

Adaptive Kalman filter based data aggregation in fault-resilient Underwater Sensor Networks

Vihman, Lauri; Raik, Jaan 2023 24th International Conference on Digital Signal Processing (DSP) 2023 / p. 1-5

<https://doi.org/10.1109/DSP58604.2023.10167982>

Advances in moving speaker acoustic localization for operation in distributed systems

Astapov, Sergei; Berdnikova, Julia; Preden, Jürgo-Sören Info- ja kommunikatsioonitehnoloogia doktorikooli IKTDK seitsmenda aastakonverentsi artiklite kogumik : 15.-16. novembril 2013, Haapsalu 2013 / p. 9-12 : ill

Arupuru rakendamise võimalustest

Preden, Jürgo-Sören; Somelar, Raili Keskkonnatehnika 2010 / 7, lk. 26-28 : ill https://artiklid.elnet.ee/record=b2179782*est

Building trust on body sensor network signals

Giani, Annarita; Seppä, Ville-Pekka; Hyttinen, Jari; Bajcsy, Ruzena 4th European Conference of the International Federation for Medical and Biological Engineering : 23-27 November, 2008, Antwerp, Belgium. 8 2009 / p. 887-890

https://link.springer.com/chapter/10.1007/978-3-540-89208-3_211

Collective acoustic localization in a network of dual channel low power devices

Astapov, Sergei; Ehala, Johannes; Preden, Jürgo-Sören Proceedings of the 21st International Conference Mixed Design of Integrated Circuits and Systems : MIXDES 2014 : Lublin, Poland, June 19-21, 2014 2014 / p. 430-435 : ill

Communication area based positioning

Preden, Jürgo-Sören 2006 IEEE International Conference on Mobile Adhoc and Sensor Systems (MASS) 2006 / p. 336-347

<https://ieeexplore.ieee.org/document/4053919>

Comparative analysis of zigbee based wireless sensor networks (WSNs)

Shabbir, Noman; Hassan, Syed Rizwan; Iqbal, Muhammad Naveed; Kütt, Lauri; Unbreen, Arooj International journal of recent technology and engineering 2019 / p. 980-984 : ill <https://www.ijrte.org/wp-content/uploads/papers/v7i6s/F04000376S19.pdf> [Journal metrics at Scopus](#) [Article at Scopus](#)

Comparative analysis of ZigBee based Wireless Sensor Networks (WSNs)

Shabbir, Noman; Hassan, Syed Rizwan; Iqbal, Muhammad Naveed; Kütt, Lauri; Unbreen, Arooj International journal of recent technology and engineering 2019 / p. 980-984 : ill <https://www.ijrte.org/wp-content/uploads/papers/v7i6s/F04000376S19.pdf>

Comparative Analysis of ZigBee Based Wireless Sensor Networks (WSNs)

Shabbir, Noman; Hassan, Syed Rizwan; Iqbal, Muhammad Naveed; Kütt, Lauri Proceeding of the 4th International Conference on Recent Trends in Computer Science and Electronics 2019 2019 / p. 115 http://www.rtcse.org/RTCSE_2019.pdf

Composite predictive speaker acoustic localization in distributed sensor networks

Astapov, Sergei; Berdnikova, Julia; Preden, Jürgo-Sören Proceedings of the 8th Annual Conference of the Estonian National Doctoral School in Information and Communication Technologies : December 5-6, 2014, Rakvere 2014 / p. 15-18 : ill

Covering an unknown area with an RFID-enabled robot swarm

Puusepp, Andres; Tammet, Tanel; Reilent, Enar Mechanical design and power engineering 2014 / p. 1157-1162

<https://doi.org/10.4028/www.scientific.net/AMM.490-491.1157> [Article at Scopus](#) [Article at WOS](#)

Data to decision : pushing situational information needs to the edge of the network

Preden, Jürgo-Sören; Kaugerand, Jaanus; Suurjaak, Erki; Astapov, Sergei; Pahtma, Raido; Mõtus, Leo 2015 IEEE International Multi-Disciplinary Conference on Cognitive Methods in Situation Awareness and Decision (CogSIMA 2015) : 9-12 March 2015, Orlando, Florida, USA 2015 / p. 158-164 : ill <http://dx.doi.org/10.1109/COGSIMA.2015.7108192>

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

<https://doi.org/10.1109/EDCC51268.2020.00015>

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-099ff757224> <https://doi.org/10.23658/taltech.7/2024>

DexterNet : an open platform for heterogeneous body sensor networks and its applications

Kuryloski, P.; Giani, Annarita; Seppä, Ville-Pekka Proceedings of the 6th Workshop on Body Sensor Networks 2009 / ? p

<https://ieeexplore.ieee.org/document/5226911>

Distributed signal processing for situation assessment in cyber-physical systems = Hajutatud signaalitöötlus olukorra hindamiseks küberfüüsilistes süsteemides

Astapov, Sergei 2016 <http://digi.lib.ttu.ee/i/?6212> https://www.ester.ee/record=b4603470*est

Dynamic slot allocation using non overlapping backoff algorithm in IEEE 802.15.6 WBAN

Saboor, Abdul; Ahmad, Rizwan; Ahmed, Waqas; Kiani, Adnan Khalid; **Alam, Muhammad Mahtab**; Kuusik, Alar; **Le Moullec, Yannick** IEEE sensors journal 2020 / p. 10862-10875 : ill <https://doi.org/10.1109/JSEN.2020.2993795> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effective self adaptive multiple source localization technique by primal dual interior point method in binary sensor networks

Khan, Muhidul Islam; Xia, Kewen IEEE communications letters 2017 / p. 1119-1122 : ill <https://doi.org/10.1109/LCOMM.2017.2657508>

An empirical modeling for the baseline energy consumption of an NB-IoT radio transceiver

Khan, Sikandar Muhammad Zulqarnain; **Alam, Muhammad Mahtab**; **Le Moullec, Yannick**; Kuusik, Alar; Päränd, Sven; Verikoukis, Christos IEEE Internet of Things Journal 2021 / p. 14756-14772 : ill <https://doi.org/10.1109/JIOT.2021.3072769> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Energy-aware task scheduling by a true online reinforcement learning in wireless sensor networks

Khan, Muhidul Islam; Xia, Kewen; Ali, Ahmad; Aslam, Nelofar International journal of sensor networks 2017 / p. 244-258 <http://dx.doi.org/10.1504/IJNET.2016.10001403>

Engineering approach for realization of small smart home systems

Kuusik, Alar Preprints [of the] 1st IFAC Conference [on] Telematics Applications in Automation and Robotics : TA'2001 : Weingarten, Germany, July 24-26, 2001 2001 / p. 499-503 : ill <https://www.sciencedirect.com/science/article/pii/S1474667017417393>

Ensuring reliable wireless data transmission - performance study from field deployment

Leier, Mairo Info- ja kommunikatsioonitehnoloogia doktorikooli IKTDK viienda aastakonverentsi artiklite kogumik : 25.-26. novembril 2011, Nelijärve 2011 / p. 151-155 : ill

Gunshot acoustic event identification and shooter localization in a WSN of asynchronous multichannel acoustic ground sensors

Astapov, Sergei; **Berdnikova, Julia**; **Ehala, Johannes**; **Kaugerand, Jaanus**; **Preden, Jürjo-Sören** Multidimensional systems and signal processing 2018 / p. 563-595 : ill <https://doi.org/10.1007/s11045-017-0479-7> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

In-process determining of the working mode in CNC turning

Aruväli, Tanel; **Serg, Risto**; **Preden, Jürjo-Sören**; **Otto, Tauno** Estonian journal of engineering 2011 / 1, p. 4-16 : ill https://www.kirj.ee/public/Engineering/2011/issue_1/eng-2011-1-4-16.pdf

In-process vibration monitoring on CNC lathe

Aruväli, Tanel; **Serg, Risto**; **Otto, Tauno** 10th International Symposium "Topical Problems in the Field of Electrical and Power Engineering". Doctoral School of Energy and Geotechnology II : Pärnu, Estonia, January 10-15, 2011 2011 / p. 174-178 : ill

Mediated interactions for collection and exchange of situational information in smart environments = Vahendatud interaktsioonid olukorrataadlikkuse informatsiooni kogumiseks ja vahetamiseks arukates keskkondades

Kaugerand, Jaanus 2020 <https://digikogu.taltech.ee/et/Item/67dab11b-894d-4903-b4ff-f4652e58bf81> TTÜ teadlane pani nutiseadmed omavahel tõhusamalt rääkima (novaator.err.ee, 16.10.2020) <https://dea.digar.ee/cgi-bin/dea?a=is&oid=AKmenteetmanu202011&type=staticpdf>

A method of initial search region reduction for acoustic localization in distributed systems

Astapov, Sergei; **Berdnikova, Julia**; **Preden, Jürjo-Sören** Proceedings of the 20th International Conference Mixed Design of Integrated Circuits and Systems : MIXDES 2013, Gdynia, Poland, June 20-22, 2013 2013 / p. 451-456 : ill

Modeling and implementation of linear energy prediction for energy harvesting in intermittently powered wireless sensor nodes = Katkendliku toitega traadita sensorsõlmede energiakorje tulemuse lineaarne ennustus, modelleerimine ja rakendused

Ahmed, Faisal 2018 <https://digi.lib.ttu.ee/i/?9955> https://www.ester.ee/record=b5056543*est

Monitoring system framework and architecture over supply chain

Aruväli, Tanel; **Serg, Risto**; **Kõrbe Kaare, Kati**; **Otto, Tauno** Annals of DAAAM for 2012 & Proceedings of the 23rd International DAAAM Symposium : Intelligent Manufacturing & Automation 2012 / 1, p. 0661-0666 : ill [CD-ROM] https://www.daaam.info/Downloads/Pdfs/proceedings/proceedings_2012/155.pdf

Nutikalt rajatud teed aitavad ohutumalt liigelda

Sillasoo, Signe; Puust, Märt Äripäev 2020 / Ehitusuudised, lk. 6-7 : ill https://www.ester.ee/record=b1071975*est

On research challenges in hybrid medium-access control protocols for IEEE 802.15.6 WBANs

Saboor, Abdul; Ahmad, Rizwan; Ahmed, Waqas; Kiani, Adnan Khalid; **Le Moullec, Yannick**; **Alam, Muhammad Mahtab** IEEE

Optimized acoustic localization with SRP-PHAT for monitoring in distributed sensor networks

Astapov, Sergei; Berdnikova, Julia; Preden, Jürjo-Sören International journal of electronics and telecommunications 2013 / p. 383-390 : ill <https://doi.org/10.2478/eletel-2013-0047> [Journal metrics at Scopus](#) [Article at Scopus](#)

Performance analysis of interference and priority aware coexistence in IEEE 802.15.6 based WBANs

Khan, Fawad Nawaz; Ahmad, Rizwan; Ahmed, Waqas; Alam, Muhammad Mahtab; Drieber, Micheal 2020 17th Biennial Baltic electronics conference, Tallinn, Estonia, October 6-8, 2020 : proceedings 2020 / 5 p <https://doi.org/10.1109/BEC49624.2020.9277066>

Performing acoustic localization in a network of embedded smart sensors

Astapov, Sergei; Ehala, Johannes; Preden, Jürjo-Sören International journal of microelectronics and computer science 2015 / p. 86-95 : ill

Radio spectrum and power optimization cognitive techniques for wireless body area networks = Raadiospektri ja võimsuse optimeerimise kognitiivsed tehnikad traadita kehavõrkudele

Ahmed, Tauseef 2017 <https://digi.lib.ttu.ee/i/27677> https://www.ester.ee/record=b4677631*est

Real-time machinery monitoring applications in shop floor

Aruväli, Tanel; Reinson, Taavi; Serg, Risto Proceedings of the World Congress on Engineering and Computer Science 2011 : WCECS 2011 : October 19-21, 2011, San Francisco, USA. Vol. I 2011 / p. 337-342 : ill https://www.iaeng.org/publication/WCECS2011/WCECS2011_pp337-342.pdf

Saving time and cost on the scheduling of fog-based IoT applications using deep reinforcement learning approach

Gazori, Pegah; Rahbari, Dadmehr; Nickray, Mohsen Future generation computer systems 2020 / p. 1098-1115 <https://doi.org/10.1016/j.future.2019.09.060>

Self-organizing scheduling in ad hoc networks

Kirt, Toomas; Võhandu, Leo WSEAS transactions on computers 2006 / 9, p. 1972-1977 <https://www.semanticscholar.org/paper/Self-Organization-in-Ad-Hoc-Networks%3A-Overview-and-Dressler/3cf7a89888d665136d43c09c1b181d12f5422c89>

Simplified acoustic localization by linear arrays for wireless sensor networks

Astapov, Sergei; Preden, Jürjo-Sören; Berdnikova, Julia 2013 18th International Conference on Digital Signal Processing (DSP) : 1-3 July 2013, Nomikos Conference Centre, Santorini, Greece 2013 / [6] p. : ill

Situatsiooniteadlikkus küberfüüsilistes süsteemides

Preden, Jürjo-Sören A & A 2010 / 4, lk. 40-47 : ill https://artiklid.elnet.ee/record=b2286483*est

Smart dust applications in production environment

Aruväli, Tanel; Serg, Risto; Preden, Jürjo-Sören; Otto, Tauno Proceedings of the 7th International Conference of DAAAM Baltic Industrial Engineering : 22-24th April 2010, Tallinn, Estonia. [II] 2010 / p. 572-577 : ill

Smart dust based modular laboratory kit for monitoring workshop machinery

Sarkans, Martinš; Preden, Jürjo-Sören; Otto, Tauno; Reinson, Taavi 8th International Workshop on Research and Education in Mechatronics 2007 : 14-15 June 2007, Tallinn, Estonia 2007 / p. 299-304 : ill

System level optimizations in wearable wireless networks = Kantavate seadmete võrkude süsteemi tasemel optimeerimine

Khan, Rida 2021 https://www.ester.ee/record=b5403571*est <https://digikogu.taltech.ee/et/Item/5d6402a5-a537-4bf4-a5e0-988b8685228b> <https://doi.org/10.23658/taltech.10/2021>

A system of systems solution for perimeter control : combining unmanned aerial system with unattended ground sensor network

Kaugerand, Jaanus Proceedings of the 8th Annual Conference of the Estonian National Doctoral School in Information and Communication Technologies : December 5-6, 2014, Rakvere 2014 / p. 57-60 : ill

A system of systems solution for perimeter control : combining unmanned aerial system with unattended ground sensor network

Kaugerand, Jaanus; Preden, Jürjo-Sören; Suurjaak, Erki; Astapov, Sergei; Mõtus, Leo; Pahtma, Raido 9th Annual IEEE International Systems Conference : April 13-16, 2015, Vancouver, British Columbia, Canada : proceedings 2015 / p. 317-323 : ill <https://doi.org/10.1109/SYSCON.2015.7116770>

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](#)

Teadlased tugevdavad Läänemere riikide digitaristut ja ühenduvust

Vaaks, Eveliis Trialoog 2025 <https://trialoog.taltech.ee/taltech-i-teadlased-tugevdavad-laanemere-riikide-digitaristut-ja-uhenduvust/>

Tolmuga tööstust jälgimas : [TTÜ automaatikainstituudi ja masinaehituse instituudi koostöös loodud sensorvõrkude laborist]

Preden, Jürgo-Sören; Otto, Tauno Eesti Ekspress 2007 / 15. veebr., lk. 44-46

UAV and SWIPT assisted disaster aware clustering and association

Hassan, Ali; Ahmad, Rizwan; Ahmed, Waqas; Magarini, Maurizio; **Alam, Muhammad Mahtab** IEEE Access 2020 / p. 204791–204803 <https://doi.org/10.1109/ACCESS.2020.3035959> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Using wireless sensor network components in practical assignments of master's study mechatronics course

Hiiemaa, Maido; Tamre, Mart 10th International Symposium "Topical Problems in the Field of Electrical and Power Engineering". Doctoral School of Energy and Geotechnology II : Pärnu, Estonia, January 10-15, 2011 / p. 193-196 : ill

Validation of wired and wireless interconnected body sensor networks

Talpur, Anum; Shaikh, Faisal Karim; Baloch, Natasha; Felemban, Emad; Khelil, Abdelmajid; **Alam, Muhammad Mahtab** Sensors 2019 / art. 3697, 23 p. : ill <https://doi.org/10.3390/s19173697> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Wireless sensor network for kitchen automation

Vu, Trieu Minh 16th International Symposium "Topical Problems in the Field of Electrical and Power Engineering. Doctoral School of Energy and Geotechnology III" : Pärnu, Estonia, January 16-21, 2017 / p. 51-54 : ill http://www.ester.ee/record=b4650094*est

Vision towards 5G : comparison of radio propagation models for licensed and unlicensed indoor femtocell sensor networks

Shabbir, Noman; Kütt, Lauri; Alam, Muhammad Mahtab; Roosipuu, Priit Physical communication 2021 / art. 101371 <https://doi.org/10.1016/j.phycom.2021.101371> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Väljakutsed küber-füüsiliste süsteemide loomisel

Preden, Jürgo-Sören Inseneeria 2011 / lk. 36-37 : ill https://artiklid.elnet.ee/record=b2369619*est https://www.ester.ee/record=b1519314*est