

A phantom study for the validation of a surgical navigation system based on real-time segmentation and registration methods

Maris, B.; Ristolainen, Asko; Li, Lin; Gavšin, Juri International journal of computer assisted radiology and surgery 2013 / p. 381-382 : ill

Bioinspired whisker sensor for 3D mapping of underground mining environments

Gomez, Virgilio; Remmas, Mohamed Walid; Hernando, Miguel; Ristolainen, Asko; Rossi, Claudio Biomimetics 2024 / art. 83
<https://doi.org/10.3390/biomimetics9020083> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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 2011 / p. 563-568 : 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](#)

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>

Dynamic modelling of a screw actuator for improved locomotion control on various terrains

Remmas, Mohamed Walid; Gkliva, Roza; Ristolainen, Asko EGU General Assembly 2022 2022 / EGU22-5726
<https://doi.org/10.5194/egusphere-egu22-5726>

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

Eesti teadlased aitavad luua kujumuutvaid kaevurroboteid

Piir, Rait novaator.err.ee 2023 [Eesti teadlased aitavad luua kujumuutvaid kaevurroboteid](#)

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>

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](#)

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

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](#)

Hoovuste mõõtja Hydromast pannakse proovile kõige karmimates tingimustes

Eding, Gaili Mente et Manu 2018 / lk. 57 : fot http://www.ester.ee/record=b1242496*est <http://dea.digar.ee/publication/AKmenteetmanu>
https://www.ttu.ee/public/m/mente-et-manu/MM_05_2018/mobile/index.html https://artiklid.elnet.ee/record=b2868948*est

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](#)

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](#)

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>

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](#)

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](#)

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](#)

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

Dzupalski, A.; Morton, J. A. S.; Papachristou, N.; Maier, R. R. J.; MacPherson, W. N.; **Ristolainen, Asko; Kruusmaa, Maarja**; Reilent, E.; **Suhhova, Irina; Lips, Urmas** 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

Dzupalski, 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, Urmas**; 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](#)

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](#)

A new mining life for non-feasible mineral deposits?

Bodo, Balazs; Lopes, Luis; Rossi, Claudio; Stasi, Giorgia; Burlet, Christian; Henley, Stephen; Correia, Vitor; Pinkse, Tobias; Kot-Niewiadomska, Alicja; **Ristolainen, Asko** EGU General Assembly 2021 2021 / art. EGU21-12115 <https://doi.org/10.5194/egusphere-egu21-12115>

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](#)

Planning and simulation of percutaneous cryoablation

Dodi, Riccardo; Ferraguti, Federica; **Ristolainen, Asko** AASRI procedia 2014 / p. 118-122 : ill

ROBOMINERS resilient reflectance/fluorescence spectrometers

Burlet, Christian; Stasi, Giorgia; **Godon, Simon Pierre; Gkliva, Roza; Piho, Laura; Ristolainen, Asko** EGU General Assembly 2023, Vienna, Austria, 24–28 Apr 2023 2023 / EGU-12056 <https://doi.org/10.5194/egusphere-egu23-12056>

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](#)

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

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](#)

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](#)