

## IEEE Magazine Papers

### IEEE Magazine Papers – under review

**[M50]** B. Coeugnet, P.G. Madoery, J.A. Fraire, J.M. Finochietto, H. Yanikomeroglu, “**High-altitude ground stations: Challenges and opportunities in all-optical satellite networks**”, under review in *IEEE Aerospace and Electronic Systems Magazine*, 2024.

**[M49]** M. Salamathoghadasi, M. Ozturk, H. Yanikomeroglu, “**Integrating terrestrial and non-terrestrial networks for sustainable 6G operations: A latency-aware multi-tier cell-switching approach**”, under review in *IEEE Network Magazine*, 2024.

**[M48]** E. Erdogan, M. Elamassie, I. Altunbas, G. Karabulut Kurt, M. Uysal, H. Yanikomeroglu, “**A novel piecewise atmospheric attenuation model for free space optical links in vertical heterogeneous networks**”, under review in *IEEE Vehicular Technology Magazine*, 2024.

## IEEE Magazine Papers – 2025

[M47] A. Farajzadeh, A. Yadav, H. Yanikomeroglu, “**Federated learning in NTNs: Design, architecture, and challenges**”, *IEEE Communications Magazine*, 2024.

[M46] A. Alidadi Shamsabadi, A. Yadav, H. Yanikomeroglu, “**Interference management strategies in HAPS-enabled vHetNets in urban deployments?**”, *IEEE Communications Standards Magazine*, 2024.

[M45] F. Khennoufa, K. Abdellatif, H. Yanikomeroglu, M. Ozturk, T. Elganimi, F. Kara, K. Rabie, “**A Multi-layer non-terrestrial networks architecture for 6G and beyond under realistic conditions and with practical limitations**”, *IEEE Internet of Things Magazine*, 2025.

[M44] A. Alidadi Shamsabadi, A. Yadav, Y. Gadallah, H. Yanikomeroglu, “**Exploring the 6G potentials: Immersive, hyper reliable, and low-latency communication**”, *IEEE Vehicular Technology Magazine*, Mar 2025.

[M43] B. Ciloglu, G.B. Koc, A. Alidadi Shamsabadi, M. Ozturk, H. Yanikomeroglu, “**Strategic demand-planning in wireless networks: Can generative-AI save spectrum and energy?**”, *IEEE Communications Magazine*, 2025.

[M42] M.A. Jamshed, B. Haq, M.A. Mohsin, A. Nauman, H. Yanikomeroglu, “**Artificial intelligence, ambient backscatter communication and non-terrestrial networks: A 6G commixture**”, *IEEE Internet of Things Magazine*, March 2025.

[M41] E. Younesian, E. Fettes, P.G. Madoery, J. Hosek, H. Yanikomeroglu, “**Guardians of connectivity: Navigating and mitigating non-malicious disruptions in satellite networks**”, *IEEE Aerospace and Electronic Systems Magazine*, Mar 2025.

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**[M40]** B. Karaman, I. Basturk, S. Taskin, F. Kara, E. Zeydan, H. Yanikomeroglu, “Enhancing resiliency of integrated space-air-ground-sea networks with renewable energies: A use case after the Türkiye earthquake”, *IEEE Wireless Communications Magazine*, Dec 2024.

**[M39]** W. Wang, O. Abbasi, H. Yanikomeroglu, C. Liang, L. Tang, Q. Chen, “VHetNets for AI and AI for VHetNets: An anomaly detection case study for ubiquitous IoT”, *IEEE Network Magazine*, Nov 2024.

**[M38]** O. Abbasi, A. Yadav, H. Yanikomeroglu, N. Dao, G. Senarath, P. Zhu, “HAPS for 6G networks: Potential use cases, open challenges, and possible solutions”, *IEEE Wireless Communications Magazine*, June 2024.

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### IEEE Magazine Papers – 2023 (2/2)

**[M37]** H. Yu, Z. Hua, X. Miao, S. Wang, G. Pan, J. An, T. Svensson, H. Yanikomeroglu, “Computer vision-based joint space sensing and communication systems: Non-source, autonomy, and low latency”, *IEEE Wireless Communications Magazine*, Dec 2023.

**[M36]** S. Alfattani, W. Jaafar, H. Yanikomeroglu, A. Yongacoglu, “Multimode high-altitude platform stations (HAPS) for next generation wireless networks: Selection mechanism, benefits, and potential challenges”, *IEEE Vehicular Technology Magazine*, Sep 2023.

**[M35]** N. Cherif, W. Jaafar, E. Vinogradov, H. Yanikomeroglu, S. Pollin, A. Yongacoglu, “iTUAVs: Intermittently tethered UAVs for future wireless networks”, *IEEE Wireless Communications Magazine*, Aug 2023.

## IEEE Magazine Papers – 2023 (1/2)

**[M34]** C.E. Kement, F. Kaya, W. Jaafar, H. Yanikomeroglu, G. Senarath, N.-D. Dao, P. Zhu, “**Sustaining dynamic traffic in dense urban areas with high altitude platform stations (HAPS)**”, *IEEE Communications Magazine*, Jul 2023.

**[M33]** Z. Akusta Dagdeviren, V.K. Akram, O. Dagdeviren, B. Tavli, H. Yanikomeroglu, “***k*-Connectivity in wireless sensor networks: Overview and future research directions**”, *IEEE Network Magazine*, May/Jun 2023.

**[M32]** A.U. Chaudhry, G. Lamontagne, H. Yanikomeroglu, “**Laser inter-satellite link range in free-space optical satellite networks: Impact on latency**”, *IEEE Aerospace and Electronic Systems Magazine*, Apr 2023.

**[M31]** H. Alakoca, M. Namdar, S. Aldirmaz-Colak, M. Basaran, A. Basgumus, L. Durak-Ata, H. Yanikomeroglu, “**Metasurface manipulation attacks: Potential security threat of RIS-aided 6G communications**”, *IEEE Communications Magazine*, Jan 2023.

**[M30]** A.M. Demirtas, M.S. Seyfioglu, I. Bor-Yaliniz, B. Tavli, and Halim Yanikomeroglu, “**Deep learning based autonomous UAV-BSSs for NGWNs: Overview and a novel architecture**”, *IEEE Consumer Electronics Magazine*, 01 Jan 2023.

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### IEEE Magazine Papers – 2022

**[M29]** W. Jaafar, H. Yanikomeroglu, “**HAPS-ITS: Enabling future ITS services in trans-continental highways**”, *IEEE Communications Magazine*, Oct 2022.

**[M28]** K. Tekbiyik, G. Karabulut Kurt, A.R. Ekti, H. Yanikomeroglu, “**Reconfigurable intelligent surfaces in action for non-terrestrial networks**”, *IEEE Vehicular Technology Magazine*, Sep 2022.

**[M27]** T. Ahmmed, A. Alidadi, Z. Zhang, A.U. Chaudhry, H. Yanikomeroglu, “**The digital divide in Canada and the role of LEO satellites in bridging the gap**”, *IEEE Communications Magazine*, Jun 2022.

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### IEEE Magazine Papers – 2021 (2/2)

**[M26]** A.U. Chaudhry, H. Yanikomeroglu, “Free space optics for next-generation satellite networks”, *IEEE Consumer Electronics Magazine*, Nov 1 2021.

**[M25]** N. Cherif, W. Jaafar, H. Yanikomeroglu, A. Yongacoglu, “3D Aerial highway: The key enabler of the retail industry transformation”, *IEEE Communications Magazine*, Sep 2021.

**[M24]** C. Goztepe, S. Büyükcörak, G. Karabulut Kurt, H. Yanikomeroglu, “Localization threats in next-generation wireless networks”, *IEEE Communications Magazine*, Sep 2021.

**[M23]** G. Karabulut Kurt, H. Yanikomeroglu, “Communication, computing, caching, and sensing for next generation aerial delivery networks: Using a high-altitude platform station as an enabling technology”, *IEEE Vehicular Technology Magazine*, Sep 2021.

**[M22]** T. Darwish, G. Karabulut Kurt, H. Yanikomeroglu, G. Senarath, P. Zhu, “A vision of self-evolving network management for future intelligent vertical HetNet”, *IEEE Wireless Communications Magazine*, Aug 2021.

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**[M21]** A.U. Chaudhry, Halim Yanikomeroglu, “**Laser inter-satellite links in a Starlink constellation: A classification and analysis**”, *IEEE Vehicular Technology Magazine*, Jun 2021.

**[M20]** A.B. Ozyurt, M. Basaran, M. Ardanuc, L. Durak-Ata, H. Yanikomeroglu, “**Intracell frequency band exiling for green wireless networks: Implementation, performance metrics, and use cases**”, *IEEE Vehicular Technology Magazine*, Jun 2021.

**[M19]** Z. Sadreddini, H. Yanikomeroglu, “**A novel centralized cloud-based mobile data rollover management**”, *IEEE Wireless Communications Magazine*, Apr 2021.

**[M18]** C.E. Kement, B. Tavli, H. Gultekin, H. Yanikomeroglu, “**Holistic privacy for electricity, water, and natural gas metering in next generation smart homes**”, *IEEE Communications Magazine*, Mar 2021.

**[M17]** M.S. Alam, G. Karabulut Kurt, H. Yanikomeroglu, P. Zhu, N.-D. Dao, “**High altitude platform station based super macro base station constellations**”, *IEEE Communications Magazine*, Jan 2021.

**[M16]** S. Alfattani, W. Jaafar, Y. Hmamouche, H. Yanikomeroglu, A. Yongacoglu, N.D. Dao, P. Zhu, “**Aerial platforms with reconfigurable smart surfaces for 5G and beyond**”, *IEEE Communications Magazine*, Jan 2021.

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### IEEE Magazine Papers – 2020

[M15] K. Tekbiyik, A.R. Ekti, G. Karabulut Kurt, A. Gorcin, H. Yanikomeroglu, “A holistic investigation on terahertz propagation and channel modeling toward vertical heterogeneous networks”, *IEEE Communications Magazine*, Nov 2020.

[M14] R. Alkurd, I. Abualhaol, H. Yanikomeroglu, “Big-data-driven and AI-based framework to enable personalization in wireless networks”, *IEEE Communications Magazine*, Mar 2020.

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**[M13]** C. Altun, B. Tavli, H. Yanikomeroglu, “**Liberalization of digital twins of IoT enabled home appliances via blockchains and absolute ownership rights**”, *IEEE Communications Magazine*, Dec 2019.

**[M12]** H. Abou-Zeid, F. Pervez, A. Adinoyi, M. Aljlayl, H. Yanikomeroglu, “**Cellular V2X transmission for connected and autonomous vehicles: Standardization, applications, and enabling technologies**”, *IEEE Consumer Electronics Magazine*, Nov-Dec 2019.

**[M11]** S. Andreev, V. Petrov, M. Dohler, H. Yanikomeroglu, “**Future of ultra-dense networks beyond 5G: Harnessing heterogeneous moving cells**”, *IEEE Communications Magazine*, Jun 2019.

**[M10]** R.H. Gohary, H. Yanikomeroglu, “**Noncoherent MIMO signaling for block-fading channels: Approaches and challenges**”, *IEEE Vehicular Technology Magazine*, Mar 2019.

**[M09]** I. Bor-Yaliniz, M. Salem, G. Senerath, H. Yanikomeroglu, “**Is 5G ready for drones?: A look into contemporary and prospective wireless networks from a standardization perspective**”, *IEEE Wireless Communications Magazine*, Feb 2019.

**[M08]** V. Petrov, K. Mikhaylov, D. Moltchanov, S. Andreev, G. Fodor, J. Torsner, H. Yanikomeroglu, M. Juntti, Y. Koucheryavy, “**When IoT keeps people in the loop: A path towards a new global utility**”, *IEEE Communications Magazine*, Jan 2019.

## IEEE Magazine Papers

### IEEE Magazine Papers – 2018 and Before

[M07] M. Alzenad, M.Z. Shakir, H. Yanikomeroglu, M.-S. Alouini, “**FSO-based vertical backhaul/fronthaul framework for 5G+ wireless networks**”, *IEEE Communications Magazine*, Jan 2018.

[M06] I. Bor-Yaliniz, H. Yanikomeroglu, “**The new frontier in RAN heterogeneity: Multi-tier drone-cells**”, *IEEE Communications Magazine*, Nov 2016.

[M05] S. Andreev, O. Galinina, A. Pyattaev, J. Hosek, P. Masek, H. Yanikomeroglu, Y. Koucheryavy, “**Exploring synergy between communications, caching, and computing in 5G-grade deployments**”, *IEEE Communications Magazine*, Aug 2016.

[M04] M. Mirahsan, R. Schoenen, H. Yanikomeroglu, G. Senerath, N.-D. Dao, “**User-in-the-loop for HetHetNets with backhaul capacity constraints**”, *IEEE Wireless Communications Mag.*, Oct 2015.

[M03] M.N. Tehrani, M. Uysal, H. Yanikomeroglu, “**Device-to-device communication in 5G cellular networks: Challenges, solutions and future directions**”, *IEEE Communications Mag.*, May 2014.

[M02] R. Schoenen, H. Yanikomeroglu, “**User-in-the-loop: Spatial and temporal demand shaping for sustainable wireless networks**”, *IEEE Communications Magazine*, Feb 2014.

[M01] R. Pabst, B.H. Walke, D.C. Schultz, P. Herhold, H. Yanikomeroglu, S. Mukherjee, H. Viswanathan, M. Lott, W. Zirwas, M. Dohler, H. Aghvami, D.D. Falconer, G.P. Fettweis, “**Relay-based deployment concepts for wireless and mobile broadband radio**”, *IEEE Communications Magazine*, Sep 2004.