

**Active-passive two-way ranging protocol for positioning systems = Aktiiv-passiivne kauguste mõõtmise protokoll positsioneerimissüsteemidele**

Laadung, Taavi 2023 <https://doi.org/10.23658/taltech.26/2023> <https://digikogu.taltech.ee/et/item/e9906a57-6c88-4a98-860e-d2c567a3109c>  
[https://www.ester.ee/record=b5567510\\*est](https://www.ester.ee/record=b5567510*est)

**Active-passive two-way ranging using UWB**

Laadung, Taavi; Ulp, Sander; **Alam, Muhammad Mahtab; Le Moullec, Yannick** 2020, 14th International Conference on Signal Processing and Communication Systems, (ICSPCS) December 14-16, 2020 – Virtual Conference : proceedings 2020  
<https://doi.org/10.1109/ICSPCS50536.2020.9309999>

**Adaptive Extended Kalman Filter position estimation based on Ultra-Wideband Active-Passive Ranging Protocol**

Laadung, Taavi; Ulp, Sander; **Fjodorov, Aleksei; Alam, Muhammad Mahtab; Le Moullec, Yannick** IEEE Access 2023 / p. 92575-92588 <https://doi.org/10.1109/ACCESS.2023.3308696> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Aerial base station assisted cellular communication : performance and trade-off**

**Sharma, Navuday;** Kumar, Atul; **Alam, Muhammad Mahtab;** Jindal, Anish; Imran, Muhammad Ali IEEE Transactions on Network Science and Engineering 2021 / p. 2765-2779 <https://doi.org/10.1109/TNSE.2021.3052984> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Algorithms for learning and adaptation over networks - distributed leader selection = Õppimisalgoritmid hajutatud võrkude tarbeks - juhtsõlme hajus valimine**

Ulp, Sander 2019 <https://digi.lib.ttu.ee/i/?11635> [https://www.ester.ee/record=b5204290\\*est](https://www.ester.ee/record=b5204290*est)

**Analyzing and investigating encrypted traffic for social media application Instagram**

Iqbal, Hameed; Ahmad, Rizwan; Ahmed, Waqas; Qazi, Shams; **Alam, Muhammad Mahtab** 2022 18th Biennial Baltic Electronics Conference (BEC) 2022 / 6 p. : ill <https://doi.org/10.1109/BEC56180.2022.9935603>

**Applying RIS-based communication for collaborative computing in a swarm of drones**

Rahbari, Dadmehr; **Alam, Muhammad Mahtab; Le Moullec, Yannick; Jenihhin, Maksim** IEEE Access 2023 / p. 70093–70109  
<https://doi.org/10.1109/ACCESS.2023.3293737> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Automatic NLOS classification from virtual 3D city models**

**Müürsepp, Ivo; Alam, Muhammad Mahtab** 2023 Eighth International Conference on Fog and Mobile Edge Computing (FMEC) 2023 / p. 190-195 <https://doi.org/10.1109/FMEC59375.2023.10306158>

**Body Area Networks. Smart IoT and Big Data for Intelligent Health : 15th EAI International Conference, BODYNETS 2020, Tallinn, Estonia, October 21, 2020 : proceedings**

2020 <https://doi.org/10.1007/978-3-030-64991-3>

**Body-to-Body communication : applications, system design aspects and performance evaluation**

**Khan, Rida; Alam, Muhammad Mahtab** The 12th International Symposium on Medical Information and Communication Technology : ISMICT 2018, 26-28 March 2018, University of Technology Sydney 2018 / 2 p. : ill <http://ismict2018.org/images/Docs-2017/ISMICT-2018-Program---Final.pdf> <http://dx.doi.org/10.1109/ISMICT.2018.8573721>

**Cell coverage analysis of a low altitude aerial base station in wind perturbations**

**Sharma, Navuday;** Sharma, Vishal; Magarini, Maurizio; Pervaiz, Haris; **Alam, Muhammad Mahtab; Le Moullec, Yannick** 2019 IEEE Globecom Workshops (GC Wkshps) : Proceedings 2019 / 6 p <https://doi.org/10.1109/GCWkshps45667.2019.9024665>

**Channel characterization at 2.4 GHz for aerial base station**

**Sharma, Navuday;** Magarini, Maurizio; Reggiani, Luca; **Alam, Muhammad Mahtab** Procedia computer science 2019 / p. 1092-1099 <https://doi.org/10.1016/j.procs.2019.04.155> [Conference proceeding at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

**Channel prediction based enhanced throughput and channel aware MAC in SmartBAN standard**

**Khan, Rida; Alam, Muhammad Mahtab; Kuusik, Alar** 2019 16th International Symposium on Wireless Communication Systems (ISWCS) 2019 / p. 463-468 : ill <https://doi.org/10.1109/ISWCS.2019.8877244>

**Communication challenges in on-body and body-to-body wearable wireless networks - a connectivity perspective**

Ben Arbia, Dhafer; **Alam, Muhammad Mahtab; Le Moullec, Yannick;** Hamida, Elyes Ben Technologies 2017 / art. 43, p.1-18 : ill <http://dx.doi.org/10.3390/technologies5030043>

**A comprehensive survey on revolutionizing connectivity through artificial intelligence-enabled digital twin network in 6G**

Sheraz, Muhammad; Chuah, Teong Chee; Lee, Ying Loong; **Alam, Muhammad Mahtab;** Al-Habashna, Ala'a; Han, Zhu IEEE Access 2024 / p. 49184-49215 <https://doi.org/10.1109/ACCESS.2024.3384272>

**A configurable radio jamming prototype for physical layer attacks against malicious unmanned aerial vehicles**

Caforio, Giulio; Scazzoli, Davide; Reggiani, Luca; Magarini, Maurizio; **Le Moullec, Yannick; Alam, Muhammad Mahtab** 2020 17th Biennial Baltic electronics conference, Tallinn, Estonia, October 6-8, 2020 : proceedings 2020 / 6 p. : ill <https://doi.org/10.1109/BEC49624.2020.9277253>

#### **Cooperative interference avoidance scheduler for radio resource management in NB-IoT systems**

**Mwakwata, Collins Burton; Alam, Muhammad Mahtab; Le Moullec, Yannick; Malik, Hassan; Päränd, Sven** EuCNC 2020: 2020 European Conference on Networks and Communications (EuCNC), Dubrovnik, Croatia, Croatia, 15-18 June 2020 : proceedings 2020 / p. 154-159 <https://doi.org/10.1109/EuCNC48522.2020.9200967>

#### **Cooperative scheduler to enhance massive connectivity in 5G and beyond by minimizing interference in OMA and NOMA**

**Mwakwata, Collins Burton; Elgarhy, Osama Mohamed Mostafa; Alam, Muhammad Mahtab; Le Moullec, Yannick; Päränd, Sven; Trichias, Konstantinos; Ramantas, Kostas** IEEE Systems Journal 2022 / p. 5044-5055 <https://doi.org/10.1109/JSYST.2021.3114338> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **CROW2 : Internet of humans-based platform for disaster relief and emergency communication**

Ben Arbia, Dhafer; **Alam, Muhammad Mahtab**; Attia, Rabah; Ben Hamida, Elyes; Kadri, Abdullah 14th IEEE Annual Consumer Communications & Networking Conference, CCNC 2017 : Las Vegas, NV, USA, January 8-11, 2017 2017 / p. 578-579 : ill <https://doi.org/10.1109/CCNC.2017.7983174>

#### **DAAG-SNP: energy efficient distance and angulation based agglomerative clustering for sink node placement**

Hanif, Maria; Ahmad, Rizwan; Ahmed, Waqas; Drieberg, Micheal; **Alam, Muhammad Mahtab** IEEE Open Journal of the Communications Society 2024 / 14 p <https://doi.org/10.1109/OJCOMS.2024.3421901>

#### **A deep learning approach for LoS/NLoS identification via PRACH in UAV-assisted public safety networks**

Scazzoli, Davide; Magarini, Maurizio; Reggiani, Luca; **Le Moullec, Yannick; Alam, Muhammad Mahtab** 2020 IEEE 31st Annual International Symposium on Personal, Indoor and Mobile Radio Communications, August 31 - September 3, 2020 in London, United Kingdom : proceedings 2020 / 6 p <https://doi.org/10.1109/PIMRC48278.2020.9217127>

#### **Device-to-device discovery and localization assisted by UAVs in pervasive public safety networks**

**Masood, Ali; Sharma, Navuday; Alam, Muhammad Mahtab; Le Moullec, Yannick**; Scazzoli, Davide; Magarini, Maurizio; Ahmad, Rizwan Proceedings of the ACM MobiHoc workshop on innovative aerial communication solutions for First Responders network in emergency scenarios : iFIRE '19, Catania, Italy, July 2-5, 2019 2019 / p. 6-11 <https://doi.org/10.1145/3331053.3335031>

#### **Direct discovery-based cooperative device-to-device communication for emergency scenarios in 6G**

**Masood, Ali; Alam, Muhammad Mahtab; Le Moullec, Yannick** 2022 Joint European Conference on Networks and Communications & 6G Summit (EuCNC/6G Summit) : proceedings 2022 / p. 297-302 : ill <https://doi.org/10.1109/EuCNC/6GSummit54941.2022.9815706>

#### **DORM : narrowband IoT development platform and indoor deployment coverage analysis**

**Khan, Sikandar Muhammad Zulqarnain; Malik, Hassan; Sarmiento, Jeffrey Leonel Redondo; Alam, Muhammad Mahtab; Le Moullec, Yannick** Procedia computer science 2019 / p. 1084-1091 : ill <https://doi.org/10.1016/j.procs.2019.04.154> [Conference proceeding at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

#### **A DRL strategy for optimal resource allocation along with 3D trajectory dynamics in UAV-MEC network**

Khurshid, Tayyaba; Ahmed, Waqas; Rehan, Muhammad; Ahmad, Rizwan; **Alam, Muhammad Mahtab**; Radwan, Ayman IEEE Access 2023 / p. 54664 - 54678 <https://doi.org/10.1109/ACCESS.2023.3278591> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Droon lendab terroriohvreile appi**

Imeline Teadus 2021 / lk. 20 : fot [https://www.ester.ee/record=b2747925\\*est](https://www.ester.ee/record=b2747925*est)

#### **Dynamic radio frame configuration by exploiting uplink control channel for URLLC**

**Sharma, Navuday; Alam, Muhammad Mahtab; Le Moullec, Yannick; Malik, Hassan; Bennis, Mehdi; Päränd, Sven** 2019 IEEE Wireless Communications and Networking Conference Workshop (WCNCW) 2019 / 6 p. : ill <https://doi.org/10.1109/WCNCW.2019.8902898>

#### **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](#)

#### **Edge-to-Fog collaborative computing in a swarm of drones**

**Rahbari, Dadmehr; Alam, Muhammad Mahtab; Le Moullec, Yannick; Jenihhin, Maksim** Advances in Model and Data Engineering in the Digitalization Era : MEDI 2021 International Workshops: DETECT, SIAS, CSMML, BIOC, HEDA, Tallinn, Estonia, June 21-23, 2021 : proceedings 2021 / p. 78-87 [https://doi.org/10.1007/978-3-030-87657-9\\_6](https://doi.org/10.1007/978-3-030-87657-9_6) [Conference Proceedings at Scopus](#) [Article at Scopus](#)

### **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 consumption evaluation of OMA vs. NOMA for sustainable scheduling in 6G O-RAN**

**Latif, Aamir; Alam, Muhammad Mahtab; Elgarhy, Osama Mohamed Mostafa; Le Moullec, Yannick** 2024 International Wireless Communications and Mobile Computing (IWCMC) 2024

### **Energy efficiency and latency optimization for IoT URLLC and mMTC use cases**

**Elgarhy, Osama Mohamed Mostafa; Reggiani, Luca; Alam, Muhammad Mahtab; Zoha, Ahmed; Ahmad, Rizwan; Kuusik, Alar** IEEE Access / p. 23132-23148 <https://doi.org/10.1109/ACCESS.2024.3364349>

### **Energy efficiency evaluation of linear transmitters for 5G NR wireless waveforms**

**Biyabani, Sara R.; Khan, Rida; Alam, Muhammad Mahtab; Biyabani, A. Ahmed; McCune, Earl** IEEE transactions on green communications and networking 2019 / p. 446 - 454 : ill <https://doi.org/10.1109/TGCN.2019.2902179> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Energy efficiency for bisection based power allocation with proportional fairness in relay-assisted LTE-A downlink system [Online resource]**

**Hassan, Hammad; Ahmed, Ifran; Alam, Muhammad Mahtab** BEC 2018 : 2018 16th Biennial Baltic Electronics Conference (BEC) : proceedings of the 16th Biennial Baltic Electronics Conference, October 8-10, 2018 2018 / 4 p. : ill <https://doi.org/10.1109/BEC.2018.8600970>

### **Energy-efficient distributed leader selection algorithm for energy-constrained wireless sensor networks**

**Ulp, Sander; Le Moullec, Yannick; Alam, Muhammad Mahtab** IEEE Access 2019 / p. 4410-4421 : ill <https://doi.org/10.1109/ACCESS.2018.2888551> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Enhanced decision mechanism for RAN subslicing in management closed control loop**

**Kulmar, Marika; Mürsepp, Ivo; Alam, Muhammad Mahtab** 2023 Eighth International Conference on Fog and Mobile Edge Computing (FMEC) 2023 / p. 175-181 : ill <https://doi.org/10.1109/FMEC59375.2023.10306223>

### **Enhanced IoT-based end-to-end emergency and disaster relief system**

**Ben Arbia, Dhafer; Alam, Muhammad Mahtab; Kadri, Abdullah; Ben Hamida, Elyes; Attia, Rabah** Journal of sensor and actuator networks 2017 / art. 19, p. 1-18 : ill <http://dx.doi.org/10.3390/jsan6030019>

### **Estimating UWB positioning integrity based on ranging residuals**

**Tommingas, Mihkel; Ulp, Sander; Alam, Muhammad Mahtab; Mürsepp, Ivo; Laadung, Taavi** 2023 24th International Conference on Applied Electromagnetics and Communications (ICECOM) 2023 / 5 p <https://doi.org/10.1109/ICECOM58258.2023.10367954>

### **ETSI SmartBAN architecture: The global vision for smart body area networks**

**Hamalainen, Matti; Mucchi, Lorenzo; Girod-Genet, Marc; Paso, Tuomas; Farserotu, John; Tanaka, Hirokazu; Anzai, Daisuke; Pierucci, Laura; Khan, Rida; Alam, Muhammad Mahtab** IEEE Access 2020 / art. 9167215, p. 150611-150625 <https://doi.org/10.1109/ACCESS.2020.3016705> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Evaluation of low power wide area network technologies for smart urban drainage systems**

**Malik, Hassan; Kändler, Nils; Alam, Muhammad Mahtab; Annus, Ivar; Le Moullec, Yannick; Kuusik, Alar** 2018 IEEE : International Conference on Environmental Engineering, March 12-14, 2018 Milan Italy : conference proceedings 2018 / 5 p. : ill <https://doi.org/10.1109/EE1.2018.8385262>

### **Evaluation of VoIP QoS performance in wireless mesh networks**

**Meeran, Mohammad Tariq; Annus, Paul; Alam, Muhammad Mahtab; Le Moullec, Yannick** Information 2017 / art. 88, p. 1-26 : ill <https://doi.org/10.3390/info8030088>

### **Experimental Characterization of Connectivity for ProSe Direct Discovery in Emergency Scenarios for 6G**

**Masood, Ali; Alam, Muhammad Mahtab; Moullec, Yannick Le** 2023 IEEE Wireless Communications and Networking Conference (WCNC) 2023 / p. 1-6 <https://doi.org/10.1109/WCNC55385.2023.10118649>

### **Experimental characterization of ProSe direct discovery for emergency scenarios**

**Masood, Ali; Le Moullec, Yannick; Alam, Muhammad Mahtab** 2021 IEEE 7th World Forum on Internet of Things (WF-IoT), 14 June 2021 - 31 July 2021, New Orleans, LA, USA : proceedings 2021 / p. 891-896 <https://doi.org/10.1109/WF-IoT51360.2021.9595305>

### **Fast and fair computation offloading management in a swarm of drones using a rating-based federated learning approach**

**Rahbari, Dadmehr; Alam, Muhammad Mahtab; Le Moullec, Yannick; Jenihhin, Maksim** IEEE Access 2021 / p. 113832-113849 <https://doi.org/10.1109/ACCESS.2021.3104117> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **FedBranched : leveraging federated learning for anomaly-aware load forecasting in energy networks**

Manzoor, Habib Ullah; Khan, Ahsan Raza; Flynn, David; **Alam, Muhammad Mahtab**; Akram, Muhammad; Imran, Muhammad Ali; Zoha, Ahmed Sensors 2023 / art. 3570 <https://doi.org/10.3390/s23073570> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **5G as an enabler of connected-and-automated mobility in European cross-border corridors — a market assessment**

Rizopoulos, Dimitrios; Laskari, Marina; Kouloubis, Gerasimos; Fergadiotou, Ioanna; Durkin, Patrick; **Körbe Kaare, Kati**; **Alam, Muhammad Mahtab** Sustainability 2022 / art. 14411 <https://doi.org/10.3390/su142114411> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **5G testbed implementation and measurement campaign for ground and aerial coverage**

**Fjodorov, Aleksei**; **Masood, Ali**; **Alam, Muhammad Mahtab**; Päränd, Sven 2022 18th Biennial Baltic Electronics Conference (BEC) 2022 / 6 p. <https://doi.org/10.1109/BEC56180.2022.9935602>

### **A flexible enhanced throughput and reduced overhead (FETRO) MAC protocol for ETSI SmartBAN**

**Khan, Rida**; **Alam, Muhammad Mahtab**; Guizani, Mohsen IEEE Transactions on Mobile Computing 2022 / p. 2671-2686 : ill <https://doi.org/10.1109/TMC.2020.3047596> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Heuristic radio access network subslicing with user clustering and bandwidth subpartitioning**

**Kulmar, Marika**; **Müürsepp, Ivo**; **Alam, Muhammad Mahtab** Sensors 2023 / art. 4613 : ill <https://doi.org/10.3390/s23104613> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **The Impact of RAN slice bandwidth subpartitioning on slice performance**

**Kulmar, Marika**; **Müürsepp, Ivo**; **Alam, Muhammad Mahtab** 2022 International Wireless Communications and Mobile Computing (IWCMC) 2022 / p. 419-424 <https://doi.org/10.1109/IWCMC55113.2022.9825262>

### **Implementation and benchmarking of a novel routing protocol for tactical mobile ad-hoc networks**

Ben Arbia, Dhafer; **Alam, Muhammad Mahtab**; Kadri, Abdullah; Attia, Rabah; Ben Hamida, Elyes 2016 IEEE 12th International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob) : 17-19 October 2016, New York, NY, USA 2016 / p. 118-125 : ill <https://doi.org/10.1109/WiMOB.2016.7763188>

### **Implementation and demonstration of a device-to-device communication system for emergency and critical scenarios = Seadmetevahelise sidesüsteemi rakendamise ja demonstreerimine hädaolukorra ja kriitiliste juhtumite jaoks**

**Masood, Ali** 2022 <https://doi.org/10.23658/taltech.30/2022> <https://digikogu.taltech.ee/et/Item/e1879ff7-ee31-4a7b-aa26-01bd973f889f> [https://www.ester.ee/record=b5502340\\*est](https://www.ester.ee/record=b5502340*est)

### **Inertial and positioning sensors fusion for indirect location tracking in warehouse inventory management**

**Fjodorov, Aleksei**; Ulp, Sander; **Alam, Muhammad Mahtab**; **Kuusik, Alar** 2023 International Conference on Control, Automation and Diagnosis (ICCAD) 2023 / p. 1-7 <https://doi.org/10.1109/ICCAD57653.2023.10152404>

### **Inter O-DUs coordination for scheduling of massive users in O-RAN**

**Latif, Aamir**; **Alam, Muhammad Mahtab**; **Le Moullec, Yannick** 2023 Joint European Conference on Networks and Communications & 6G Summit (EuCNC/6G Summit) 2023 / p. 6 <https://doi.org/10.1109/EuCNC/6GSummit58263.2023.10188234>

### **Inter-cell interference reduction scheme for uplink transmission in NB-IoT Systems**

**Mwakwata, Collins Burton**; **Elgarhy, Osama Mohamed Mostafa**; **Le Moullec, Yannick**; **Alam, Muhammad Mahtab**; **Päränd, Sven**; **Annus, Ivar** IWCMC 2021 Wireless Sensors & IoT: 2021 International Wireless Communications and Mobile Computing (IWCMC), Harbin, China, June 28 - July 2, 2021 2021 / p. 400-405 <https://doi.org/10.1109/IWCMC51323.2021.9498970>

### **Interference and priority aware coexistence (IPC) algorithm for link scheduling in IEEE 802.15.6 based WBANs**

Khan, Fawad Nawaz; Ahmad, Rizwan; Ahmed, Waqas; **Alam, Muhammad Mahtab**; Driberg, Micheal IEEE Access 2019 / art. 8910561, p. 168736–168751 : ill [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Interference-aware radio resource allocation for 5G ultra-reliable low-latency communication**

**Malik, Hassan**; **Alam, Muhammad Mahtab**; **Le Moullec, Yannick**; Ni, Qiang 2018 IEEE Globecom Workshops (GC Wkshps) : proceedings 2018 / p. <https://doi.org/10.1109/GLOCOMW.2018.8644301>

### **Internet of drones-enabled Smart Cities**

**Sharma, Navuday**; Magarini, Maurizio; **Alam, Muhammad Mahtab** IoT Architectures, Models, and Platforms for Smart City Applications 2020 / p. 107-133 <https://doi.org/10.4018/978-1-7998-1253-1.ch006>

### **Jamming of UAV remote control systems using software defined radio**

Pärin, Karel; **Alam, Muhammad Mahtab**; **Le Moullec, Yannick** 2018 International Conference on Military Communications and Information Systems (ICMCIS), 22-23 May 2018 : proceedings 2018 / p. 173-178 <http://dx.doi.org/10.1109/ICMCIS.2018.8398711>

**Joint PHY-MAC realistic performance evaluation of body-to-body communication in IEEE 802.15.6 and SmartBAN**  
**Khan, Rida; Alam, Muhammad Mahtab** The 12th International Symposium on Medical Information and Communication Technology : ISMICT 2018, 26-28 March 2018, University of Technology Sydney 2018 / 6 p.: ill <http://ismict2018.org/images/Docs-2017/ISMICT-2018-Program---Final.pdf> <http://dx.doi.org/10.1109/ISMICT.2018.8573715>

**Latest research trends in gait analysis using wearable sensors and machine learning: A systematic review**  
**Saboor, Abdul; Kask, Triin; Kuusik, Alar; Alam, Muhammad Mahtab; Le Moullec, Yannick** IEEE Access 2020 / art. 3022818, p. 167830–167864 <https://doi.org/10.1109/ACCESS.2020.3022818> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**A machine learning approach to achieving energy efficiency in relay-assisted LTE-a downlink system**  
Hassan, Hammad; Ahmed, Ifran; Ahmad, Rizwan; Khammari, Hedi; Bhatti, Ghulam; Ahmed, Waqas; **Alam, Muhammad Mahtab** Sensors 2019 / art. 3461, 25 p. : ill <https://doi.org/10.3390/s19163461> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Machine learning meets communication networks : current trends and future challenges**  
Ahmad, Ijaz; Shahabuddin, Shariar; Malik, Hassan; Leppänen, Teemu; Loven, Lauri; Anttonen, Antti; Sodhro, Ali Hassan; **Alam, Muhammad Mahtab**; Juntti, Markku; Ylä-Jääski, Antti IEEE Access 2020 / art. 9274307, p. 223418–223460  
<https://doi.org/10.1109/ACCESS.2020.3041765> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Machine learning techniques for wireless-powered ambient backscatter communications : enabling intelligent iot networks in 6g era**  
Jameel, Furqan; **Sharma, Navuday**; Khan, Muhammad Awais; Khan, Imran; **Alam, Muhammad Mahtab**; Alam, Muhammad Mahtab; Mavromoustakis, Constandinos X. Internet of Things / 2020 [https://doi.org/10.1007/978-3-030-44907-0\\_8](https://doi.org/10.1007/978-3-030-44907-0_8) [Article collection](#) [metrics at Scopus](#) [Article at Scopus](#)

**Management closed control loop automation for improved RAN slice performance by subslicing**  
**Kulmar, Marika; Alam, Muhammad Mahtab; Mürsepp, Ivo** IEEE Access 2024 / p. 103082–103095  
<https://doi.org/10.1109/ACCESS.2024.3433475>

**Management closed control loop automation for improved RAN slice performance by subslicing : preprint**  
**Kulmar, Marika; Alam, Muhammad Mahtab; Mürsepp, Ivo** techrxiv.org 2023 / 18 p. : ill  
<https://doi.org/10.36227/techrxiv.170290948.88447519/v1>

**Managing critical nodes in UAV assisted disaster networks**  
Hassan, Ali; Ahmad, Rizwan; Ahmed, Waqas; Magarini, Maurizio; **Alam, Muhammad Mahtab** 2020 17th Biennial Baltic electronics conference, Tallinn, Estonia, October 6-8, 2020 : proceedings 2021 / 6 p. : ill <https://doi.org/10.1109/BEC49624.2020.9276993>

**Matrix Profile based anomaly detection in streaming gait data for fall prevention**  
Gerazov, Branislav; Hadjieva, Elena; **Krivošei, Andrei; Sanchez, Fiorella Ines Soto; Rostovski, Jakob; Kuusik, Alar; Alam, Muhammad Mahtab** 2023 30th International Conference on Systems, Signals and Image Processing (IWSSIP) 2023 / p. 1-5  
<https://doi.org/10.1109/IWSSIP58668.2023.10180243>

**Monitoring and control of smart urban drainage systems using NB-IoT cellular sensor networks**  
**Roosipuu, Priit; Annus, Ivar; Kuusik, Alar; Kändler, Nils; Alam, Muhammad Mahtab** Water science & technology Water science and technology 2023 / p. 339–354 <https://doi.org/10.2166/wst.2023.222> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**A multi-armed bandit solver method for adaptive power allocation in device-to-device communication**  
**Khan, Muhidul Islam; Alam, Muhammad Mahtab; Le Moullec, Yannick** Procedia computer science 2018 / p. 1069–1076  
<https://doi.org/10.1016/j.procs.2018.04.155> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

**Narrowband internet of things (NB-IoT) : from physical (PHY) and media access control (MAC) layers perspectives**  
**Mwakwata, Collins Burton; Malik, Hassan; Alam, Muhammad Mahtab; Le Moullec, Yannick; Päränd, Sven; Mumtaz, Shahid** Sensors 2019 / art. 2613, 34 p.: ill <https://doi.org/10.3390/s19112613> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Narrowband Internet of Things (NB-IoT) : from physical (PHY) and Media Access Control (MAC) layers perspectives : [an article in collection]**  
**Mwakwata, Collins Burton; Malik, Hassan; Alam, Muhammad Mahtab; Le Moullec, Yannick; Päränd, Sven; Mumtaz, Shahid** Internet of things and sensors networks in 5G wireless communications 2020 / p. 39–72 : ill <https://doi.org/10.3390/books978-3-03928-149-7> <https://doi.org/10.3390/s19112613>

**Narrowband internet of things (NB-IoT) : from radio network coverage to device energy consumption modeling and energy-efficient application = Kitsaribaline asjade internet (NB-IoT) : raadiovõrgu katvusest seadme energiatarbe modelleerimise ja energiasäästliku rakenduseni**  
**Khan, Sikandar Muhammad Zulqarnain** 2022 [https://www.ester.ee/record=b5491661\\*est](https://www.ester.ee/record=b5491661*est) <https://diqikoqu.taltech.ee/et/Item/8244be00->

### **Narrowband internet of things (NBIIoT) for industrial automation**

**Malik, Hassan; Alam, Muhammad Mahtab; Kuusik, Alar; Le Moullec, Yannick;** Päränd, Sven Wireless automation as an enabler for the next industrial revolution 2020 / p. 65-87 <https://doi.org/10.1002/9781119552635.ch4>

### **NarrowBand-IoT performance analysis for healthcare applications**

**Malik, Hassan; Alam, Muhammad Mahtab; Le Moullec, Yannick; Kuusik, Alar** Procedia computer science 2018 / p. 1077–1083 <https://doi.org/10.1016/j.procs.2018.04.156> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

### **An NB-IoT based edge-of-things framework for energy-efficient image transfer**

**Khan, Sikandar Muhammad Zulqarnain; Le Moullec, Yannick; Alam, Muhammad Mahtab** Sensors 2021 / art. 5929, 21 p. : ill <https://doi.org/10.3390/s21175929> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **NB-IoT based visual smart waste management system**

Zulqarnain Khan, Sikandar; **Hein, Haigo; Alam, Muhammad Mahtab; Le Moullec, Yannick;** Päränd, Sven 2022 18th Biennial Baltic Electronics Conference (BEC) 2022 / 6 p. : ill <https://doi.org/10.1109/BEC56180.2022.9935601>

### **NB-IoT network field trial : indoor, outdoor and underground coverage campaign**

**Malik, Hassan; Khan, Sikandar Muhammad Zulqarnain; Sarmiento, Jeffrey Leonel Redondo; Kuusik, Alar; Alam, Muhammad Mahtab; Le Moullec, Yannick; Päränd, Sven** IWCMC 2019 : 15th International Wireless Communications & Mobile Computing Conference (IWCMC), June 24–28, 2019, Tangier, Morocco 2019 / p. 537-542 : ill <https://doi.org/10.1109/IWCMC.2019.8766568>

### **NB-IoT-võrgu uuring : katvus sise-, välis- ja maa-alustes tingimustes**

**Malik, Hassan; Khan, Sikandar Muhammad Zulqarnain; Sarimento, Jeffrey Leonel Redondo; Mwakwata, Collins Burton; Alam, Muhammad Mahtab; Le Menach, Yvonnick;** Päränd, Sven Elektriala 2019 / lk. 14-18 : ill [http://www.ester.ee/record=b1240496\\*est](http://www.ester.ee/record=b1240496*est)

### **Network coding and hierarchical modulation for energy efficient cooperative WBAN**

Waheed, Maham; Talha, Sadaf; Ahmad, Rizwan; Kiani, Adnan Khalid; **Alam, Muhammad Mahtab;** Ahmed, Waqas International journal of distributed systems and technologies 2019 / p. 90-111 <https://doi.org/10.4018/IJDST.2019070106> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Network coding for energy efficient transmission in Wireless Body Area Networks**

Talha, Sadaf; Rizwan, Ahmad; Adnan, K. Kiani; **Alam, Muhammad Mahtab** Procedia computer science 2017 / p. 435-440 : ill <https://doi.org/10.1016/j.procs.2017.08.285>

### **Non-Line of Sight detection based on 5G signal strength- and quality measurements and its impact on mobile positioning accuracy**

**Mürsepp, Ivo; Fjodorov, Aleksei; Alam, Muhammad Mahtab** 2024 International Wireless Communications and Mobile Computing (IWCMC) 2024 / p. 256-261 <https://doi.org/10.1109/IWCMC61514.2024.10592586>

### **Novel active-passive two-way ranging protocols for UWB positioning systems**

**Laadung, Taavi; Ulp, Sander; Alam, Muhammad Mahtab; Le Moullec, Yannick** IEEE sensors journal 2022 / p. 5223-5237 : ill <https://doi.org/10.1109/JSEN.2021.3125570> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **A novel multi-hop body-to-body routing protocol for disaster and emergency networks**

Ben Arbia, Dhafer; **Alam, Muhammad Mahtab;** Attia, Rabah; Ben Hamida, Elyes 2016 International Conference on Wireless Networks and Mobile Communications (WINCOM'2016) : October 26-29, 2016 Fez, Morocco 2016 / p. 1-7 : ill <https://doi.org/10.1109/WINCOM.2016.7777222>

### **Novel real-time in-step gait anomaly detection algorithms**

**Rostovski, Jakob; Krivošei, Andrei; Kuusik, Alar; Le Moullec, Yannick; Alam, Muhammad Mahtab** techrxiv.org 2024 <https://doi.org/10.36227/techrxiv.171173236.66440239/v1>

### **On coverage of critical nodes in UAV-assisted emergency networks**

Waheed, Maham; Ahmad, Rizwan; Ahmed, Waqas; **Alam, Muhammad Mahtab;** Magarini, Maurizio Sensors 2023 / art. 1586 <https://doi.org/10.3390/s23031586> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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

Saboor, Abdul; Ahmad, Rizwan; Ahmed, Waqas; Kiani, Adnan Khalid; **Moullec, Yannick Le; Alam, Muhammad Mahtab** IEEE Sensors Journal 2019 / p. 8543 - 8555 <https://doi.org/10.1109/JSEN.2018.2883786> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Optimal sliding window selection in non-overlapping backoff algorithm for IEEE 802.15.6 WBAN**

Saboor, Abdul; Ahmad, Rizwan; Ahmed, Waqas; **Alam, Muhammad Mahtab;** Radwan, Ayman IEEE communications letters 2024 /

### **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>

### **Performance evaluation of 5G NR sidelink for V2X scenarios**

**Elgarhy, Osama Mohamed Mostafa**; Yener, Onur; **Alam, Muhammad Mahtab** 2022 18th Biennial Baltic Electronics Conference (BEC) : proceedings 2022 / 5 p <https://doi.org/10.1109/BEC56180.2022.9935591>

### **Performance evaluation of 5G-NR positioning accuracy using time difference of arrival method**

**Mürsepp, Ivo**; **Kulmar, Marika**; **Elgarhy, Osama Mohamed Mostafa**; **Alam, Muhammad Mahtab**; Chen, Tao; Horsmanheimo, Seppo; Scholliers, Johan 2021 IEEE International Mediterranean Conference on Communications and Networking (MeditCom) : Athens, Greece, 7-10 Sept. 2021 2021 / p. 494-499 : ill <https://doi.org/10.1109/MeditCom49071.2021.9647652>

### **Performance evaluation of UWB active-passive two-way ranging distance estimation matrix weighting methods**

**Laadung, Taavi**; Ulp, Sander; **Alam, Muhammad Mahtab**; **Le Moullec, Yannick** WiP Proceedings of the Twelfth International Conference on Indoor Positioning and Indoor Navigation 2022 / p. paper29 <https://ceur-ws.org/Vol-3248/paper29.pdf> [Conference proceedings at Scopus](#) [Article at Scopus](#)

### **Power aware ON/OFF switching schemes for energy efficient phantom cellular networks**

Anjum, M Naveed; Ahmad, Rizwan; Hassan, Ali; Ahmed, Waqas; **Alam, Muhammad Mahtab** 2022 18th Biennial Baltic Electronics Conference (BEC) 2022 / 6 p <https://doi.org/10.1109/BEC56180.2022.9935605>

### **Predictive machine learning analysis for reliable D2D discovery in 6G critical communications**

**Masood, Ali**; **Alam, Muhammad Mahtab**; **Le Moullec, Yannick** 2023 Eighth International Conference on Fog and Mobile Edge Computing (FMEC) 2023 / p. 58-63 <https://doi.org/10.1109/FMEC59375.2023.10306113>

### **Preface**

**Alam, Muhammad Mahtab**; Hämäläinen, Matti; Mucchi, Lorenzo; Niazi, Imran Khan; **Le Moullec, Yannick** Body Area Networks. Smart IoT and Big Data for Intelligent Health : 15th EAI International Conference, BODYNETS 2020, Tallinn, Estonia, October 21, 2020 : proceedings 2020 / p. V <https://link.springer.com/content/pdf/bfm:978-3-030-64991-3/1?pdf=chapter%20toc> <https://doi.org/10.1007/978-3-030-64991-3> [Conference proceeding](#) [Article at Scopus](#)

### **A primer on public safety communication in the context of terror attacks: the NATO SPS “COUNTER-TERROR” project**

**Alam, Muhammad Mahtab**; **Le Moullec, Yannick**; Ahmad, Rizwan; Magarini, Maurizio; Reggiani, Luca Advanced Technologies for Security Applications : Proceedings of the NATO Science for Peace and Security 'Cluster Workshop on Advanced Technologies', 17-18 September 2019, Leuven, Belgium 2020 / p. 19-34 [https://doi.org/10.1007/978-94-024-2021-0\\_3](https://doi.org/10.1007/978-94-024-2021-0_3) [Article collection metrics at Scopus](#) [Article at Scopus](#)

### **ProSe direct discovery : experimental characterization and context-aware heuristic approach to extend public safety networks lifetime**

**Masood, Ali**; **Alam, Muhammad Mahtab**; **Le Moullec, Yannick**; Reggiani, Luca; Scazzoli, Davide; Magarini, Maurizio; Ahmad, Rizwan IEEE Access 2021 / p. 130055 –130071 <https://doi.org/10.1109/ACCESS.2021.3112751> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Q-Learning based joint energy-spectral efficiency optimization in multi-hop device-to-device communication**

**Khan, Muhidul Islam**; Reggiani, Luca; **Alam, Muhammad Mahtab**; **Le Moullec, Yannick**; **Sharma, Navuday**; Yaacoub, Elias; Magarini, Maurizio Sensors 2020 / art. 6692, 23 p.: ill <https://doi.org/10.3390/s20226692> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Radio access network subslicing in closed control loop for improved slice performance management = Raadiojuurdepääsu võrguviilu alamviilutamise suletud juhtimisahelas**

**Kulmar, Marika** 2024 <https://doi.org/10.23658/taltech.2/2024> <https://digikogu.taltech.ee/et/item/38b22df5-0884-4c20-941e-2562491879e5> [https://www.ester.ee/record=b5649442\\*est](https://www.ester.ee/record=b5649442*est)

### **Radio resource management in NB-IoT systems : empowered by interference prediction and flexible duplexing**

**Malik, Hassan**; **Alam, Muhammad Mahtab**; Pervaiz, Haris; **Moullec, Yannick Le**; Al-Dulaimi, Anwer; Päränd, Sven; Reggiani, Luca IEEE Network 2020 / Art. nr. 8839971 <https://doi.org/10.1109/MNET.001.1900087> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Radio resource management scheme in NB-IoT systems**

**Malik, Hassan**; Pervaiz, Haris; **Alam, Muhammad Mahtab**; **Le Moullec, Yannick**; **Kuusik, Alar**; Imran, Muhammad Ali IEEE Access 2018 / p. 15051-15064 : ill <https://doi.org/10.1109/ACCESS.2018.2812299> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Rate-latency optimization for NB-IoT with adaptive resource unit configuration in uplink transmission**

Elgarhy, Osama Mohamed Mostafa; **Reggiani, Luca; Malik, Hassan; Alam, Muhammad Mahtab**; Imran, Muhammad Ali IEEE Systems Journal 2021 / p. 265 - 276 <https://doi.org/10.1109/JSYST.2020.2991073> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Real-time gait anomaly detection using 1D-CNN and LSTM**

**Rostovski, Jakob; Ahmadilivani, Mohammad Hasan; Krivošei, Andrei; Kuusik, Alar; Alam, Muhammad Mahtab** Digital Health and Wireless Solutions : First Nordic Conference, NCDHWS 2024, Oulu, Finland, May 7–8, 2024 : Proceedings, Part II 2024 / p. 260-278 [https://doi.org/10.1007/978-3-031-59091-7\\_17](https://doi.org/10.1007/978-3-031-59091-7_17)

### **Real-time gait anomaly detection using SVM time series classification**

**Rostovski, Jakob; Krivošei, Andrei; Kuusik, Alar; Alam, Muhammad Mahtab; Ahmadov, Ulvi** 2023 International Wireless Communications and Mobile Computing (IWCMC) 2023 / p. 1389-1394 <https://doi.org/10.1109/IWCMC58020.2023.10182666>

### **A reinforcement learning routing protocol for UAV aided public safety networks**

Minhas, Hassan Ishtiaq; Ahmad, Rizwan; Ahmed, Waqas; Waheed, Maham; **Alam, Muhammad Mahtab**; Gul, Sufi Tabassum Sensors 2021 / Art. nr. 4121 <https://doi.org/10.3390/s21124121> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Reliability-critical computation offloading in UAV swarms**

**Rahbari, Dadmehr; Ahmed, Faisal; Jenihhin, Maksim; Alam, Muhammad Mahtab; Le Moullec, Yannick** IEEE Systems Journal 2024 / 12 p <https://doi.org/10.1109/JSYST.2024.3432449>

### **Scheduling in radio resource management for massive machine-type communications = Raadioressursside planeerimine massiivse masin-masin tüüpi kommunikatsioonikorral**

**Mwakwata, Collins Burton** 2022 <https://doi.org/10.23658/taltech.32/2022> <https://digikogu.taltech.ee/et/Item/e62dd1a5-5791-487b-b5f6-0d983f37a7d5> [https://www.ester.ee/record=b5502362\\*est](https://www.ester.ee/record=b5502362*est)

### **Service placement and migration algorithm utilizing precise positioning for connected and automated vehicles**

**Elgarhy, Osama Mohamed Mostafa; Alam, Muhammad Mahtab; Reggiani, Luca; Azeem, Muhammad Moazam** 2023 IEEE Conference on Standards for Communications and Networking (CSCN) 2023 / p. 183-188 <https://doi.org/10.1109/CSCN60443.2023.10453210>

### **SmartBAN performance evaluation for diverse applications**

Khan, Rida; **Alam, Muhammad Mahtab** Body Area Networks : Smart IoT and Big Data for Intelligent Health Management. 14th EAI International Conference, BODYNETS 2019, Florence, Italy, October 2-3, 2019 : Proceedings 2019 / p. 239-251 [https://doi.org/10.1007/978-3-030-34833-5\\_19](https://doi.org/10.1007/978-3-030-34833-5_19) [Conference proceeding at Scopus](#) [Article at Scopus](#)

### **A survey on the roles of communication technologies in IoT-based personalized healthcare applications**

**Alam, Muhammad Mahtab; Malik, Hassan; Khan, Muhidul Islam; Pardy, Tamas; Kuusik, Alar; Le Moullec, Yannick** IEEE Access 2018 / p. 36611-36631 : ill <https://doi.org/10.1109/ACCESS.2018.2853148> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Surveying pervasive public safety communication technologies in the context of terrorist attacks**

**Masood, Ali; Scazzoli, Davide; Sharma, Navuday; Le Moullec, Yannick; Ahmad, Rizwan; Reggiani, Luca; Magarini, Maurizio; Alam, Muhammad Mahtab** Physical communication 2020 / art. 101109, <https://doi.org/10.1016/j.phycom.2020.101109> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Sustainable scheduling for ultra massive machine type communication using NOMA in 6G O-RAN**

**Latif, Aamir; Alam, Muhammad Mahtab; Elgarhy, Osama Mohamed Mostafa; Le Moullec, Yannick** Digital Proceedings of the European Conference on Networks and Communications & 6G Summit 2024 (EuCNC 2024) 2024

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

**Khan, Rida** 2021 [https://www.ester.ee/record=b5403571\\*est](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>

### **TalTech ootab logistikasektorilt koostööd**

Transport ja Logistika : infoleht 2020 / lk. 2 [https://www.ester.ee/record=b1975868\\*est](https://www.ester.ee/record=b1975868*est)

### **Task classification for optimal offloading and resource allocation in vehicular edge computing**

Mubashir, Memona; Ahmad, Rizwan; Saadat, Ahsan; Chaudhry, Saqib Rasool; Kiani, Adnan Khalid; **Alam, Muhammad Mahtab** 2023 Eighth International Conference on Fog and Mobile Edge Computing (FMEC) 2023 / p. 15-21 <https://doi.org/10.1109/FMEC59375.2023.10306155>

### **Teadlased selgitasid välja asjade interneti seadmete energiavajaduse**



### **Throughput and channel aware MAC scheduling for SmartBAN standard**

**Khan, Rida; Alam, Muhammad Mahtab;** Paso, Tuomas; Haapola, Jussi IEEE Access 2019 / p. 63133-63145 : ill <https://doi.org/10.1109/ACCESS.2019.2916159> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Throughput-aware cooperative reinforcement learning for adaptive resource allocation in device-to-device communication**

**Khan, Muhidul Islam; Alam, Muhammad Mahtab; Le Moullec, Yannick; Yaacoub, Elias** Future Internet 2017 / art. 72, p. 1-17 : ill <https://doi.org/10.3390/fi9040072>

### **Towards efficient wireless body area network using two-way relay cooperation**

Waheed, Maham; Ahmad, Rizwan; **Alam, Muhammad Mahtab** Sensors 2018 / art. 565, 23 p. : ill <https://doi.org/10.3390/s18020565> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **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](#)

### **UAV trajectory planning for disaster scenarios**

Javed, Sadaf; Hassan, Ali; Ahmad, Rizwan; Ahmed, Waqas; **Alam, Muhammad Mahtab;** Rodrigues, Joel J. P. C. Vehicular Communications 2023 / art. 100568, 12 p. : ill <https://doi.org/10.1016/j.vehcom.2022.100568> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **A Unique backoff algorithm in IEEE 802.15.6 WBAN**

Saboor, Abdul; Ahmad, Rizwan; Ahmed, Waqas; **Alam, Muhammad Mahtab** 2018 IEEE 88th Vehicular Technology Conference (VTC-Fall) : Chicago, IL, USA 27 - 30 August 2018 : proceedings 2018 / 5 p. : ill <https://doi.org/10.1109/VTCFall.2018.8690812> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

### **A unique backoff algorithm in IEEE 802.15.6 WBAN**

Saboor, Abdul; Ahmad, Rizwan; Ahmed, Waqas; **Alam, Muhammad Mahtab** The 88th IEEE Vehicular Technology Conference : Final Programme, 27-30 August 2018, Chicago, USA 2018 / p. 48 <http://www.ieeevtc.org/vtc2018fall/final-program.pdf>

### **UWB positioning integrity estimation using ranging residuals and ML augmented filtering**

**Tommingas, Mihkel; Alam, Muhammad Mahtab; Mürsepp, Ivo;** Ulp, Sander IEEE Journal of indoor and seamless positioning and navigation 2024 / p. 205-218 <https://doi.org/10.1109/JSPIN.2024.3418296>

### **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](#)

### **Wearable m-assessment system for neurological disease patients**

**Kuusik, Alar; Alam, Muhammad Mahtab; Kask, Triin; Gross-Paju, Katrin** Proceedings : IEEE 4th World Forum on Internet of Things 2018 / p. 201-206 : ill <https://doi.org/10.1109/WF-IoT.2018.8355165>

### **Wearable wireless sensor networks for emergency response in public safety networks**

**Alam, Muhammad Mahtab;** Ben Arbia, Dhafer; Ben Hamida, Elyes Wireless public safety networks 2 : a systematic approach 2016 / p. 63-94 : ill <https://doi.org/10.1016/B978-1-78548-052-2.50003-7>

### **5G tehnoloogia lükkab käima uued idufirmad ja aitab kaasa tööstuse digitaliseerimisele**

**Härrat, Karin** Mente et Manu 2019 / lk. 40-41 : fot [https://www.ester.ee/record=b1242496\\*est](https://www.ester.ee/record=b1242496*est) [https://www.ttu.ee/public/m/mente-et-manu/MM\\_04\\_2019/mobile/index.html](https://www.ttu.ee/public/m/mente-et-manu/MM_04_2019/mobile/index.html)

### **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](#)

### **Värske veri TTÜs**

**Alam, Muhammad Mahtab; Kolde, Kristjan; Kuivjõgi, Kaja; Lung, Marti; Parnell, Kevin Ellis; Preis, Sergei** Mente et Manu 2018 / lk. 47-49 : portr [https://ttu.ee/public/m/mente-et-manu/MM\\_02\\_2018/mobile/index.html#p=6](https://ttu.ee/public/m/mente-et-manu/MM_02_2018/mobile/index.html#p=6) [http://www.ester.ee/record=b1242496\\*est](http://www.ester.ee/record=b1242496*est) <http://dea.digar.ee/publication/AKmenteetmanu> [https://artiklid.elnet.ee/record=b2862662\\*est](https://artiklid.elnet.ee/record=b2862662*est)