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Research outputs

ISAC-Powered Distributed Matching and Resource Allocation in Multi-band NTN

Leyva-Mayorga, I., Pandey, S. R., Popovski, P., Saggese, F., Soret, B. & Stefanovic, C., 2 Dec 2025, arXiv, 7 p.

Integrating Atmospheric Sensing and Communications for Resource Allocation in NTNs

Leyva-Mayorga, I., Saggese, F., Li, L. & Popovski, P., Nov 2025, In: IEEE Transactions on Wireless Communications. 24, 11, p. 9703-9718 16 p.

Integrating Atmospheric Sensing and Communications for Resource Allocation in NTNs

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Heterogeneous Radio Access with Multiple Latency Targets

Leyva-Mayorga, I., Giménez, J. M., Valentini, L. & Popovski, P., 1 Apr 2024, *Conference Record of the 57th Asilomar Conference on Signals, Systems and Computers, ACSSC 2023*. Matthews, M. B. (ed.). IEEE (Institute of Electrical and Electronics Engineers), p. 80-84 5 p. (Conference Record - Asilomar Conference on Signals, Systems and Computers).

Continent-Wide Efficient and Fair Downlink Resource Allocation in LEO Satellite Constellations

Leyva-Mayorga, I., Gala, V., Chiariotti, F. & Popovski, P., 23 Oct 2023, *ICC 2023 - IEEE International Conference on Communications: Sustainable Communications for Renaissance*. Zorzi, M., Tao, M. & Saad, W. (eds.). IEEE (Institute of Electrical and Electronics Engineers), p. 6689-6694 6 p. 10279350. (IEEE International Conference on Communications).

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Non-geostationary orbit constellation design for global connectivity

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Inter-Plane Inter-Satellite Connectivity in LEO Constellations: Beam Switching vs. Beam Steering

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Slicing a single wireless collision channel among throughput- and timeliness-sensitive services

Leyva-Mayorga, I., Chiariotti, F., Stefanovic, C., Kalør, A. E. & Popovski, P., 23 Jun 2021, *ICC 2021 - IEEE International Conference on Communications*. IEEE (Institute of Electrical and Electronics Engineers), p. 1-6 6 p. (I E E E International Conference on Communications).

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LEO Small-Satellite Constellations for 5G and Beyond-5G Communications

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Leyva-Mayorga, I., Stefanovic, C., Popovski, P., Pla, V. & Martinez-Bauset, J., 29 Dec 2019, *Wiley 5G Ref: The Essential 5G reference Online*. Wiley, 21 p.

Adaptive access class barring for efficient mMTC

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An adaptive access class barring scheme for handling massive M2M communications in LTE-A

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Performance analysis of access class barring for handling massive M2M traffic in LTE-A networks
Leyva-Mayorga, I., Tello-Oquendo, L., Pla, V., Martinez-Bauset, J. & Casares-Giner, V., 12 Jul 2016, *2016 IEEE International Conference on Communications (ICC)*. IEEE (Institute of Electrical and Electronics Engineers), 7510814. (2016 IEEE International Conference on Communications, ICC 2016).

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Prizes

Best Student Paper Award

Nguyen, L. D. (Recipient), Popovski, P. (Recipient) & Mayorga, I. L. (Recipient), 2021

Novo Nordisk Foundation's Prize for Excellence in Technical Science Teaching 2025

Bøgh, S. (Recipient), Nielsen, J. F. D. (Recipient) & Mayorga, I. L. (Recipient), 19 Mar 2025

Outstanding PhD thesis

Mayorga, I. L. (Recipient), 16 Jul 2020