tests for nonlinear systems"**

Sarafrazi, Mohammad Amin; Bartosiewicz, Zbigniew; Kotta, Ülle Automatica 2020 / art. 108617 <https://doi.org/10.1016/j.automatica.2019.108617> [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; Tõnso, 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](#)

### **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](#)

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

Tõnso, Maris 2010 [https://www.ester.ee/record=b2552427\\*est](https://www.ester.ee/record=b2552427*est)

### **Construction of flat outputs of nonlinear discrete-time systems in a geometric and an algebraic framework**

Kolar, Bernd; Kaldmäe, Arvo; Schöberl, Markus; Kotta, Ülle; Schlacher, Kurt IFAC-PapersOnLine 2016 / p. 796-801 <https://doi.org/10.1016/j.ifacol.2016.10.263> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

### **Controller and controllability canonical forms for discrete-time nonlinear systems**

Kotta, Ülle Proceedings of the Estonian Academy of Sciences. Physics. Mathematics 2005 / 1, p. 55-62

### **Decomposition of discrete-time nonlinear control systems**

Kotta, Ülle Proceedings of the Estonian Academy of Sciences. Physics. Mathematics 2005 / 3, p. 154-161

### **Degree of Dieudonné determinant defines the order of nonlinear system**

Kotta, Ülle; Belikov, Juri; Halas, Miroslav; Leibak, Alar International journal of control 2019 / p. 518-527 <https://doi.org/10.1080/00207179.2017.1361042> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Discrete-time linear- analytic system linearization and decoupling via application of right inverse system**

Kotta, Ülle Eesti NSV Teaduste Akadeemia toimetised. Füüsika. Matemaatika = Известия Академии наук Эстонской ССР. Физика. Математика = Proceedings of Academy of Sciences of the Estonian SSR. Physics. Mathematics 1988 / lk. 257-262 [https://www.ester.ee/record=b1264310\\*est](https://www.ester.ee/record=b1264310*est)

### **Disturbance decoupling by measurement feedback**

Kaldmäe, Arvo; Kotta, Ülle 19th IFAC World Congress on International Federation of Automatic Control, IFAC 2014 2014 / p. 7735-7740 : ill <https://doi.org/10.3182/20140824-6-za-1003.00216> [Conference proceedings at Scopus](#) [Article at Scopus](#)

### **Disturbance decoupling by measurement feedback : sensor location**

Kaldmäe, Arvo; Kotta, Ülle; Shumsky, Alexey; Zhirabok, Alexey Proceedings of the Estonian Academy of Sciences 2016 / p. 317-

329 : ill <https://doi.org/10.3176/proc.2016.4.05> [https://artiklid.elnet.ee/record=b2808632\\*est](https://artiklid.elnet.ee/record=b2808632*est) [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Disturbance decoupling for nonlinear systems by measurement feedback: Sensor location**

**Kaldmäe, Arvo; Kotta, Ülle;** Shumsky, Alexey; Zhirabok, Alexey 19th IFAC World Congress on International Federation of Automatic Control, IFAC 2014 2014 / p. 7729-7734 : ill <https://doi.org/10.3182/20140824-6-za-1003.00013> [Conference proceedings at Scopus](#) [Article at Scopus](#)

#### **Disturbance decoupling in nonlinear hybrid systems**

**Kaldmäe, Arvo; Kotta, Ülle;** Shumsky, Alexey; Zhirabok, Alexey Nonlinear analysis : hybrid systems 2018 / p. 42-53  
<https://doi.org/10.1016/j.nahs.2017.11.001> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Disturbance decoupling in nonlinear hybrid systems [Electronic resource]**

**Kaldmäe, Arvo; Kotta, Ülle;** Shumsky, Alexey; Zhirabok, Alexey 12th IEEE International Conference on Control and Automation : ICCA 2016 : Kathmandu, Nepal, 1-3 June 2016 2016 / p. 86-91 : ill. [USB] <https://doi.org/10.1109/ICCA.2016.7505257>

#### **Disturbance decoupling of multi-input multi-output discrete-time nonlinear systems by static measurement feedback**

**Kaldmäe, Arvo; Kotta, Ülle** Proceedings of the Estonian Academy of Sciences 2012 / p. 77-88  
[https://artiklid.elnet.ee/record=b2497319\\*est](https://artiklid.elnet.ee/record=b2497319*est)

#### **Disturbance decoupling problem in finite automata : sensor location problem**

**Kaldmäe, Arvo; Kotta, Ülle;** Shumsky, Alexey; Zhirabok, Alexey 2016 IEEE Conference on Control Applications (CCA) : part of 2016 IEEE Multi-Conference on Systems and Control, September 19-22, 2016, Buenos Aires, Argentina 2016 / p. 481-486 : ill  
<https://doi.org/10.1109/CCA.2016.7587876>

#### **Eesti Vabariigi 2018. aasta teaduspreemia laureaadid TTÜst**

**Vähi, Kersti; Buldas, Ahto; Kotta, Ülle; Kurnitski, Jarek; Raudla, Ringa** Mente et Manu 2018 / lk. 26-27 : portr  
<https://www.ttu.ee/ttu-uudised/ajaleht-mente-et-manu/mente-et-manu/> [http://www.ester.ee/record=b1242496\\*est](http://www.ester.ee/record=b1242496*est)  
[https://artiklid.elnet.ee/record=b2836028\\*est](https://artiklid.elnet.ee/record=b2836028*est)

#### **Equivalence of linear control systems on time scales**

Bartosiewicz, Zbigniew; **Kotta, Ülle;** Pawluszewicz, Ewa Proceedings of the Estonian Academy of Sciences. Physics. Mathematics 2006 / 1, p. 43-52

#### **Equivalence of realizability conditions for nonlinear control systems**

**Kotta, Ülle; Mullari, Tanel** Proceedings of the Estonian Academy of Sciences. Physics. Mathematics 2006 / 1, p. 24-42

#### **Erratum : Linearization of discrete-time control system by state transformation**

**Mullari, Tanel; Kotta, Ülle** Proceedings of the Estonian Academy of Sciences 2021 / p. 307 <https://doi.org/10.3176/proc.2021.1.09>  
[https://kirj.ee/wp-content/plugins/kirj/pub/Erratum-proc-3-2021-307\\_20210822154030.pdf](https://kirj.ee/wp-content/plugins/kirj/pub/Erratum-proc-3-2021-307_20210822154030.pdf)

#### **Event-based control for differentially flat systems: application to autonomous underwater vehicle**

**Kaldmäe, Arvo; Kotta, Ülle; Meurer, Christian; Simha, Ashutosh** IFAC-PapersOnLine 2019 / p. 180-185  
<https://doi.org/10.1016/j.ifacol.2019.11.775> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

#### **Experimental validation of the Newton observer for a nonlinear flux-controlled AMB system operated with zero-bias flux**

Mystkowski, Arkadiusz; Kierdelewicz, A.; **Kotta, Ülle; Kaparin, Vadim** International journal of control 2020 / p. 2257-2266 : ill  
<https://doi.org/10.1080/00207179.2018.1552025> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Extended observer form : simple existence conditions**

**Kaparin, Vadim; Kotta, Ülle; Mullari, Tanel** International journal of control 2013 / p. 794-803 : ill  
<https://doi.org/10.1080/00207179.2012.760048> [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>

#### **Extended observer form with vector fields**

**Mullari, Tanel; Kotta, Ülle; Kaldmäe, Arvo; Kaparin, Vadim;** Simha, Ashutosh International journal of control 2024 / p. 2399 - 2412  
<https://doi.org/10.1080/00207179.2023.2274060> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Extended observer forms for submersive discrete-time systems**

Simha, Ashutosh; **Kaparin, Vadim; Mullari, Tanel; Kotta, Ülle** IEEE Transactions on Automatic Control 2023 / p. 2684 - 2688  
<https://doi.org/10.1109/TAC.2023.3336253> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Faulty plant reconfiguration based on disturbance decoupling methods**

**Kaldmäe, Arvo; Kotta, Ülle;** Jiang, Bin; Shumsky, Alexey Ye.; Zhirabok, Alexey N. Asian journal of control 2016 / p. 858-867 : ill <https://doi.org/10.1002/asjc.1185> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Faulty plant reconfiguration by measurement feedback: Sensor location**

**Kaldmäe, Arvo; Kotta, Ülle;** Shumsky, Alexey; Zhirabok, Alexey IFAC-PapersOnLine 2015 / p. 1283-1288 : ill <https://doi.org/10.1016/j.ifacol.2015.09.702> [Conference proceedings at Scopus](#) [Article at Scopus](#)

**Feedback linearization and lattice theory**

**Kotta, Ülle; Tõnso, 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; **Tõnso, 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](#)

**Feedback linearization of discrete-time nonlinear control systems : computational aspects**

**Mullari, Tanel; Kotta, Ülle** Proceedings of the Estonian Academy of Sciences 2020 / p. 11-26 <https://doi.org/10.3176/proc.2020.1.03> [http://kirj.ee/32996/?tpl=1061&c\\_tpl=1064](http://kirj.ee/32996/?tpl=1061&c_tpl=1064) [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Feedback linearization of possibly non-smooth systems**

**Kaldmäe, Arvo; Kotta, Ülle;** Shumsky, Alexey; Zhirabok, Alexey Proceedings of the Estonian Academy of Sciences 2017 / p. 109-123 <https://doi.org/10.3176/proc.2017.2.01> [http://www.ester.ee/record=b2355998\\*est](http://www.ester.ee/record=b2355998*est) [https://artiklid.elnet.ee/record=b2820923\\*est](https://artiklid.elnet.ee/record=b2820923*est) [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Finite determination of accessibility and singular points of nonlinear systems: an algebraic approach**

Sarafrazi, Mohammad Amin; **Kotta, Ülle;** Bartosiewicz, Zbigniew Systems & control letters 2020 / art. 104600, p. 1–7 <https://doi.org/10.1016/j.sysconle.2019.104600> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**A flapped paddle-fin for improving underwater propulsive efficiency of oscillatory actuation**

**Simha, Ashutosh; Gkliva, Roza; Kotta, Ülle; Kruusmaa, Maarja** IEEE robotics and automation letters 2020 / p. 3176-3181 <https://doi.org/10.1109/LRA.2020.2975747> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Flatness based control of a HVAC system**

**Kaldmäe, Arvo; Kotta, Ülle** Information technology and control 2017 / p. 499-507 : ill <https://doi.org/10.5755/j01.itc.46.4.17697> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**FLHex: a flapped-paddle hexapod for all-terrain amphibious locomotion**

Burzynski, Piotr; **Simha, Ashutosh; Kotta, Ülle;** Pawluszewicz, Ewa; Sastry, Shivakumar Bulletin of the Polish Academy of Sciences Technical Sciences 2021 / art. e139007, 9 p. : ill <https://doi.org/10.24425/bpasts.2021.139007> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Forward and backward shifts of vector fields : towards the dual algebraic framework**

**Mullari, Tanel; Kotta, Ülle;** Bartosiewicz, Zbigniew; Pawluszewicz, Ewa; Moog, Claude IEEE transactions on automatic control 2017 / p. 3029-3033 <https://doi.org/10.1109/TAC.2016.2608718> [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.; **Tõnso, 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](http://www.ester.ee/record=b2355998*est) [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**A geometric approach to position tracking control of a nonholonomic planar rigid body : case study of an underwater vehicle**

**Simha, Ashutosh; Kotta, Ülle** Proceedings of the Estonian Academy of Sciences 2020 / p. 215-227 : ill <https://doi.org/10.3176/proc.2020.3.05> [https://kirj.ee/public/proceedings\\_pdf/2020/issue\\_3/proc-2020-3-215-227.pdf](https://kirj.ee/public/proceedings_pdf/2020/issue_3/proc-2020-3-215-227.pdf) [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](http://www.ester.ee/record=b2355998*est) [https://artiklid.elnet.ee/record=b2824300\\*est](https://artiklid.elnet.ee/record=b2824300*est) [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Infoleht / [TTÜ] Küberneetika Instituut

Penjam, Jaan; Kotta, Ülle; Kutser, Mati; Lemba, Maris; Tamm, Marje 2001

### **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](#)

### **Input-output linearization of discrete-time systems by dynamic output feedback**

**Kaldmäe, Arvo; Kotta, Ülle** European journal of control 2014 / p. 73-78 <https://doi.org/10.1016/j.ejcon.2013.12.004> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Institute of Cybernetics at TTU : activity report 1997-1999**

**Kotta, Ülle** 2000

### **Institute of Cybernetics at TUT : activity report 2000-2003**

2004 [https://www.ester.ee/record=b1928118\\*est](https://www.ester.ee/record=b1928118*est)

### **Intrinsic conditions for extended observer forms for nonlinear systems**

**Simha, Ashutosh; Respondek, Witold; Kaldmäe, Arvo; Kaparin, Vadim; Kotta, Ülle** 2018 IEEE Conference on Decision and Control (CDC), 17-19 Dec. 2018, 17-19 Dec. 2018 : proceedings 2018 / p. 1373-1378 <https://doi.org/10.1109/CDC.2018.8619122> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

### **Juhtimissüsteemide juhitevus ja tagasiside. Tagasiside. Mittelineaarsus.Lamedus**

**Kotta, Ülle** Keeruka maailma võlu 2015 / lk. 77-80 : ill [https://www.ester.ee/record=b4488344\\*est](https://www.ester.ee/record=b4488344*est)

### **Kahe doktorikraadi omanik Sven Nõmm : [intervjuu TTÜ ja Nantes'i Ülikooli doktoriga]**

**Nõmm, Sven; Kotta, Ülle** Tallinna Tehnikaülikooli aastaraamat 2004 2005 / lk. 123-124

### **Learning based personalized energy management systems for residential buildings**

**Soudari, Mallikarjun; Srinivasan, Seshadhri; Balasubramanian, Subathra; Vain, Jüri; Kotta, Ülle** Energy and buildings 2016 / p. 953-968 : ill <https://doi.org/10.1016/j.enbuild.2016.05.059> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Lineaarse mitmedimensionaalse dünaamilise süsteemi identifitseerimine sisend-väljundandmete põhjal**

**Kotta, Ülle** 350 aastat matemaatikat Tartu Ülikoolis = 350 лет математики в Тартуском университете : ettekannete teesid 1982 / lk. 82-85 [https://www.ester.ee/record=b1255795\\*est](https://www.ester.ee/record=b1255795*est)

### **A linear filtering framework for nonlinear systems based on extended output injection**

**Simha, Ashutosh; Kotta, Ülle** IFAC-PapersOnLine 2019 / p. 274-279 <https://doi.org/10.1016/j.ifacol.2019.11.791> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

### **Linearization by generalized input-output injections on homogeneous time scales**

**Ciulkin, Monika; Pawluszewicz, Ewa; Kaparin, Vadim; Kotta, Ülle** 2016 21st International Conference on Methods and Models in Automation and Robotics (MMAR 2016) : Miedzyzdroje, Poland, 29 August - 1 September 2016 2016 / p. 48-53 <https://doi.org/10.1109/MMAR.2016.7575086>

### **Linearization by input-output injections on homogeneous time scales**

**Ciulkin, Monika; Kaparin, Vadim; Kotta, Ülle; Pawluszewicz, Ewa** Proceedings of the Estonian Academy of Sciences 2014 / p. 387-397 [https://artiklid.elnet.ee/record=b2707375\\*est](https://artiklid.elnet.ee/record=b2707375*est) <https://doi.org/10.3176/proc.2014.4.04> [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](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-event systems**

**Kaldmäe, Arvo; Kotta, Ülle; Shumsky, Alexey; Zhirabok, Alexey** International journal of robust and nonlinear control 2015 / p. 3330-3348 <https://doi.org/10.1002/rnc.3265> [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 systems**

**Kotta, Ülle; Moog, Claude; Tõnso, 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](#)

### **Minimal realizations of nonlinear time-delay systems**

**Kaldmäe, Arvo; Zbigniew, Bartosiewicz; Kotta, Ülle; Wyrwas, Malgorzata** IEEE transactions on automatic control 2023 / p. 6766 -

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

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

### **Mittelineaarsed juhtimissüsteemid**

**Kotta, Ülle** Aastaraamat 2018 / Eesti Matemaatika Selts 2022 / lk. 9-21 <https://matemaatika.eu/aastaraamatud/aastaraamat-2018/>

### **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://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

### **Motor failure tolerant control system with self diagnostics for unmanned multirotors**

Ambroziak, Leszek; **Simha, Ashutosh**; Pawluszewicz, Ewa; Kotta, Ülle 2019 24th International Conference on Methods and Models in Automation and Robotics (MMAR) 2019 / p. 422-427 : ill <https://doi.org/10.1109/MMAR.2019.8864726>

### **Nabla derivatives associated with nonlinear control systems on homogeneous time scales**

Bartosiewicz, Zbigniew; **Kotta, Ülle**; Mullari, Tanel; **Tõnso, 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

### **Neural networks based ANARX structure for identification and model based control**

**Petlenkov, Eduard**; Nõmm, Sven; **Kotta, Ülle** 9th International Conference on Control, Automation, Robotics and Vision : 5-8 December, 2006, Singapore : [proceedings] 2006 / p. 2284-2288 <https://ieeexplore.ieee.org/document/4150221>

### **Newton observer for a nonlinear flux-controlled AMB system**

Mystkowski, Arkadiusz; **Kotta, Ülle**; **Kaparin, Vadim** Proceedings of the Estonian Academy of Sciences 2018 / p. 61-72 : ill <https://doi.org/10.3176/proc.2018.1.03> [http://www.ester.ee/record=b2355998\\*est](http://www.ester.ee/record=b2355998*est) Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

### **NLControl - a mathematica package for nonlinear control systems**

**Kotta, Ülle**; **Tõnso, 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

### **Non-commutative determinants in nonlinear control theory : preliminary ideas**

**Kotta, Ülle**; **Leibak, Alar**; Halas, Miroslav ICARCV 2008 : 10th International Conference on Control, Automation, Robotics & Vision : 17-20 December 2008, Hanoi, Vietnam 2008 / p. 815-820 <https://ieeexplore.ieee.org/document/4795622>

### **Nonlinear orientation controller for a compliant robotic fish based on asymmetric actuation**

**Meurer, Christian**; **Simha, Ashutosh**; **Kotta, Ülle**; **Kruusmaa, Maarja** 2019 International Conference on Robotics and Automation : ICRA 2019, Palais des Congres de Montreal, Canada, 20-24 May, 2019 / Art. 8793892 ; p. 4688-4694 <https://doi.org/10.1109/ICRA.2019.8793892> Conference proceeding at Scopus Article at Scopus Article at WOS

### **A note on observability of nonlinear discrete-time systems**

**Kaldmäe, Arvo**; **Kotta, Ülle** 2023 62nd IEEE Conference on Decision and Control (CDC), Singapore, 13-15 December 2023 / p. 7483-7488 <https://doi.org/10.1109/CDC49753.2023.10383709> Conference proceedings at Scopus Article at Scopus Article at WOS

### **Observable space of the nonlinear control system on a homogeneous time scale**

**Kaparin, Vadim**; **Kotta, Ülle**; Wyrwas, Małgorzata Proceedings of the Estonian Academy of Sciences 2014 / p. 11-25 [https://artiklid.elnet.ee/record=b2665198\\*est](https://artiklid.elnet.ee/record=b2665198*est) <https://doi.org/10.3176/proc.2014.1.04> Journal metrics at Scopus Article at Scopus Journal metrics at Scopus Article at WOS

### **Observer-based residual generation for nonlinear discrete-time systems**

**Kaldmäe, Arvo**; **Kotta, Ülle** Proceedings of the Estonian Academy of Sciences 2018 / p. 325-336 <https://doi.org/10.3176/proc.2018.4.01> [http://www.kirj.ee/public/proceedings\\_pdf/2018/issue\\_4/proc-2018-4-325-336.pdf](http://www.kirj.ee/public/proceedings_pdf/2018/issue_4/proc-2018-4-325-336.pdf) Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

### **Oluline sündmus : [juuni algul kaitses Sven Nõmm Tallinna Tehnikaülikoolis loodusteaduste doktori kraadi, talle omistati ka Nantes'i ülikooli doktorikraad ühise kraadiõppe programmi raames]**

Kotta, Ülle Postimees 2004 / lk. 12

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

Bartosiewicz, Zbigniew; **Kotta, Ülle**; Mullari, Tanel; **Tõnso, Maris**; Wyrwas, Małgorzata Systems & control letters 2016 / p. 8-13

### **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](#)

### **On integrability of observable space for discrete-time analytic systems**

Kawano, Yu; **Kotta, Ülle** 2015 54th IEEE Conference on Decision and Control (CDC) : date: 15-18 Dec. 2015 2015 / p. 7137 - 7142 <https://doi.org/10.1109/CDC.2015.7403345> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

### **On integrability of observable space for discrete-time polynomial control systems**

Kawano, Yu; **Kotta, Ülle** IEEE transactions on automatic control 2015 / p. 1987-1991 <https://doi.org/10.1109/TAC.2014.2365685> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **On submersivity assumption for nonlinear control systems on homogeneous time scales**

**Kotta, Ülle**; Rehák, Branislav; Wyrwas, Małgorzata Proceedings of the Estonian Academy of Sciences 2011 / 1, 25-37

### **On the differentiation of a composite function with a generalized vector argument on homogeneous time scales**

**Kaparin, Vadim; Kotta, Ülle** Proceedings of the Estonian Academy of Sciences 2017 / p. 309-322 : tab <https://doi.org/10.3176/proc.2017.3.04> [http://www.eester.ee/record=b2355998\\*est](http://www.eester.ee/record=b2355998*est) [https://artiklid.elnet.ee/record=b2824309\\*est](https://artiklid.elnet.ee/record=b2824309*est) [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **On the finiteness of accessibility test for nonlinear discrete-time systems**

Sarafrazi, Mohammad Amin; Pawluszewicz, Ewa; Bartosiewicz, Zbigniew; **Kotta, Ülle** International journal of control 2021 / p. 2330-2336 <https://doi.org/10.1080/00207179.2019.1706102> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **On the properties of forward and backward shifts of vector fields**

**Kaldmäe, Arvo; Kaparin, Vadim; Kotta, Ülle; Mullari, Tanel**; Pawluszewicz, Ewa Proceedings of the Estonian Academy of Sciences 2022 / p. 314-325 <https://doi.org/10.3176/proc.2022.4.02> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **On the stopping criteria in nonlinear unknown input observability condition**

Sarafrazi, Mohammad Amin; **Kotta, Ülle**; Bartosiewicz, Zbigniew IEEE transactions on automatic control 2022 / p. 4733-4737 <https://doi.org/10.1109/TAC.2022.3160133> [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](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://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](#)

### **Popov form and the explicit equations of inverse systems**

Bartosiewicz, Zbigniew; **Kotta, Ülle**; Pawluszewicz, Ewa; Tönso, Maris; Wyrwas, Małgorzata Proceedings of the Estonian Academy of Sciences 2018 / p. 432-355 : ill [http://www.kirj.ee/public/proceedings\\_pdf/2018/issue\\_4/proc-2018-4-342-355.pdf](http://www.kirj.ee/public/proceedings_pdf/2018/issue_4/proc-2018-4-342-355.pdf) <https://doi.org/10.3176/proc.2018.4.04> [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](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](#)

### **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](#)

### **Realizability of bilinear input-output differential equations in the classigal [i.e. classical] state-space form**

**Kotta, Ülle; Mullari, Tanel; Kotta, Palle**; Zinober, Alan 5th Junior European Meeting on Control & Information Technology :

**Realization and identification of discrete-time nonlinear systems**

Nõmm, Sven 2004 [https://www.ester.ee/record=b1910554\\*est](https://www.ester.ee/record=b1910554*est)

**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 nonlinear input-output equations in controller canonical form**

Kaldmäe, Arvo; Kotta, Ülle Kybernetika 2018 / p. 736-747 <https://doi.org/10.14736/kyb-2018-4-0736> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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

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

**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](#)

**Reducibility condition for nonlinear discrete-time systems : behavioral approach**

Bartosiewicz, Zbigniew; Kotta, Ülle; Pawłuszewicz, Ewa; Tõnso, 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](#)

**Rekursiivsed juhtimissüsteemid : Eesti Teadusfondi projekt aastatel 1999-2002**

Kotta, Ülle; Nõmm, Sven Eesti Teadusfondi Aastaraamat 2002/2003 2003 / lk. 23 : ill. (Tehnikateadused)

**Relations between modules associated to input-output nonlinear equations with delays and their realizations**

Bartosiewicz, Zbigniew; Kaldmäe, Arvo; Kotta, Ülle; Wyrwas, Małgorzata 62nd IEEE Conference on Decision and Control, CDC 2023, Singapore, 13-15 December 2023 2023 / p. 644-650 <https://doi.org/10.1109/CDC49753.2023.10383927> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

**Relaxing realizability conditions for discrete-time nonlinear systems**

Kotta, Ülle; Schlahter, Kurt; Tõnso, 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; 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](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; Tõnso, 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>

**Silmad kinni ja näpud püsti! Kellest saab doktorant? : [kavandatavaid seadusemuudatusi õppetoetuste ja õppelaenu osas kommenteerivad TTÜ kõnetehnoloogia doktorant Tanel Alumäe, infotehnoloogia doktorant Juhan-Peep Ernits ja Küberneetikainstituudi vanemteadur Ülle Kotta]**

Lill, Anne; Alumäe, Tanel; Ernits, Juhan-Peep; Kotta, Ülle Linnaleht 2004 / 3. det., lk. A 7

**Single-experiment observability decomposition of discrete-time analytic systems**

Kawano, Yu; Kotta, Ülle Systems & control letters 2016 / p. 193-199 <https://doi.org/10.1016/j.sysconle.2016.09.016> [Journal metrics at](#)

**State estimation and control for small low-cost autonomous underwater vehicles = Meetodid olekute hindamiseks ja juhtimiseks soodsa hinnaga autonoomsetele allveerobotitele**

**Meurer, Christian** 2021 [https://www.ester.ee/record=b5435482\\*est](https://www.ester.ee/record=b5435482*est) <https://digikogu.taltech.ee/et/Item/717111f2-51e3-4176-b0b8-b369064b26a2> <https://doi.org/10.23658/taltech.27/2021>

**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; 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](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](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](#)

**Teadlane peab julgema eksida : [Ülle Kotta : TTÜ kübermeetika instituudi teadur, kes 1996. aastal pälvis pika teadurikarjääri tunnustusena Eesti Vabariigi teaduspreemia]**

**Helme, Kristi; Kotta, Ülle** Mente et Manu 2013 / lk. 6-8 : fot

**A test for the generic strong-accessibility of meromorphic nonlinear systems**

Carravetta, Francesco; Sarafrazi, Mohammad Amin; Bartosiewicz, Zbigniew; **Kotta, Ülle** IEEE transactions on automatic control 2020 / p. 867-873 <https://doi.org/10.1109/TAC.2019.2921645> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Testing generic strong accessibility of nonlinear control systems via polynomial (quadratic) immersion**

Carravetta, Francesco; Sarafrazi, Mohammad Amin; Bartosiewicz, Zbigniew; **Kotta, Ülle** 61st IEEE Conference on Decision and Control, CDC 2022, Cancun, 6 December - 9 December 2022, proceedings 2022 / p. 1841-1846 <https://doi.org/10.1109/CDC51059.2022.9992952> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

**The concepts of Lie derivative for discrete-time systems**

**Mullari, Tanel; Kotta, Ülle**; Bartosiewicz, Zbigniew; Pawluszewicz, Ewa Proceedings of the Estonian Academy of Sciences 2012 / p. 253-265 : ill

**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](#)

**Theorem on the differentiation of a composite function with a vector argument**

Kaparin, Vadim; **Kotta, Ülle** Proceedings of the Estonian Academy of Sciences 2010 / 3, p. 195-200 [https://artiklid.elnet.ee/record=b2163022\\*est](https://artiklid.elnet.ee/record=b2163022*est)

**Tracking control of nonlinear pneumatic actuator systems using static state feedback linearization of the input-output map**

Wang, Jihong; **Kotta, Ülle**; Ke, Jia Proceedings of the Estonian Academy of Sciences. Physics. Mathematics 2007 / 1, p. 47-66 : ill

**Transfer functions of discrete-time nonlinear control systems**

Halas, Miroslav; **Kotta, Ülle** Proceedings of the Estonian Academy of Sciences. Physics. Mathematics 2007 / 4, p. 322-335

**Transfer matrix and its Jacobson form for nonlinear systems on time scales : mathematica implementation**

**Belikov, Juri; Kotta, Ülle; Leibak, Alar** Full Papers : 18th International Conference on Process Control '11 : June 14-17, 2011, Tatransk Lomnica, Slovakia 2011 / p. 141-146

**Transformation of nonlinear discrete-time state equations into the observer form : extension to non-reversible case**  
Mullari, Tanel; Kotta, Ülle Proceedings of the Estonian Academy of Sciences 2021 / p. 235-247 <https://doi.org/10.3176/proc.2021.3.03>  
[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Transformation of nonlinear discrete-time state equations into the observer form : revision**  
Mullari, Tanel; Kotta, Ülle Proceedings of the Estonian Academy of Sciences 2023 / p. 1-5 <https://doi.org/10.3176/proc.2023.1.01>  
[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Transformation of nonlinear discrete-time system into the extended observer form**  
Kaparin, Vadim; Kotta, Ülle International journal of control 2018 / p. 848-858 <https://doi.org/10.1080/00207179.2017.1294264> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Transformation of nonlinear MIMO discrete-time systems into the extended observer form**  
Kaparin, Vadim; Kotta, Ülle Asian journal of control 2019 / p. 2208–2217 : ill <https://doi.org/10.1002/asjc.1824> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Transformation of nonlinear state equations into observer form = Mittelineaarsete olekuvõrrandite olekutaastaja kujule teisendamise**  
Kaparin, Vadim 2013 [https://www.ester.ee/record=b2998616\\*est](https://www.ester.ee/record=b2998616*est)

**Transformation of nonlinear state equations into the observer form : necessary and sufficient conditions in terms of one-forms**  
Kaparin, Vadim; Kotta, Ülle Kybernetika 2015 / p. 36-58 <https://doi.org/10.14736/kyb-2015-1-0036> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Transformation of the transfer matrix of the nonlinear system into the Jacobson form**  
Belikov, Juri; Kotta, Ülle; Leibak, Alar Proceedings of the 2010 IRAST International Congress on Computer Applications and Computational Science (CACS 2010) : 4-6 December 2010, Singapore 2010 / p. 495-498

**Transforming a set of nonlinear input-output 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](#)

**Täppisteaduste valdkonna aastapreemia tööde tsükli "Algebralised meetodid matemaatilises juhtimisteoorias" eest : Ülle Kotta. Algebralised meetodid matemaatilises juhtimisteoorias**  
Kotta, Ülle Eesti Vabariigi preemiad 2018 : teadus. F. J. Wiedemanni keeleaühind. Kultuur. Sport 2018 / lk. 76-89 : portr

**Universal tool for solving different control problems**  
Kotta, Ülle 5th Junior European Meeting on Control & Information Technology : September 20-22, 2006, Tallinn, Estonia : book of abstracts 2006 / p. 1

**Weak reachability and controllability of discrete-time nonlinear systems: generic approach and singular points**  
Mullari, Tanel; Kotta, Ülle; Bartosiewicz, Zbigniew; Sarafrazi, Mohammad Amin; Moog, Claude; Pawluszewicz, Ewa International journal of control 2020 / p. 483-489 <https://doi.org/10.1080/00207179.2018.1479076> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [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

**Ülle Kotta: A researcher seeks the best solution, the industry a functional one**  
Kotta, Ülle Estonian Centre of Excellence in ICT Research 2021 / p. 64-68 : ill <http://www.digar.ee/id/nlib-digar:634779>  
[https://www.ester.ee/record=b5456158\\*est](https://www.ester.ee/record=b5456158*est)

**Ülle Kotta: tulemus on hea, kui ta on varastamist väärt**  
Kotta, Ülle Mente et Manu 2025 / lk. 50-51 : fot [https://www.ester.ee/record=b1242496\\*est](https://www.ester.ee/record=b1242496*est)

**Автоматизированное проектирование многомерных линейных систем управления**  
Oit, Monika; Pajuruu, J.; Härmaorg, T.; Jaaksoo, Ülo; Kotta, Ülle; Nurges, Ülo VIII Всесоюзное совещание по проблемам управления : Таллин, октябрь 1980 : тезисы докладов. Книга 3 1980 / с. 597-600 [https://www.ester.ee/record=b1275375\\*est](https://www.ester.ee/record=b1275375*est)

**Идентификация многомерных линейных стационарных динамических систем : автореферат ... кандидата технических наук (05.13.01)**  
Kotta, Ülle 1980 [https://www.ester.ee/record=b3545499\\*est](https://www.ester.ee/record=b3545499*est)

**Управление дискретными обратимыми системами нелинейными системами : автореферат ... доктора физико-математических наук**

**Kotta, Ülle** 1992 [https://www.eester.ee/record=b1164884\\*est](https://www.eester.ee/record=b1164884*est)

**Частичная декомпозируемость многомерных систем**

**Kotta, Ülle** Eesti NSV Teaduste Akadeemia toimetised. Füüsika. Matemaatika = Известия Академии наук Эстонской ССР.

Физика. Математика = Proceedings of Academy of Sciences of the Estonian SSR. Physics. Mathematics 1987 / lk. 30-35

[https://www.eester.ee/record=b1264310\\*est](https://www.eester.ee/record=b1264310*est)