

## PUBLICATIONS

- [j14] A. Yadav, A. Kumar, **Ethungshan Shitiri**, S. Kumar and H. -S. Cho, "Non-Data-Aided SNR Estimation for Molecular Communication Systems in Internet of Bio-Nano Things," in IEEE Internet of Things Journal, vol. 12, no. 1, pp. 595-604, 1 Jan.1, 2025, doi: 10.1109/JIOT.2024.3465495.
- [j13] **Ethungshan Shitiri** and H. -S. Cho, "An M-Ary Concentration-Shift Keying With Common Detection Thresholds for Multitransmitter Molecular Communication," in IEEE Internet of Things Journal, vol. 11, no. 10, pp. 17948-17959, 15 May15, 2024, doi: 10.1109/JIOT.2024.3359999
- [j12] Junho Cho, Faisal Ahmed, **Ethungshan Shitiri**, and Ho-Shin Cho, "Reinforcement Learning-Based Power Control for MACA-Based Underwater MAC Protocol," in IEEE Access, vol. 10, pp. 71044-71053, 05 July 2022. DOI: 10.1109/ACCESS.2022.3188705 (IF 3.9)
- [j11] Tania Islam, **Ethungshan Shitiri**, and Ho-Shin Cho, "In-Body Sequential Multidrug Delivery Scheme Using Molecular Communication," in IEEE Access, vol. 10, pp. 39975-39985, 12 April 2022. DOI: 10.1109/ACCESS.2022.3166945 (IF 3.9)
- [j10] **Ethungshan Shitiri**, H. Birkan Yilmaz and Ho-Shin Cho, "Probability Distribution of a Signal's Peak Time in a Molecular Diffusive Media," in IEEE Communications Letters, 27 September 2021. DOI: 10.1109/LCOMM.2021.3115724 (IF 4.1)
- [j9] Tania Islam, **Ethungshan Shitiri**, and Ho-Shin Cho, "A Molecular Communication-Based Simultaneous Targeted-Drug Delivery Scheme," IEEE Access, vol. 9, pp. 96658-96670, 05 July 2021. DOI: 10.1109/ACCESS.2021.3094892 (IF 3.9)
- [j8] **Ethungshan Shitiri** and Ho-Shin Cho, "A TDMA-Based Data Gathering Protocol for Molecular Communication via Diffusion-Based Nano-Sensor Networks", IEEE Sensors, June 2021. DOI: 10.1109/JSEN.2021.3091494 (IF 4.3)
- [j7] **Ethungshan Shitiri** and Ho-Shin Cho, "Timing Alignment in Molecular Communication-based Nanonetworks", in IEEE Communications Magazine, vol. 59, no. 5, pp. 54-60, May 2021 (3<sup>rd</sup> June online). DOI: 10.1109/MCOM.001.2000959 (IF 11.9)
- [j6] Tania Islam, **Ethungshan Shitiri**, and Ho-Shin Cho, "A Simultaneous Drug Release Scheme for Targeted Drug Delivery Using Molecular Communications", IEEE Acess, vol. 8, pp. 91770-91778, 14 May 2020. DOI: 10.1109/ACCESS.2020.2994493 (IF 3.9)
- [j5] **Ethungshan Shitiri**, H. Birkan Yilmaz, and Ho-Shin Cho, "A Time-Slotted Molecular Communication (TS-MOC): Framework and Time-Slot Errors," IEEE Access, vol. 7, pp. 78146 - 78158, 12 June 2019. DOI: 10.1109/ACCESS.2019.2922294 (IF 3.9)
- [j4] **Ethungshan Shitiri**, Athanasios V. Vasilakos, Ho-Shin Cho, "Biological Oscillators in Nanonetworks - Opportunities and Challenges," MDPI Sensors 18(5): 1544, 13 May 2018. <https://doi.org/10.3390/s18051544> (IF 3.9)
- [j3] Junho Cho, **Ethungshan Shitiri**, Ho-Shin Cho, "Network Allocation Vector (NAV) Optimization for Underwater Handshaking-Based Protocols," MDPI Sensors 17(1): 32, 24 December 2016. <https://doi.org/10.3390/s17010032> (IF 3.9)
- [j2] **Ethungshan Shitiri**, In-Seop Park, Ho-Shin Cho, "OrMAC: A Hybrid MAC Protocol Using Orthogonal Codes for Channel Access in M2M Networks," MDPI Sensors 17(9): 2138, 17 September 2017. <https://doi.org/10.3390/s17092138> (IF 3.9)

- [j1] Ethungshan Shitiri and Ho-Shin Cho, "A Biochemical Oscillator Using Excitatory Molecules for Nanonetworks," IEEE Transactions on NanoBioscience, vol. 15, no. 7, pp. 765-774, 18 October 2016. DOI: 10.1109/TNB.2016.2616539 (IF 3.9)

## BOOK CHAPTER

- [b1] Ethungshan Shitiri and Ho-Shin Cho, *Synchronization for Molecular Communications and Nanonetworking*, Nanoscale Networking and Communications Handbook, CRC Press, July 2019

## CONFERENCE PRESENTATIONS

### INTERNATIONAL

- [c16] Mika Leo Hube, Filip Lemic, Ethungshan Shitiri, Gerard Calvo Bartra, Sergi Abadal, and Xavier Costa Pérez. 2025. "Set Transformer Architectures and Synthetic Data Generation for Flow-Guided Nanoscale Localization". In Proceedings of the 12th Annual ACM International Conference on Nanoscale Computing and Communication (NANOCOM '25).
- [c15] Ethungshan Shitiri, Eneko Ibarluzea Sòria, Satvika Santhoshi Marakala, Filip Lemic, Sergi Abadal, and Eduard Alarcón. 2024. "Intra-Body Nanonetworks for In Vivo Biomarker Detection in Capillaries". In Proceedings of the 11th Annual ACM International Conference on Nanoscale Computing and Communication (NANOCOM '24).
- [c14] Ethungshan Shitiri, Akarsh Yadav, Sergi Abadal, Eduard Alarcón, and Ho-Shin Cho. 2024. "Enhanced Drug Delivery via Localization-Enabled Relaying in Molecular Communication Nanonetworks", In Proceedings of the 11th Annual ACM International Conference on Nanoscale Computing and Communication (NANOCOM '24).
- [c13] Faisal Ahmed, Ethungshan Shitiri, and Ho-Shin Cho, "Reinforcement Learning-Based MAC for Reconfigurable Intelligent Surface-Assisted Wireless Sensor Networks," 13<sup>th</sup> International Conference on Ubiquitous and Future Networks, ICUFN, Barcelona, Spain, July 2022.
- [c12] Junho Cho, Faisal Ahmed, Ethungshan Shitiri, and Ho-Shin Cho, "Power Control for MACA-based Underwater MAC Protocol: A Q-Learning Approach," 2021 IEEE Region 10 Symposium (TENSYMP), August 2021.
- [c11] Ethungshan Shitiri, H. Birkan Yilmaz, and Ho-Shin Cho, "Analysis of Akaike's Information Criterion for Propagation Delays in a Free-Diffusion Channel", 4<sup>th</sup> Workshop on Molecular Communications (MolCom), Linz, Austria, April 2019.
- [c10] Ethungshan Shitiri and Ho-Shin Cho, "Achieving in-phase synchronization in a diffusion-based nanonetwork with unknown propagation delay", 4<sup>th</sup> International Conference on Nanoscale Computing and Communication (NanoCom), Washington DC, USA, September 2017.
- [c9] In-Seop Park, Ethungshan Shitiri, Ho-Shin Cho, "An orthogonal coded hybrid MAC protocol with received power based prioritization for M2M networks", 8<sup>th</sup> International Conference on Ubiquitous and Future Networks, ICUFN, Vienna, Austria, July 2016.

### DOMESTIC

- [c8] **Ethungshan Shitiri** and Ho-Shin Cho, “*Effects of Detection Threshold on Concentration Shift Keying for Molecular Communications with Multiple Transmitters*”, KICS Fall Conference, South Korea, 2021 ([Best Paper Award](#))
- [c7] Faisal Ahmed, **Ethungshan Shitiri**, and Ho-Shin Cho, “*On a Reconfigurable Intelligent Surface-aided Relay Network Architecture for Underwater Acoustic Sensor Networks*”, KICS Fall Conference, South Korea, 2021
- [c6] Tania Islam, **Ethungshan Shitiri**, Ho-Shin Cho, “*A Sequential Drug Release Scheme among Multiple Nanomachines*, KICS Fall Conference”, South Korea, 2021
- [c5] Tania Islam, **Ethungshan Shitiri**, and Ho-Shin Cho, “*Synchronization among Multiple Nanomachines for Simultaneous Targeted Drug Delivery*”, KICS (The Korean Institute of Communications and Information Sciences) Winter Conference, Jeongseon, South Korea (2019)
- [c4] **Ethungshan Shitiri** and Ho-Shin Cho, “*Impact of Propagation Delay and Nanomachine Position on the Synchronization Error Ratio*,” KICS Summer Conference, Jeju, South Korea (2017)
- [c3] **Ethungshan Shitiri** and Ho-Shin Cho, “*A low complexity synchronization scheme for nanonetworks*,” KICS Winter Conference, Jeongseon, South Korea (2017)
- [c2] **Ethungshan Shitiri** and Ho-Shin Cho, “*Synchronization using Excitatory Molecules in Nanonetworks*,” JCCI (The Joint Conference on Communications and Information), Sokcho, South Korea (2016)
- [c1] **Ethungshan Shitiri** and Ho-Shin Cho, “*Molecular Oscillator: A bio-inspired oscillator for Molecular Nanonetworks*,” KICS Summer Conference, Jeju, South Korea (2015)