

Aasta teaduspeemia tehnikateaduste alal tööde tsükli "Bioloogiast inspireeritud allveerobotite liikumine ja tajud" eest :

Maarja Kruusmaa

Kruusmaa, Maarja Eesti Vabariigi preemiad 2016 : teadus. F. J. Wiedemanni keeleaühind. Kultuur. Sport 2016 / lk. 84-95 : ill., portr

Against the flow : a Braitenberg controller for a fish robot

Salumäe, Taavi; Rano, Inaki; Akanyeti, Otar; Kruusmaa, Maarja 2012 IEEE International Conference on Robotics and Automation :

ICRA : Saint Paul, Minnesota, USA, May 14-18, 2012 / p. 4210-4215 : ill <https://ieeexplore.ieee.org/document/6225023>

Akadeemik Maarja Kruusmaa : ebakindlus on uus reaalsus

Kruusmaa, Maarja Mente et Manu 2017 / lk. 12-17 : fot http://www.ttu.ee/public/m/mente-et-manu/MM_01_2017/index.html

Amfiibrobotid aitavad aimu saada veealusest elust

Traks, Kristina novaator.err.ee 2023 [Amfiibrobotid aitavad aimu saada veealusest elust](#) [Robotid aitavad aimu saada veealusest elust](#)

An advanced finite element model of IPMC

Pugal, Deivid; Kasemägi, Heiki; Kruusmaa, Maarja; Aabloo, Alvo Electroactive Polymer Actuators and Devices (EAPAD) 2008

2008 / p. 692711

An integrated electroactive polymer sensor-actuator : design, model-based control, and performance characterization

Hunt, Andres; Chen, Zheng; Tan, K.; Kruusmaa, Maarja Smart materials and structures 2016 / art. 035016, p. 1-16 : ill

<https://doi.org/10.1088/0964-1726/25/3/035016> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Apokalüpsise ratsanikega tuleb tegeleda korraga

Kruusmaa, Maarja Postimees 2022 / Lk. 8 [Apokalüpsise ratsanikega tuleb tegeleda korraga](#) [Apokalüpsise ratsanikega tuleb tegeleda korraga](#)

Application-oriented performance characterization of the ionic polymer transducers (IPTs) = loonpolümeeridest täiturite võimekuse karakteriseerimine rakendusteks

Hunt, Andres 2017 <https://digi.lib.ttu.ee/ii/?7576> https://www.ester.ee/record=b4670806*est

The ARROWS project : robotic technologies for underwater archaeology

Allotta, Benedetto; Costanzi, Riccardo; Ridolfi, Alessandro; Salvetti, Ovidio; Reggiannini, Marco; Kruusmaa, Maarja; Salumäe,

Taavi; Lane, David M. Mike; Frost, Gordon; Tsiogkas, Nikolaos; Cocco, Michele IOP conference series : materials science and

engineering 2018 / art. 012088 <https://doi.org/10.1088/1757-899X/364/1/012088> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Artificial lateral line for aquatic habitat modelling: An example for Lefua echigonia

Garcia-Vega, Ana; Fuentes-Perez, Juan Francisco; Fukuda, Shinji; Kruusmaa, Maarja; Sanz-Ronda, Francisco Javier; Tuhtan,

Jeffrey Andrew Ecological Informatics 2021 / art. 101388 <https://doi.org/10.1016/j.ecoinf.2021.101388> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Assessing safety of object pushing using the principle of reversibility

Gavšin, Juri; Kruusmaa, Maarja Hybrid Artificial Intelligent Systems : 6th International Conference : HAIS 2011 : Wroclaw, Poland,

May 23-25, 2011 : proceedings. Part I 2011 / p. 313-320 : ill https://link.springer.com/chapter/10.1007/978-3-642-21219-2_40

Benchmarking 3D CFD for studies on turbulent flow around fish shaped bodies

Khan, Ali Hassan; Hussmann, Karla Ruiz; Powala, Dennis; Hoerner, Stefan; Kruusmaa, Maarja; Tuhtan, Jeffrey Andrew The 14th

International Symposium on Ecohydraulics : proceedings 2022 / S3: Ecohydraulics on Micro-scale [https://iahr-oss-](https://iahr-oss-accelerate.aliyuncs.com/upload/file/20221009/20221009192523_72824.doc)

[accelerate.aliyuncs.com/upload/file/20221009/20221009192523_72824.doc](https://iahr-oss-accelerate.aliyuncs.com/upload/file/20221009/20221009192523_72824.doc)

A bio-inspired compliant robotic fish : design and experiments

EL Daou, Hadi; Salumäe, Taavi; Toming, Gert; Kruusmaa, Maarja 2012 IEEE International Conference on Robotics and

Automation : ICRA : Saint Paul, Minnesota, USA, May 14-18, 2012 / p. 5340-5345 : ill

https://www.researchgate.net/publication/254041437_A_bio-inspired_compliant_robotic_fish_Design_and_experiments

Biologically inspired semi-autonomous underwater robot

Listak, Madis; Kruusmaa, Maarja US/EU-Baltic International Symposium : Ocean observations, ecosystem-based management &

forecasting : May 27-29, 2008, Tallinn, Estonia : book of abstracts 2008 / p. 89

A bio-mimetic design and control of a fish-like robot using compliant structures

EL Daou, Hadi; Salumäe, Taavi; Ristolainen, Asko; Toming, Gert; Listak, Madis; Kruusmaa, Maarja The 15th International

Conference on Advanced Robotics : Tallinn, Estonia, June 20-23, 2011 / p. 563-568 : ill

Biomimetic fish-like underwater robot for shallow water applications

Listak, Madis; Pugal, Deivid; Kruusmaa, Maarja 13th International Conference on Advanced Robotics : Korea, Jeju, 21-24 August,

2007 / p. 332-336

Biomimetic mechanical design for soft-bodied underwater vehicles

Fiazza, C.; **Salumäe, Taavi**; **Listak, Madis**; Kulikovskis, Guntis; Templeton, R.; Akanyeti, Otar; Megill, W.; Fiorini, Paolo; **Kruusmaa, Maarja** IEEE OCEANS : Sydney, 24-27 May 2010 / [7] p.: ill

Biorobootik Maarja Kruusmaa : peame valmis olema suurteks muutusteks

Aesma, Madis; **Kruusmaa, Maarja** Eesti Päevaleht 2016 / lk. 42-46 <https://epl.delfi.ee/artikkel/76462663/biorobootik-maarja-kruusmaa-peame-olema-valmis-suurteks-muutusteks> https://artiklid.elnet.ee/record=b2808283*est

Biorobootik Maarja Kruusmaa paneb robotid kalade kombel ujuma

Linnard, Henry; **Kruusmaa, Maarja** Õhtuleht 2017 / lk. 22-23 <https://www.oh tuleht.ee/loodus/807381/biorobootik-maarja-kruusmaa-paneb-robotid-kalade-kombel-ujuma>

Biorobootika : hetkeseis ja arengusuunad : avalik loeng 14. mail 2007 TTÜs

Kruusmaa, Maarja Tallinna Tehnikaülikooli aastaraamat 2007 2008 / lk. 332-334 : ill

Byoyancy control of a semiautonomous underwater vehicle for environmental monitoring in Baltic Sea

Listak, Madis; Kruusmaa, Maarja Proc. of the Int. IEEE Conf. Mechatronics and Robotics 2004 : MechRob'04 : Aachen, Germany, 2004. Vol. 2 2004 / p. 252-257
https://www.researchgate.net/publication/228404776_Buoyancy_Control_of_a_Semiautonomous_Underwater_Vehicle_for_Environmental_Monitoring_in_Baltic_Sea

Collective responses of a large mackerel school depend on the size and speed of a robotic fish but not on tail motion

Kruusmaa, Maarja; Rieucan, Guillaume; Castillo Montoya, Jose Carlos; **Markna, Riho**; Handegard, Nils Olav Bioinspiration & biomimetics 2016 / p. 1-12 : ill <https://doi.org/10.1088/1748-3190/11/5/056020> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Comparative experiments on the emergence of safe behaviours

Gavšin, Juri; **Kruusmaa, Maarja** Towards Autonomous Robotic Systems 2008 : Edinburgh, 1-3 September 2008 2008 / ? p

Computational fluid dynamics simulations of a biomimetic underwater robot

Listak, Madis; Pugal, Deivid; **Kruusmaa, Maarja** 13th International Conference on Advanced Robotics : Korea, Jeju, 21-24 August, 2007 2007 / p. 314-319 https://ims.ut.ee/images/d/d4/Listak_icar2007_15_03.pdf

Computational fluid dynamics simulations of a biomimetic underwater robot

Listak, Madis; Pugal, Deivid; **Kruusmaa, Maarja** 8th International Workshop on Research and Education in Mechatronics 2007 : 14-15 June 2007, Tallinn, Estonia 2007 / p. 72-77 : ill

Construction of a female shape-changing robotic mannequin

Abels, Artur; **Kruusmaa, Maarja** International journal of automation and control engineering 2013 / p. 132-134 : ill

Continuous, near-bed current velocity estimation using pressure and inertial sensing

Ristolainen, Asko; Tuhtan, Jeffrey Andrew; **Kruusmaa, Maarja** IEEE sensors journal 2019 / p. 12398 - 12406 : ill
<https://doi.org/10.1109/JSEN.2019.2937954> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Contributions to the modelling and control of fin-actuated autonomous underwater vehicles = Uimedega autonoomsete allveesõidukite modelleerimis- ja juhtimisloogika edendamine

Remmas, Mohamed Walid 2023 <https://doi.org/10.23658/taltech.71/2023> <https://digikogu.taltech.ee/et/Item/17167e2e-2c31-451c-834d-1da98160b2ce> https://www.ester.ee/record=b5647340*est

Control allocation for 6-DOF control of a highly manoeuvrable under-actuated bio-inspired AUV

Remmas, Mohamed Walid; Meurer, Christian; Chemori, Ahmed; **Kruusmaa, Maarja** IEEE Transactions on Robotics 2023

Control of an inverted pendulum using an ionic polymer-metal composite actuator

Hunt, Andres; Chen, Zheng; Tan, Xiaobo; **Kruusmaa, Maarja** IEEE/ASME Transactions in Mechatronics : 2010 IEEE/ASME International Conference on Advanced Intelligent Mechatronics : July 6-9, 2010, Montréal, Canada 2010 / p. 163-168 : ill
<https://ieeexplore.ieee.org/document/5695913>

Current velocity estimation using a lateral line probe

Fuentes-Pérez, Juan Francisco; Tuhtan, Jeffrey Andrew; Carbonell Baeza, Ruth; Musall, Mark; **Toming, Gert**; **Muhammad, Naveed**; **Kruusmaa, Maarja** Ecological engineering 2015 / p. 296-300 : ill <https://doi.org/10.1016/j.ecoleng.2015.10.008> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Data-driven cross-layer fault management architecture for sensor networks

Vihman, Lauri; **Kruusmaa, Maarja**; **Raik, Jaan** 16th European Dependable Computing Conference : EDCC 2020 : Virtual Conference, Munich, Germany, 7-10 September 2020 : proceedings 2020 / art. 20094188, p. 33-40

Data-driven fault-resilient cross-layer sensor network architecture = Andmepõhine tõrkekindel kihtideülene sensorvõrgu arhitektuur

Vihman, Lauri 2024 https://www.ester.ee/record=b5657135*est <https://digikogu.taltech.ee/et/Item/00a93258-dc0f-4a4d-822f-099fff757224>
<https://doi.org/10.23658/taltech.7/2024>

Depth control of the biomimetic U-CAT turtle-like AUV with experiments in real operating conditions

Chemori, Ahmed; Kuusmik, Keijo; Salumäe, Taavi; Kruusmaa, Maarja 2016 IEEE International Conference on Robotics and Automation : Stockholm, Sweden, May 16th-21st 2016 / p. 4750-4755 : ill <https://doi.org/10.1109/ICRA.2016.7487677> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Design and application of a fish-shaped lateral line probe for flow measurement

Tuhtan, Jeffrey Andrew; Fuentes-Pérez, Juan Francisco; Strokina, Nataliya; Toming, Gert; Musall, Mark; Noack, M.; Kämäräinen, Joni-Kristian; Kruusmaa, Maarja Review of scientific instruments 2016 / p. 045110-1 - 045110-8 : ill <https://doi.org/10.1063/1.4946765> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Design of a semiautonomous biomimetic underwater vehicle for environmental monitoring

Listak, Madis; Martin, G.; Pugal, David; Aabloo, Alvo; Kruusmaa, Maarja Proceedings of the 2005 IEEE International Symposium on Computational Intelligence in Robotics and Automation : CIRA 2005 : Espoo, Finland, 2005 2005 / ? p <https://ieeexplore.ieee.org/document/1554247>

Design of a shape-changing anthropomorphic mannequin for tailoring applications

Abels, Artur; Kruusmaa, Maarja ICAR 2009 : 14th International Conference on Advanced Robotics : Munich, Germany, June 22-26, 2009 2009 / [6] p

Design principle of a biomimetic underwater robot U-CAT

Salumäe, Taavi; Raag, Rasmus; Rebane, Jaan; Ernits, Andres; Toming, Gert; Ratas, Mart; Kruusmaa, Maarja OCEANS'14 MTS/IEEE St. John's : St. Johns, Newfoundland, Canada, 14-19 September 2014 2014 / [5] p. : ill

Development and experimental assessment of a flexible robot fin

Gkliva, Roza; Sfakiotakis, Michael; Kruusmaa, Maarja 2018 IEEE International Conference on Soft Robotics (RoboSoft) : proceedings 2018 / p. 208-213 : ill <https://doi.org/10.1109/ROBOSOFT.2018.8404921>

Development of a cognitive robotic system for simple surgical tasks

Muradore, Riccardo; Fiorini, Paolo; Li, Lin; Kruusmaa, Maarja; Ristolainen, Asko International journal of advanced robotic systems 2015 / p. 1-20 : ill <https://doi.org/10.5772/60137> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Development of high fidelity liver and kidney phantom organs for use with robotic surgical systems

Õpik, Rivo; Hunt, Andres; Ristolainen, Asko; Aubin, Patrick M.; Kruusmaa, Maarja Proceedings of the 4th IEEE RAS & EMBS International Conference on Biomedical Robotics and Biomechatronics (BioRob), 24-27 June 2012, Rome, Italy 2012 / p. 425-430 : ill <https://ieeexplore.ieee.org/document/6290831>

Differential pressure sensor speedometer for autonomous underwater vehicle velocity estimation

Meurer, Christian; Francisco Fuentes-Perez, Juan; Palomeras, Narcis; Carreras, Marc; Kruusmaa, Maarja IEEE Journal of Oceanic Engineering 2020 / p. 946 - 978 <https://doi.org/10.1109/JOE.2019.2907822> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Differential pressure sensors for underwater speedometry in variable velocity and acceleration conditions

Fuentes-Perez, Juan Francisco; Meurer, Christian; Tuhtan, Jeffrey Andrew; Kruusmaa, Maarja IEEE Journal of Oceanic Engineering 2018 / p. 418-426 : ill <https://doi.org/10.1109/JOE.2017.2767786> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

A distributed model of ionomeric polymer metal composite

Punning, Andres; Johanson, Urmas; Anton, Mart; Aabloo, Alvo; Kruusmaa, Maarja Journal of intelligent material systems and structures 2009 / p. 1711-1724 : ill <https://doi.org/10.1177/1045389X0933717>

Diver tracking in open waters : a low-cost approach based on visual and acoustic sensor fusion

Remmas, Mohamed Walid; Chemori, Ahmed; Kruusmaa, Maarja Journal of field robotics 2021 / p. 494-508 <https://doi.org/10.1002/rob.21999> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Doktorikraad annab juhiloa, mitte töökoha

Kruusmaa, Maarja Eesti Teaduste Akadeemia aastaraamat = Annales academiae scientiarum Estonicae 2016 2017 / lk. 68-71 : fot http://www.ester.ee/record=b1218094*est

Doktorikraad annab juhiloa, mitte töökoha

Kruusmaa, Maarja Postimees 2016 / AK, lk. 7 https://artiklid.elnet.ee/record=b2803182*est <https://teadus.postimees.ee/3876751/maarja-kruusmaa-doktorikraad-annab-juhiloa-mitte-tookoha>

Don't do things that you can't undo : reversibility models for generating safe behaviours

Kruusmaa, Maarja; Gavšin, Juri; Eppendahl, A. Proceedings of the 2007 IEEE International Conference in Robotics and Automation : ICRA'07 : Rome, Italy, 10-14 April 2007 2007 / p. 1134-1139 <https://ieeexplore.ieee.org/document/4209241>

Dynamical variation of the impedance of IPMC

Kruusamäe, Karl; Punning, Andres; **Kruusmaa, Maarja**; Aabloo, Alvo Proceedings of SPIE 2009 / Electroactive Polymer Actuators and Devices (EAPAD) 2009, p. 72870V-1 - 72870V-9 : ill https://www.researchgate.net/publication/236115865_Dynamical_variation_of_the_impedances_of_IPMC

Ecohydraulics of non-uniform flows in Vertical Slot Fishways

Branco, Paulo; **Fuentes-Pérez, Juan Francisco**; Eckert, Mario; **Tuhtan, Jeffrey Andrew**; **Kruusmaa, Maarja** Riverine landscapes as coupled socio-ecological systems : 6th biennial Symposium of the International Society for River Science : book of abstracts 2019 / p. 183 https://www.bib.irb.hr/1025362/download/1025362.ISRS2019_book_of_abstracts.pdf

Economically affordable anatomical kidney phantom with calyces for puncture and drainage training in interventional urology and radiology

Ristolainen, Asko; **Ross, Peeter**; Gavšin, Juri; Semjonov, Eero; **Kruusmaa, Maarja** Acta radiologica short reports 2014 / p. 1-7 : ill

Eestlaste revolutsioon veebirõivakaubanduses : Massi Miliano OÜ : [robotmannekeenist ka Maarja Kruusmaa sõnul]

Lugude algus 2012 / lk. 96-97 : fot

Effectiveness of Vertical Slot Fishways under experimental non-uniform flows

Eckert, Mario; **Fuentes-Pérez, Juan Francisco**; **Tuhtan, Jeffrey Andrew**; **Kruusmaa, Maarja** Riverine landscapes as coupled socio-ecological systems : 6th biennial Symposium of the International Society for River Science : book of abstracts 2019 / p. 195 https://www.bib.irb.hr/1025362/download/1025362.ISRS2019_book_of_abstracts.pdf

Electrode reactions in Cu-Pt coated Nafion[r] actuators

Johanson, Urmas; Mäeorg, Uno; Brandell, Daniel; Punning, Andres; Torop, Janno; **Kruusmaa, Maarja**; Aabloo, Alvo Artificial Muscle Actuators using Electroactive Polymers 2009 / p. 75-80 https://www.researchgate.net/publication/236115789_Electrode_Reactions_in_Cu-Pt_Coated_NafionR_Actuators

Elus, surnud ja merel : Meri toob inimeses välja juba muinasmõttelejate kirjeldatud kolmanda oleku, leiab allveetehnoloog Maarja Kruusmaa

Kruusmaa, Maarja Postimees 2020 / Lk. 14 : fot https://heureka.postimees.ee/6863788/elus-surnud-ja-merel-antarktika-reis-toob-inimeses-esile-urgse-oleku?_ga=2.78530071.248236587.1578296660-1045332091.1401712292 https://www.ester.ee/record=b1072778*est

Emergence of safe behaviours with an intrinsic reward

Gavšin, Juri; **Kruusmaa, Maarja** Adaptive and Intelligent Systems : Second International Conference : ICAIS 2011 : Klagenfurt, Austria, September 6-8, 2011 : proceedings 2011 / p. 180-191 : ill https://link.springer.com/chapter/10.1007/978-3-642-23857-4_20

Estimation of flow turbulence metrics with a lateral line probe and regression

Chen, Ke; **Tuhtan, Jeffrey Andrew**; **Fuentes-Pérez, Juan Francisco**; **Toming, Gert**; Musall, Mark; Strokina, Nataliya; Kämäräinen, Joni-Kristian; **Kruusmaa, Maarja** IEEE transactions on instrumentation and measurement 2017 / p. 651-660 : ill <https://doi.org/10.1109/TIM.2017.2658278> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Experimental study of hydrodynamic forces acting on artificial fish in a von Kármán vortex street

Toming, Gert; Chambers, Lily D.; **Kruusmaa, Maarja** Underwater technology 2014 / p. 81-91 : ill <https://doi.org/10.3723/ut.32.081> [Journal metrics at Scopus](#) [Article at Scopus](#)

Exponential distribution of wave-driven near-bed water speeds under short-crested waves: a case study in the eastern Gulf of Riga, the Baltic Sea

Eelsalu, Maris; **Piho, Laura**; Aigars, Juris; Kelpšaitė-Rimkienė, Loreta; Kondrat, Vitalijus; **Kruusmaa, Maarja**; **Parnell, Kevin Ellis**; **Ristolainen, Asko**; Šakurova, Ilona; Skudra, Māris; Viška, Maija; **Soomere, Tarmo** Proceedings of the Estonian Academy of Sciences 2025 / p. 23-42 : map, ill <https://doi.org/10.3176/proc.2025.1.03>

Fault-tolerant control allocation for a bio-inspired underactuated AUV in the presence of actuator failures : design and experiments

Remmas, Mohamed Walid; Chemori, Ahmed; **Kruusmaa, Maarja** Ocean engineering 2023 / art. 115327, 10 p. : ill <https://doi.org/10.1016/j.oceaneng.2023.115327> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Feasibility study on distributed flow sensing with inertial sensors in aquaculture fish cages

Ristolainen, Asko; **Piho, Laura**; **Kruusmaa, Maarja** Aquacultural Engineering 2022 / art. 102271, 9 p. : ill <https://doi.org/10.1016/j.aquaeng.2022.102271> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Feedback control of a coupled IPMC (Ionic Polymer-Metal Composite) sensor-actuator

Hunt, Andres; Tan, Xiaobo; Chen, Zheng; **Kruusmaa, Maarja** Proceedings of ASME Dynamic Systems Control Conference : California, USA, 12-14.10.2009 2009 / ? p <https://asmedigitalcollection.asme.org/DSCC/proceedings/DSCC2009/48920/485/346423>

FILOSE for svenning : a flow sensing bioinspired robot

EL Daou, Hadi; Ježov, Jaas; Jung, David S.; Kruusmaa, Maarja; Listak, Madis; Salumäe, Taavi; Toming, Gert IEEE robotics and automation magazine 2014 / p. 51-62 : ill <https://doi.org/10.1109/MRA.2014.2322287> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

A fish perspective : detecting flow features while moving using an artificial lateral line in steady and unsteady flow

Chambers, Lily D.; **Ježov, Jaas; Kruusmaa, Maarja** Journal of the Royal Society Interface 2014 / p. 1-13 : ill <https://doi.org/10.1098/rsif.2014.0467> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

FishView : developing a hydrodynamic imaging system using a robot fish with an artificial lateral line

Tuhtan, Jeffrey Andrew; Kruusmaa, Maarja; Toming, Gert 10th International Symposium on Ecohydraulics : Trondheim, Norway, 23-27 June 2014 2014 / [4] p. : ill

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](#)

A flexible fin with bio-inspired stiffness profile and geometry

Salumäe, Taavi; Kruusmaa, Maarja Journal of bionic engineering 2011 / p. 418-428 <https://www.sciencedirect.com/science/article/pii/S1672652911600474>

Flow aided path following of an underwater robot

Jung, David S.; Pott, Peter P.; Salumäe, Taavi; Kruusmaa, Maarja 2013 IEEE International Conference on Robotics and Automation (ICRA) : Karlsruhe, Germany, May 6-10, 2013 2013 / p. 4602-4607 : ill <https://doi.org/10.1109/ICRA.2013.6631231> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

Flow feature extraction for underwater robot localization : preliminary results

Muhammad, Naveed; Strokina, Nataliya; Toming, Gert; Tuhtan, Jeffrey Andrew; Kämäräinen, Joni-Kristian; Kruusmaa, Maarja 2015 IEEE International Conference on Robotics and Automation (ICRA) : Washington State Convention Center, Seattle, Washington, May 26-30, 2015 2015 / p. 1125-1130 : ill <https://doi.org/10.1109/ICRA.2015.7139317> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Flow sensing with pressure sensor-based artificial lateral lines : from the laboratory to the field = Veevoolu tajumine rõhusensoritel baseeruvate küljejooneanduritega : laborist välikatseteni

Fuentes-Pérez, Juan Francisco 2019 <https://digi.lib.ttu.ee/i/?12014>

Flow velocity estimation using a fish-shaped lateral line probe with product-moment correlation features and a neural network

Tuhtan, Jeffrey Andrew; Fuentes-Pérez, Juan Francisco; Toming, Gert; Kruusmaa, Maarja Flow measurement and instrumentation 2017 / p. 1-8 : ill <https://doi.org/10.1016/j.flowmeasinst.2016.10.017> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Flow-relative control of an underwater robot

Salumäe, Taavi; Kruusmaa, Maarja Proceedings of the Royal Society. A, Mathematical, physical & engineering sciences 2013 / art. 20120671 <https://doi.org/10.1098/rspa.2012.0671> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Flow-sensitive robotic fish : from concept to experiments = Voolutundlik robotkala : ideest katsetusteni

Salumäe, Taavi 2015 https://www.ester.ee/record=b4446456*est

Fluid body interaction of biomimetic underwater robots = Biomimeetiliste robotite ja vedeliku vastasmõju

Toming, Gert 2017 <https://digi.lib.ttu.ee/i/?7304> https://www.ester.ee/record=b4665016*est

Fluid dynamics experiments with a passive robot in regular turbulence

Toming, Gert; Salumäe, Taavi; Ristolainen, Asko; Visentin, Francesco; Akanyeti, Otari; Kruusmaa, Maarja Proceedings of the 2012 IEEE International Conference on Robotics and Biomimetics : December 11-14, 2012, Guangzhou, China 2012 / p. 532-537 : ill https://www.researchgate.net/publication/261276529_Fluid_dynamics_experiments_with_a_passive_robot_in_regular_turbulence

From bench to bedside

Arezzo, Alberto; **Kruusmaa, Maarja; Mylonas, George** IEEE Transactions on Medical Robotics and Bionics 2022 / p. 297 - 299 <https://doi.org/10.1109/TMRB.2022.3172013> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Guest editorial: New boundaries for robotics

Kruusmaa, Maarja; Tan, Xiaobo; Laschi, Cecilia; Fioroni, Paolo; Madhavan, Raj Robotics and autonomous systems 2014 / p. 1-2
<https://doi.org/10.1016/j.robot.2012.12.002> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Hall effect sensor-based low-cost flow monitoring device : design and validation

Egerer, Margit; Ristolainen, Asko; Piho, Laura; Vihman, Lauri; Kruusmaa, Maarja IEEE sensors journal 2024 / 12 p. : ill
<https://doi.org/10.1109/JSEN.2024.3354194> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Hirmul robotite ees on suured silmad ja sügavad juured

Kruusmaa, Maarja; Eslas, Urve Postimees 2011 / Arter, lk. 7

Hydraulics of vertical-slot fishways: nonuniform profiles

Fuentes-Pérez, Juan Francisco; Tuhtan, Jeffrey Andrew; Eckert, Mario; Romao, F.; Ferreira, Maria Teresa; Kruusmaa, Maarja; Branco, Paulo Journal of hydraulic engineering 2019 / p. 06018020-1 - 06018020-6 : ill [https://doi.org/10.1061/\(ASCE\)HY.1943-7900.0001565](https://doi.org/10.1061/(ASCE)HY.1943-7900.0001565) [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Hydrodynamic classification of natural flows using an artificial lateral line and frequency domain features

Tuhtan, Jeffrey Andrew; Strokina, Nataliya; Toming, Gert; Muhammad, Naveed; Kruusmaa, Maarja; Kämäräinen, Joni-Kristian E-proceedings of the 36th IAHR World Congress : 28 June - 3 July, 2015, The Hague, the Netherlands 2015 / p. 1-8 : ill

Hydrodynamic pressure sensing with an artificial lateral line in steady and unsteady flows

Venturelli, Roberto; **Ježov, Jaas; Toming, Gert; Kruusmaa, Maarja** Bioinspiration & biomimetics 2012 / 12 p. : ill
<https://pubmed.ncbi.nlm.nih.gov/22498729/>

Hydromast : a bioinspired flow sensor with accelerometers

Ristolainen, Asko; Tuhtan, Jeffrey Andrew; Kuusik, Alar; Kruusmaa, Maarja Biomimetic and biohybrid systems : 5th International Conference, Living Machines 2016, Edinburgh, UK, July 19-22, 2016 : proceedings 2016 / p. 510-517 : ill
https://doi.org/10.1007/978-3-319-42417-0_55 [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Conference Proceedings at WOS](#) [Article at WOS](#)

Hydromorphological classification using synchronous pressure and inertial sensing

Ristolainen, Asko; Kalev, Kaia; Tuhtan, Jeffrey Andrew; Kuusik, Alar; Kruusmaa, Maarja IEEE transactions on geoscience and remote sensing 2018 / p. 3222-3232 : ill <https://doi.org/10.1109/TGRS.2018.2795641> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

I paneel. Ülikooli missioon ühiskonnas ning kõrghariduse, teaduspoliitika ja haridusteaduste kestlikkus

Land, Tiit; Valk, Aune; Raidal, Martti; **Kruusmaa, Maarja**; Lauristin, Marju Haridus - meie ühine vastutus : Eesti Haridusfoorum 2018-2020 : ettekannete ja artiklite kogumik 2020 / lk. 36-43 : fot https://www.ester.ee/record=b5397258*est

Identification of reverse-action pairs using reversibility of actions

Gavšin, Juri; Kruusmaa, Maarja 2011 IEEE International Conference on Systems, Man, and Cybernetics (SMC) : Anchorage, AK, USA, October 9-12 2011 / p. 2555-2560 : ill <https://ieeexplore.ieee.org/document/6084061>

Improving area coverage by reversible object pushing

Gavšin, Juri; Kruusmaa, Maarja The 15th International Conference on Advanced Robotics : Tallinn, Estonia, June 20-23, 2011 2011 / p. 415-420 : ill <https://ieeexplore.ieee.org/document/6088579>

An insight on mud behavior upon stepping

Godon, Simon Pierre; Ristolainen, Asko; Kruusmaa, Maarja IEEE robotics and automation letters 2022 / p. 11039-11046
<https://doi.org/10.1109/LRA.2022.3194667> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Intrinsic robot safety through reversibility of actions = Iseeneslik ohutus robotikas tegevuste pööratavuse põhjal

Gavšin, Juri 2011 <https://digi.lib.ttu.ee/i/?639>

Inverse-model intelligent control of fin-actuated underwater robots based on drag force propulsion

Remmas, Mohamed Walid; Chemori, Ahmed; Kruusmaa, Maarja Ocean Engineering 2021 / art. 109883, 19 p. : ill
<https://doi.org/10.1016/j.oceaneng.2021.109883> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Investigating Fish Hydrodynamic Sensing : An Integrated Approach Utilizing Numerical and Experimental Methods [Võrguteavik] = Uurimus kalade hüdrodünaamilise tajumise kohta : integreeritud lähenemine, kasutades numbrilisi ja eksperimentaalseid meetodeid

Khan, Ali Hassan 2025 https://www.ester.ee/record=b5729246*est <https://digikogu.taltech.ee/et/Item/01ab1ec5-371a-442e-9564-04042ce64f53> <https://doi.org/10.23658/taltech.8/2025>

Joint estimation of bulk flow velocity and angle using a lateral line probe

Strokina, Nataliya; Kämäräinen, Joni-Kristian; **Tuhtan, Jeffrey Andrew; Fuentes-Pérez, Juan Francisco; Kruusmaa, Maarja** IEEE transactions on instrumentation and measurement 2016 / p. 601-613 : ill <https://doi.org/10.1109/TIM.2015.2499019> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Kas tehisaru areng toob kaasa robotite imevõimed?

Kruusmaa, Maarja postimees.ee 2025 <https://arvamus.postimees.ee/8205770/maarja-kruusmaa-kas-tehisaru-areng-toob-kaasa-robotite-imevoimed>

Kriiside tekkimine ühiskondliku valiku teel ehk Riikide säilimine olelusvõitluses

Kruusmaa, Maarja Arvamus, kultuur : [ajalehe Postimees lisa] 2022 / Lk. 20-21 <https://dea.digar.ee/article/ak/2022/02/12/12.2>

Kruusmaa: meil oli praktikutelt ette antud probleem

Lõugas, Hans; **Kruusmaa, Maarja** Eesti Päevaleht 2013 / lk. 3 <https://epl.delfi.ee/artikkel/67117076/kruusmaa-meil-oli-praktikutelt-ette-antud-probleem>

Kuidas keegi : [küsimustele vastab] Maarja Kruusmaa

Kruusmaa, Maarja Tarkade Klubi 2009 / 5, lk. 78 : portr

Kõva sõna

Kruusmaa, Maarja Postimees 2020 / Lk. 2 https://www.ester.ee/record=b1072778*est

Lahendada tuleks halvim võimalik stsenaarium

Marti Aavik Postimees 2020 / lk. 5 https://www.ester.ee/record=b1072778*est

Legged Locomotion on Soft and Wet Terrains [Võrguteavik] = Jalgadel liikumine pehmel ja märjal maastikul

Godon, Simon Pierre 2025 https://www.ester.ee/record=b5754511*est <https://digikogu.taltech.ee/et/Item/3fa536fe-cad0-47ce-b240-5415fb6ce141> <https://doi.org/10.23658/taltech.48/2025>

Light control method for automatic benthic algae recognition

Listak, Madis; Martin, G.; Kruusmaa, Maarja The XVIIIth International Seaweed Symposium : Bergen, Norway, 2004 2004 / p. ?

Linear modeling of elongated bending EAP actuator at large deformations

Must, Indrek; Anton, Mart; **Kruusmaa, Maarja**; Aabloo, Alvo Proceedings of SPIE 2009 / Electroactive Polymer Actuators and Devices (EAPAD) 2009, p. 728723-1 - 728723-12 : ill https://www.researchgate.net/publication/236115802_Linear_modeling_of_elongated_bending_EAP_actuator_at_large_deformations

A linked manipulator with ion-polymer metal composite (IPMC) joints for soft- and micromanipulation

Kruusmaa, Maarja; Hunt, Andres; Punning, Andres; Anton, Mart; Aabloo, Alvo 2008 IEEE International Conference on Robotics and Automation : Pasadena, CA, 19-23 May 2008. Vols. 1-9 2008 / p. 3588-3593

Low cost anatomically realistic renal biopsy phantoms for interventional radiology trainees

Hunt, Andres; Ristolainen, Asko; Ross, Peeter; Öpik, Rivo; Krumme, Andres; Kruusmaa, Maarja European journal of radiology 2013 / p. 594-600 : ill <https://doi.org/10.1016/j.ejrad.2012.12.020> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Lugemiselamus

Kruusmaa, Maarja Horisont 2017 / lk. 61 : ill http://www.ester.ee/record=b1072243*est

Lühike õpetus kriisijuhtidele

Kruusmaa, Maarja Arvamus, kultuur : [ajalehe Postimees lisa] 2023 / Lk. 2-3 <https://dea.digar.ee/article/ak/2023/01/14/2.1>

Maarja Kruusmaa: kõige tõenäolisemalt sureb vaktsiinivastane hoopis südame-veresoonkonnahaigustesse [Võrguväljaanne]

Kruusmaa, Maarja postimees.ee 2022 "[Maarja Kruusmaa: kõige tõenäolisemalt sureb vaktsiinivastane hoopis südame-veresoonkonnahaigustesse](#)"

Maarja Kruusmaa: lühike õpetus kriisijuhtidele

Kruusmaa, Maarja Arvamus, kultuur : [ajalehe Postimees lisa] 2023 / Lk. 2 [Maarja Kruusmaa: lühike õpetus kriisijuhtidele https://dea.digar.ee/article/ak/2023/01/14/2.1](https://dea.digar.ee/article/ak/2023/01/14/2.1)

Maarja Kruusmaa: mõtlemine, kas olen piisavalt heal tasemel, ei vii edasi. Tegutseda tuleb!

Vaikmaa, Madis; **Kruusmaa, Maarja** Postimees 2018 / Arter, lk. 2-6 [Arteri suur intervjuu robotikateadlase Maarja Kruusmaaga: mõtlemine, kas olen piisavalt tasemel, ei vii edasi. Tegutseda tuleb](#)

Maarja Kruusmaa: peame kastma neid taimi, mis vilja kannavad

Kruusmaa, Maarja Mente et Manu 2020 / lk. 24-27 : fot <https://dea.digar.ee/cgi-bin/dea?a=is&oid=AKmenteetmanu202011&type=staticpdf>

Maarja Kruusmaa: säilenõtkusesse panustamine tagab ühiskonna toimimise mistahes olukorras

Kruusmaa, Maarja Arvamus, kultuur : [ajalehe Postimees lisa] 2023 / Lk. 3 [Maarja Kruusmaa: säilenõtkusesse panustamine tagab ühiskonna toimimise mistahes olukorras](#)

Maneuvering on non-Newtonian fluidic terrain : a survey of animal and bio-inspired robot locomotion techniques on soft yielding grounds

Godon, Simon Pierre; Kruusmaa, Maarja; Ristolainen, Asko Frontiers in Robotics and AI 2023 / art. 1113881

<https://doi.org/10.3389/frobt.2023.1113881> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Man-made flows from a fish's perspective : autonomous classification of turbulent fishway flows with field data collected using an artificial lateral line

Tuhtan, Jeffrey Andrew; Fuentes-Pérez, Juan Francisco; Toming, Gert; Schneider, Matthias; Schwarzenberger, Richard; Schletterer, Martin; Kruusmaa, Maarja Bioinspiration & biomimetics 2018 / art. 046006, 17 p. : ill <https://doi.org/10.1088/1748-3190/aabc79>

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

Map-based localization and loop-closure detection from a moving underwater platform using flow features

Muhammad, Naveed; Fuentes-Pérez, Juan Francisco; Tuhtan, Jeffrey Andrew; Toming, Gert; Kruusmaa, Maarja; Musall, Mark Autonomous robots 2019 / p. 1419-1434 : ill <https://doi.org/10.1007/s10514-018-9797-3>

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

A method to improve instationary force error estimates for undulatory swimmers

Tuhtan, Jeffrey Andrew; Toming, Gert; Ruuben, Toomas; Kruusmaa, Maarja Underwater technology 2016 / p. 141-151 : ill

<https://doi.org/10.3723/ut.33.141> [Journal metrics at Scopus](#) [Article at Scopus](#)

Mida vinget tõi lõppev aasta tehnikailma? : [2016. aasta olulisematest uuendustest tehnoloogiamailmas : ekspertidena vastavad Gert Jervan, Argo Virkebau, ... Maarja Kruusmaa jt.]

Pau, Aivar Postimees 2016 / lk. 24-25 : ill

Modelling of a biologically inspired robotic fish driven by compliant parts

EL Daou, Hadi; Salumäe, Taavi; Chambers, Lily D.; McGill, William M.; Kruusmaa, Maarja Bioinspiration & biomimetics 2014 / p. 1-11 : ill <https://doi.org/10.1088/1748-3182/9/1/016010>

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

Monitoring of coastal waves and velocities with a robotic platform

Piho, Laura; Egerer, Margit; Gkliva, Roza; Kruusmaa, Maarja; Ristolainen, Asko OCEANS 2024 - Halifax : proceedings 2024 /

5 p <https://doi.org/10.1109/OCEANS55160.2024.10754335> [Conference proceedings at Scopus](#) [Article at Scopus](#)

More than depth : developing pressure sensing systems for aquatic environments

Schletterer, Martin; **Tuhtan, Jeffrey Andrew; Fuentes-Pérez, Juan Francisco; Kruusmaa, Maarja** HydroSenSoft, International Symposium and Exhibition on Hydro-Environment Sensors and Software : 1-3 March 2017, Madrid, Spain 2017 / p. 1-7 : ill

Motion control architecture of a 4-fin U-CAT AUV using DOF prioritization

Salumäe, Taavi; Chemori, Ahmed; Kruusmaa, Maarja IROS 2016 : 2016 IEEE/RSJ International Conference on Intelligent Robots and Systems : October 9-14, 2016, Daejeon Convention Center, Daejeon, Korea 2016 / p. 1321-1327 : ill

<https://doi.org/10.1109/IROS.2016.7759218> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Motion control of a hovering biomimetic four-fin underwater robot

Salumäe, Taavi; Chemori, Ahmed; Kruusmaa, Maarja IEEE Journal of Oceanic Engineering 2019 / p. 54 - 71

<https://doi.org/10.1109/JOE.2017.2774318> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

A multiplexed FBG based sensor platform for flow and temperature measurements in the Baltic Sea

Dzipsalski, A.; Morton, J. A. S.; Papachristou, N.; Maier, R. R. J.; MacPherson, W. N.; **Ristolainen, Asko; Kruusmaa, Maarja; Reilent, E.; Suhhova, Irina; Lips, Urmás** Proceedings of SPIE 2023 / art. 1264307-1 : ill <https://doi.org/10.1117/12.2679756>

[Conference proceedings at Scopus](#) [Article at Scopus](#)

A multiplexed reconfigurable modular FBG-based sensor platform for flow and temperature measurements in the North Sea

Dzipsalski, Adrian; Morton, Jonathan A. S.; Papchristou, Nikolitsa; Maier, Robert R. J.; MacPherson, William N.; **Ristolainen, Asko; Reilent, Enar; Kruusmaa, Maarja; Wolf, Ben J.; Piri, Primoz; Van Netten, Sietse M.; Suhhova, Irina; Lips, Urmás; McFarlane, Nathan; MacLeod, Robert; Hendry, Mark; Sheehy, Jack; Almoghayer, Mohammed; Rojas, Natalia; Davies, Gareth** Proceedings of SPIE 2024 / 6 p

<https://doi.org/10.1117/12.3031643> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Multiscale change detection in a supraglacial stream using surface drifters

Tuhtan, Jeffrey Andrew; Kruusmaa, Maarja; Alexander, Andreas; Fuentes-Pérez, Juan Francisco River Flow 2020

Proceedings of the 10th Conference on Fluvial Hydraulics (Delft, Netherlands, 7-10 July 2020): River Flow 2020, Online, 7-10 July

A multi-terrain robot prototype with archimedean screw actuators : design, realization, modeling, and control

Gkliva, Roza; Remmas, Mohamed Walid; Godon, Simon Pierre; Rebane, Jaan; Ochs, Kilian; Kruusmaa, Maarja; Ristolainen, Asko IEEE Access 2024 / p. 95820 - 95830 <https://doi.org/10.1109/ACCESS.2024.3426105> [Journal metrics at Scopus](#)
[Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Muutus TalTechi rektoraadis : teadusprorektoriks saab Tiit Lukk, Maarja Kruusmaa pühendub uurimistööle

digi.geenius.ee 2023 [Muutus TalTechi rektoraadis : teadusprorektoriks saab Tiit Lukk, Maarja Kruusmaa pühendub uurimistööle](#)

[Mõtted]

Kruusmaa, Maarja Hallo, Kosmos! Elu mõte / Ingrid Peek 2017 / lk. 27 https://www.ester.ee/record=b4746867*est

Myometry-driven compliant-body design for underwater propulsion

Akanyeti, Otar; Listak, Madis; Ernits, Andres; Fiazza, Maria-Camilla; Toming, Gert; Kulikovskis, Guntis; Raag, Rasmus; Salumäe, Taavi; Fiorini, Paolo; Kruusmaa, Maarja IEEE International Conference on Robotics and Automation : ICRA 2010 : Anchorage, Alaska, USA, 3-7 May 2010 2010 / p. 84-89 <https://ieeexplore.ieee.org/document/5509431>

Nanoporous carbon-based electrodes for high strain ionomeric bending actuators

Palmre, Viljar; Brandell, Daniel; Mäeorg, Uno; Torop, Janno; Volobujeva, Olga; Punning, Andres; Johanson, Urmas; Kruusmaa, Maarja; Aabloo, Alvo Smart materials & structures 2009 / 9, [7] p. : ill

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 2019 / Art. 8793892 ; p. 4688-4694
<https://doi.org/10.1109/ICRA.2019.8793892> [Conference proceeding at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Novel mechanisms of robot locomotion : variable stiffness actuators for underwater and multi-phase environments =

Robotite uudsed liikumismehhanismid : muutuva jäikusega täitured veealustes ja mitmefaasilistes keskkondades
Gkliva, Roza 2023 <https://doi.org/10.23658/taltech.3/2023> <https://digikogu.taltech.ee/et/Item/b1135cd8-02a8-44f8-8b2c-d66d019ea63c>
https://www.ester.ee/record=b5537817*est

Odavrobotika levik muudab lahinguvälja ja relvaturgu

Oidsalu, Meelis Postimees 2023 / Lk. 18-19 <https://dea.digar.ee/article/postimees/2023/11/14/20.1>

On the shoulders of giants : colourful argument trees for academic writing

Kruusmaa, Maarja; Moktefi, Amirouche; Tuhtan, Jeffrey Andrew Diagrammatic representation and inference : 11th International Conference, Diagrams 2020, Tallinn, Estonia, August 24–28, 2020 : proceedings 2020 / p. 520-524 https://doi.org/10.1007/978-3-030-54249-8_48 [Conference proceedings at Scopus](#) [Article at Scopus](#) [Conference proceedings at WOS](#) [Article at WOS](#)

An open 3D CFD model for the investigation of flow environments experienced by freshwater fish

Khan, Ali Hassan; Hussmann, Karla Ruiz; Powalla, Dennis; Hoerner, Stefan; Kruusmaa, Maarja; Tuhtan, Jeffrey Andrew Ecological Informatics 2022 / art. 101652, 12 p. : ill <https://doi.org/10.1016/j.ecoinf.2022.101652> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Pandeemia lõi uue maailma. Milline see on?

Päart, Villu postimees 2020 / Lk. 8-9 : ill <https://leht.postimees.ee/6984645/pandeemia-loi-uue-maailma-milline-see-on>
https://www.ester.ee/record=b1072778*est

PHA-based feedback control of a biomimetic AUV for diver following : design, simulations and real-time experiments

Ratas, Mart; Chemori, Ahmed; Kruusmaa, Maarja European Control Conference (ECC) 2022 / p. 503-509
<https://doi.org/10.23919/ECC55457.2022.9838054>

A phantom pig abdomen as an alternative for testing robotic surgical systems : our experience

Ristolainen, Asko; Colucci, Gianluca; Kruusmaa, Maarja ATLA = Alternatives to laboratory animals 2013 / p. 359-367
<https://doi.org/10.1177/026119291304100506> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Pressure and inertia sensing drifters for glacial hydrology flow path measurements

Alexander, Andreas; Kruusmaa, Maarja; Tuhtan, Jeffrey Andrew; Hodson, Andrew J.; Schuler, Thomas V.; Kääb, Andreas The cryosphere 2020 / p. 1009-1023 <https://doi.org/10.5194/tc-14-1009-2020> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Pressure LaPlacian measurement with a bioinspired fish-shaped lateral line probe

Tuhtan, Jeffrey Andrew; Fuentes-Pérez, Juan Francisco; Schletterer, Martin; Kruusmaa, Maarja HydroSenSoft, International Symposium and Exhibition on Hydro-Environment Sensors and Software : 1-3 March 2017, Madrid, Spain 2017 / p. 1-6 : ill

Pressure sensitive lateral line for underwater robot = Rõhutundliku küljejoone kasutamine allveerobotil
Ježov, Jaas 2013 https://www.ester.ee/record=b3008502*est

Random forests hydrodynamic flow classification in a vertical slot fishway using a bioinspired artificial lateral line probe
Fukuda, Shinji; Tuhtan, Jeffrey Andrew; Fuentes-Pérez, Juan Francisco; Schletterer, Martin; Kruusmaa, Maarja Intelligent Robotics and Applications : 9th International Conference, ICIRA 2016, Tokyo, Japan, August 22-24, 2016 : proceedings. Part II 2016 / P. 297-307 : ill https://doi.org/10.1007/978-3-319-43518-3_29 Conference Proceedings at Scopus Article at Scopus Conference Proceedings at WOS Article at WOS

Research: New method maps meltwater flows inside glaciers
Kruusmaa, Maarja news.err.ee 2023 [Research: New method maps meltwater flows inside glaciers Topology and spatial-pressure-distribution reconstruction of an englacial channel](#)

Research: Robots assist in gaining glimpse of life underwater
Traks, Kristina news.err.ee 2023 [Research: Robots assist in gaining glimpse of life underwater](#)

Riik kui leiutis
Kruusmaa, Maarja Postimees 2018 / AK, lk. 6 [Maarja Kruusmaa: riik kui leiutis](#)

Robotik, keda inspireerib loodus
Kruusmaa, Maarja Horisont 2017 / lk. 26-31 : fot http://www.ester.ee/record=b1072243*est https://artiklid.elnet.ee/record=b2811777*est

Robotikaproffessor Maarja Kruusmaa teaduse rahastamisest : pole mõtet vahelejäänut peksta, kui süsteem lonkab
Berendson, Risto; Kruusmaa, Maarja Õhtuleht 2019 / lk. 2-3 [Robotikaproffessor Maarja Kruusmaa teaduse rahastamisest : pole mõtet vahelejäänut peksta, kui süsteem lonkab](#)

Robotic feet modeled after ungulates improve locomotion on soft wet grounds
Godon, Simon Pierre; Ristolainen, Asko; Kruusmaa, Maarja Bioinspiration and biomimetics 2024 / art. 066009, 12 p. : ill <https://doi.org/10.1088/1748-3190/ad839c> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Robotid saadetakse tööle kohta, kuhu vähesed meist minna tahavad
digi.geenius.ee 2024 [Robotid saadetakse tööle kohta, kuhu vähesed meist minna tahavad](#)

Robotite kaasamine võib töökohti ka juurde luua
Alver, Anne-Mari; Kruusmaa, Maarja Eesti Päevaleht 2018 / Tööstus, lk. 28

Robotkala aitab teadlasi mõista päris kalu : [TTÜ biorobotika keskusele eraldati teadusgrant robotkala ehitamiseks : Maarja Kruusmaa kommentaariga]
Nõges, Krõõt; Kruusmaa, Maarja Mente et Manu 2009 / 27. aug., lk. 2 : fot https://www.ester.ee/record=b1242496*est

Salmon behavioural response to robots in an aquaculture sea cage
Kruusmaa, Maarja; Gkliva, Roza; Tuhtan, Jeffrey Andrew; Tuvikene, A.; Alfredsen, J.A. Royal Society open science 2020 / art. 191220, 14 p. : ill <https://doi.org/10.1098/rsos.191220> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Scientific language connects - an interview with Maarja Kruusmaa
Kruusmaa, Maarja Eesti Teaduste Akadeemia in words and images 2018 2019 / p. 48-53 : phot https://www.ester.ee/record=b5178522*est

Self-motion effects on hydrodynamic pressure sensing : Part I. Forward-backward motion
Akanyeti, Otar; Ježov, Jaas; Kruusmaa, Maarja Bioinspiration & biomimetics 2013 / p. 1-10 : ill <https://doi.org/10.1088/1748-3182/8/2/026001> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Sensing drifters for glacial hydrology measurements
Alexander, Andreas; Kruusmaa, Maarja; Tuhtan, Jeffrey Andrew; Hodson, Andreas J. Svalbard Science Conference 2019 : book of abstracts 2019 / p. 50 <https://www.forskningssradet.no/contentassets/f464e19d364c40b59170a1956a98e747/book-of-abstracts-ssc2019.pdf>

Shape classification using hydrodynamic detection via a sparse large-scale 2D-sensitive artificial lateral line
Wolf, Ben J.; Pirih, Primoz; Kruusmaa, Maarja; Van Netten, Sietse M. IEEE Access 2020 / p. 11393 - 11404 <https://doi.org/10.1109/ACCESS.2020.2965316> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Shape control of an anthropomorphic tailoring robot mannequin
Abels, Artur; Kruusmaa, Maarja International journal of humanoid robotics 2013 / [16] p <https://doi.org/10.1142/S0219843613500023> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Ship wake analysis using an array of nearbed sensors

Kruusmaa, Maarja; Parnell, Kevin Ellis; Ristolainen, Asko; Rätsep, Margus; Soomere, Tarmo Abstracts : [BSSC 2019] 2019 / p. 292 https://www.su.se/polopoly_fs/1.446756.1566224624!/menu/standard/file/abstracts_A5_ny.pdf

Soft fluidic actuator for locomotion in multi-phase environments

Gkliva, Roza; Kruusmaa, Maarja IEEE robotics and automation letters 2022 / p. 10462-10469

<https://doi.org/10.1109/LRA.2022.3192204> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Spatial preferences of Iberian barbel in a vertical slot fishway under variable hydrodynamic scenarios

Fuentes-Pérez, Juan Francisco; Eckert, Mario; Tuhtan, Jeffrey Andrew; Ferreira, Maria Teresa; Kruusmaa, Maarja; Branco, Paulo Ecological engineering 2018 / p. 131-142 : ill <https://doi.org/10.1016/j.ecoleng.2018.10.014> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

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://digikogu.taltech.ee/et/Item/717111f2-51e3-4176-b0b8-b369064b26a2> <https://doi.org/10.23658/taltech.27/2021>

Statistical methods for ultrasound image segmentation = Ultrahelipiltide segmenteerimine statistiliste meetoditega

Li, Lin 2015 https://www.ester.ee/record=b4526723*est

Subsurface flow path modeling from inertial measurement unit sensor data using infinite hidden Markov models

Piho, Laura; Kruusmaa, Maarja IEEE sensors journal 2022 / p. 621-630 : ill <https://doi.org/10.1109/JSEN.2021.3128838> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Surface vessel localization from wake measurements using an array of pressure sensors in the littoral zone

Rätsep, Margus; Parnell, Kevin Ellis; Soomere, Tarmo; Kruusmaa, Maarja; Ristolainen, Asko; Tuhtan, Jeffrey Andrew Ocean engineering 2021 / art. 109156 <https://doi.org/10.1016/j.oceaneng.2021.109156> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Swimming speed control and on-board flow sensing of an artificial trout

Kruusmaa, Maarja; Toming, Gert; Salumäe, Taavi; Ježov, Jaas; Ernits, Andres 2011 IEEE International Conference on Robotics and Automation : ICRA : May 9-13, 2011, Shanghai, China 2011 / p. 1791-1796 : ill https://www.researchgate.net/publication/224252443_Swimming_speed_control_and_on-board_flow_sensing_of_an_artificial_trout

Systematic review of fault tolerant techniques in underwater sensor networks

Vihman, Lauri; Kruusmaa, Maarja; Raik, Jaan Sensors 2021 / art. 3264 <https://doi.org/10.3390/s21093264> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Tallinna Tehnikaülikooli allveerobot hõlbustab kalakasvatajate tööd [Võrguväljaanne]

Kruusmaa, Maarja novaator.err.ee 2020 / fot https://www.ester.ee/record=b2747925*est

TalTech создает роботов для обслуживания канализационных сетей

rus.postimees.ee 2024 [TalTech создает роботов для обслуживания канализационных сетей](https://rus.err.ee/1609441499/taltech-razrabotaet-robotov-dlja-kanalizacionnoj-seti) <https://rus.err.ee/1609441499/taltech-razrabotaet-robotov-dlja-kanalizacionnoj-seti>

TalTechi allveerobot sukeldus lõheluurele

Imeline Teadus 2020 / lk. 21 : fot https://www.ester.ee/record=b2747925*est

TalTechi arengukava 2021-2025 : teadusvaldkonna sihid ja sammud

Kruusmaa, Maarja Mente et Manu 2021 / lk. 20- 23 : fot https://www.ester.ee/record=b1242496*est

TalTechi põdrajalgse roboti uudis pälvis maailmas tähelepanu

Pärn, Rein postimees.ee 2025 [TalTechi põdrajalgse roboti uudis pälvis maailmas tähelepanu](https://www.ester.ee/record=b2747925*est)

TalTechi teadlased saadavad robotid kanalisatsiooni müttama

Imeline Teadus 2024 / lk. 20 : fot https://www.ester.ee/record=b2747925*est

A task-oriented design of a biologically inspired underwater robot

Listak, Madis 2007 http://www.ester.ee/record=b2298234*est

Task-oriented design of an underwater vehicle for environmental monitoring in the Baltic Sea

Listak, Madis; Martin, G.; Pugal, David; Aabloo, Alvo; Kruusmaa, Maarja Proc. of the IWUR2005 International Workshop on Underwater Robotics for Sustainable Management of Marine Ecosystems and Environmental Monitoring : Genoa, Italy, 2005 2005 / ? p

Teadlane vastab : kas robotid võivad muutuda inimestele ohtlikeks? [Võrguväljaanne]

Kruusmaa, Maarja forte.delfi.ee 2020 / video [Teadlane vastab: kas robotid võivad muutuda inimestele ohtlikeks?](#)

Teadlane vastab : kas robotid võtavad tulevikus meie töö ära? [Võrguväljaanne]

Kruusmaa, Maarja Eesti Teaduste Akadeemia : Youtube kanal 2020 / video [Teadlane vastab: kas robotid võtavad tulevikus meie töö ära?](#)

Teadlase kuvand ja usaldusväärsus

Kruusmaa, Maarja Teadus ja ühiskond 2018 / lk. 91-96 : fot

Teadlased löid robotile uue meeleeelundi

Olesk, Arko; **Kruusmaa, Maarja** Postimees 2013 / lk. 6 <https://teadus.postimees.ee/1163870/teadlased-loid-robotile-uue-meeleeelundi>

Teaduskeel on ühendaja - intervjuu Maarja Kruusmaaga

Kruusmaa, Maarja Eesti Teaduste Akadeemia sõnas ja pildis 2018 2019 / lk. 48-53 : fot

Tehisintellekt ruulib - Robotex 2001 : [esimene robotite võistlus Eestis TTÜ ja TÜ tudengite vahel : intervjuu Mart Tamre ja Maarja Kruusmaaga]

Ummelas, Mart; Tamre, Mart; Kruusmaa, Maarja Mente et Manu 2001 / 13. nov., lk. 1, 4 : fot https://www.ester.ee/record=b1242496*est

The ARROWS project : adapting and developing robotics technologies for underwater archaeology

Allotta, Benedetto; Costanzi, Riccardo; **Kruusmaa, Maarja; Salumäe, Taavi** IFAC-PapersOnLine 2015 / p. 194-199 : ill <https://doi.org/10.1016/j.ifacol.2015.06.032> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

3D CFD analysis of pressure, boundary layer and shear stresses on a gudgeon (Gobio gobio)

Khan, Ali Hassan; Hoerner, Stefan; Toming, Gert; Kruusmaa, Maarja; Tuhtan, Jeffrey A. Journal of ecohydraulics 2024 / 15 p <https://doi.org/10.1080/24705357.2024.2426809> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

3D modelling of non-uniform and turbulent flow in vertical slot fishways

Fuentes-Pérez, Juan Francisco; Silva, A.T.; Tuhtan, Jeffrey Andrew; Garcia-Vega, Ana; Carbonell Baeza, Ruth; Musall, Mark; Kruusmaa, Maarja Environmental modelling & software 2018 / p. 156-169 : ill <https://doi.org/10.1016/j.envsoft.2017.09.011> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Topology and spatial-pressure-distribution reconstruction of an englacial channel

Piho, Laura; Alexander, Andreas; Kruusmaa, Maarja The cryosphere 2022 / p. 3669–3683 <https://doi.org/10.5194/tc-16-3669-2022> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Towards a biomimetic EAP robot

Anton, Mart; Punning, Andres; Aabloo, Alvo; **Listak, Madis; Kruusmaa, Maarja** Proceedings of TAROS 2004 : Towards Autonomous Systems 2004 / p. ? https://www.researchgate.net/publication/248127819_Towards_a_biomimetic_EAP_robot

2D estimation of velocity relative to water and tidal currents based on differential pressure for autonomous underwater vehicles

Meurer, Christian; Fuentes-Perez, Juan Francisco; Schwarzwald, Kordula; Ludvigsen, Martin; Sorensen, Asgeir Johan; Kruusmaa, Maarja IEEE robotics and automation letters 2020 / p. 3444–3451 <https://doi.org/10.1109/LRA.2020.2976318> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Tänavust Robotexi külastas rekordarv robotihuvilisi : [professor M.Kruusmaa kommentaariga]

Soomann, Anna-Liisa; **Kruusmaa, Maarja** HEI = Hea Eesti Idee 2008 / lk. 28-30 : ill

U-CAT for underwater archaeology : turtle-inspired robot operates in tethered and autonomous modes

Kruusmaa, Maarja; Salumäe, Taavi Sea technology 2016 / p. 37-40 : ill [https://www.proquest.com/docview/1784047942?](https://www.proquest.com/docview/1784047942?sourcetype=Trade%20Journals) [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Underwater bioinspired sensing: New opportunities to improve environmental monitoring

Tuhtan, Jeffrey Andrew; Nag, Saptarshi; Kruusmaa, Maarja IEEE instrumentation & measurement magazine 2020 / p. 30-36 <https://doi.org/10.1109/MIM.2020.9062685> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Underwater confined space mapping by resource-constrained autonomous vehicle

Preston, Victoria; Salumäe, Taavi; Kruusmaa, Maarja Journal of field robotics 2018 / p. 1122-1148 : ill <https://doi.org/10.1002/rob.21806> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Underwater map-based localization using flow features

Muhammad, Naveed; Toming, Gert; Tuhtan, Jeffrey A.; Musall, Mark; Kruusmaa, Maarja Autonomous robots 2017 / p. 417-436 : ill <https://doi.org/10.1007/s10514-016-9558-0> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Underwater robotics is full of opportunities. Estonia has one of Europe's top 15 research teams

Kruusmaa, Maarja Estonian Centre of Excellence in ICT Research 2021 / p. 48-52 : ill <http://www.digar.ee/id/nlib-digar:634779>
https://www.ester.ee/record=b5456158*est

Underwater vehicle speedometry using differential pressure sensors : preliminary results [Online resource]

Fuentes-Pérez, Juan Francisco; Kalem, Kaia; Tuhtan, Jeffrey Andrew; Kruusmaa, Maarja Autonomous Underwater Vehicles 2016 : AUV 2016 : 6-9 November 2016 : IIS, the University of Tokyo, Tokyo, Japan 2016 / p. 156-160 : ill
<https://doi.org/10.1109/AUV.2016.7778664>

Using spectrograms from underwater total pressure sensors to detect passing vessels in a coastal environment

Rätsep, Margus; Parnell, Kevin Ellis; Soomere, Tarmo; Kruusmaa, Maarja; Ristolainen, Asko; Tuhtan, Jeffrey Andrew Journal of atmospheric and oceanic technology 2020 / p. 1353-1363 : ill <https://doi.org/10.1175/JTECH-D-19-0192.1> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Walking in Mud : Modeling, Control, and Experiments of Quadruped Locomotion

Godon, Simon Pierre; Prados, Carlos; Chemori, Ahmed; Ristolainen, Asko; Kruusmaa, Maarja IEEE/ASME Transactions on Mechatronics 2025 / 12 p. : ill <https://doi.org/10.1109/TMECH.2025.3560588>

Whisker-based tactile navigation algorithm for underground robots

Kossas, Tanel; Remmas, Mohamed Walid; Gkliva, Roza; Ristolainen, Asko; Kruusmaa, Maarja 2024 IEEE International Conference on Robotics and Automation (ICRA) 2024 / p. 13164-13170 <https://doi.org/10.1109/ICRA57147.2024.10610762> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Üks küsimus : milline on teie jaoks ideaalne ülikool?

Mente et Manu 2020 / lk. 24-25 , 34-35, 44-45 : portr https://www.ester.ee/record=b1242496*est

Маарья Круусмаа : антиваксер, скорее всего, умрет от сердечного приступа [Online resource]

Kruusmaa, Maarja rus.postimees.ee 2022 "[Маарья Круусмаа: антиваксер, скорее всего, умрет от сердечного приступа](#)"