

**Active-passive two-way ranging protocol for positioning systems = Aktiv-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](#)

**Dispersion map optimization for nonlinearity mitigation in two-span phase-sensitive amplifier links [Electronic resource]**

**Astra, Egon; Olsson, Samuel L. I.; Eliasson, Henrik; Laadung, Taavi; Andrekson, Peter Avo** ECOC 2016 : 42th European Conference on Optical Communication : September 18-22, 2016, Congress Center Düsseldorf (CCD), Germany : proceedings 2016 / p. 953-955 : ill. [DVD]

**Enhancing UWB and multi-sensor positioning with ML-based uncertainty estimation = Üililairiba ja mitme sensoriga positsioneerimissüsteemide täpsuse parandamine masinõppe meetodil**

**Tommingas, Mihkel** 2025 [https://www.ester.ee/record=b5748107\\*est](https://www.ester.ee/record=b5748107*est) <https://digikogu.taltech.ee/et/Item/7703d05c-98d7-48a6-939d-ab766de4d1c6> <https://doi.org/10.23658/taltech.35/2025>

**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>

**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](#)

**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](#)

**UWB and GNSS Sensor Fusion Using ML-Based Positioning Uncertainty Estimation**

**Tommingas, Mihkel; Laadung, Taavi; Varbla, Sander; Mürsepp, Ivo; Alam, Muhammad Mahtab** IEEE Open Journal of the Communications Society 2025 / p. 2177-2189 : ill <https://doi.org/10.1109/OJCOMS.2025.3554352>