List of Peer-Reviewed Publications

Dr. Antonio Di Maio

January 2025

Journal Articles

1. Xu, Z., Di Maio, A., Samikwa, E., and Braun, T. (2024). CSTAR-FL: Stochastic Client Selection for Tree All-Reduce Federated Learning. *IEEE Transactions on Mobile Computing*, pages 1–18

2. Samikwa, E., Di Maio, A., and Braun, T. (2024a). DFL: Dynamic Federated Split Learning in Heterogeneous IoT. *IEEE Transactions on Machine Learning in Communications and Networking*, 2:733–752

3. Pacheco, L., Braun, T., Rosário, D., Di Maio, A., and Cerqueira, E. (2024). A Distributed Aggregation Approach for Vehicular Federated Learning. *IEEE Access*, pages 1–1

4. Medeiros, A., Di Maio, A., Braun, T., and Neto, A. (2024b). TENET: Adaptive Service Chain Orchestrator for MEC-Enabled Low-Latency 6DoF Virtual Reality. *IEEE Transactions on Network and Service Management*, 21(2):1894–1911

5. Samikwa, E., Di Maio, A., and Braun, T. (2024b). DISNET: Distributed Micro-Split Deep Learning in Heterogeneous Dynamic IoT. *IEEE Internet of Things Journal*, 11(4):6199–6216

6. Samikwa, E., Di Maio, A., and Braun, T. (2022b). ARES: Adaptive Resource-Aware Split Learning for Internet of Things. *Computer Networks*, 218:109380

7. Zhao, Z., Pacheco, L., Santos, H., Liu, M., Di Maio, A., Rosário, D., Cerqueira, E., Braun, T., and Cao, X. (2021). Predictive UAV Base Station Deployment and Service Offloading With Distributed Edge Learning. *IEEE Transactions on Network and Service Management*, 18(4):3955–3972

8. Medeiros, A., Braun, T., Di Maio, A., and Neto, A. (2021). REACT: A solidarity-based elastic service resource reallocation strategy for Multi-access Edge Computing. *Physical Communication*, 47:101380

9. Duarte, J. M., Kalogeiton, E., Soua, R., Manzo, G., Palattella, M. R., Di Maio, A., Braun, T., Engel, T., Villas, L. A., and Rizzo, G. A. (2018). A Multi-Pronged Approach to Adaptive and Context Aware Content Dissemination in VANETs. *Mobile Networks and Applications*, 23(5):1247–1259

10. Di Maio, A., Palattella, M. R., Soua, R., Lamorte, L., Vilajosana, X., Alonso-Zarate, J., and Engel, T. (2016). Enabling SDN in VANETs: What is the Impact on Security? *Sensors*, 16(12):2077

Conference Articles

1. Hasheminezhad, E., Di Maio, A., and Braun, T. (2025b). DERRIC: Decentralized Reinforced RAN Intelligent Controller Orchestration for 6G Networks. In *IEEE Wireless Communications and Networking Conference (WCNC 2025)*

2. Wassie, S., Di Maio, A., and Braun, T. (2025). Autonomous VNF deployment and SFC reconfiguration for 6G Network Architecture. In *Proceedings of the 40th ACM/SIGAPP Symposium on Applied Computing*, SAC '25, page to appear, New York, NY, USA. Association for Computing Machinery

3. Hasheminezhad, E., Di Maio, A., and Braun, T. (2025a). Data-Driven Orchestration for Distributed RAN Intelligent Controller Placement in 6G Networks. In *Proceedings of the 40th ACM/SIGAPP Symposium on Applied Computing*, SAC '25, page to appear, New York, NY, USA. Association for Computing Machinery

4. Aghaei Dinani, M., Di Maio, A., and Rizzo, G. (2024). Gossip Learning in Edge-Retentive Time-Varying Random Graphs with Node Churn. In *2024 IEEE Annual Congress on Artificial Intelligence of Things (AIoT)*, pages 53–59

5. De Liso, M., Di Maio, A., and Braun, T. (2024). Throughput- and Cost-Aware Node Relocation for MANET Resiliency Under Jamming Attacks. In *2024 22nd Mediterranean Communication and Computer Networking Conference (MedComNet)*, pages 1–10

6. Ajayi, J., Di Maio, A., and Braun, T. (2024). Drift-Aware Policy Selection for Slice Admission Control. In *2024 IEEE/IFIP Network Operations and Management Symposium (NOMS 2024)*, Seoul, South Korea

7. Samikwa, E., Schärer, J., Braun, T., and Di Maio, A. (2023). Machine Learning-based Energy Optimisation in Smart City Internet of Things. In *Proceedings of the Twenty-fourth International Symposium on Theory, Algorithmic Foundations, and Protocol Design for Mobile Networks and Mobile Computing*, MobiHoc '23, pages 364–369, New York, NY, USA. Association for Computing Machinery

8. Di Maio, A., Aghaei Dinani, M., and Rizzo, G. (2023). The Upsides of Turbulence: Baselining Gossip Learning in Dynamic Settings. In *Proceedings of the Twenty-fourth International Symposium on Theory, Algorithmic Foundations, and Protocol Design for Mobile Networks and Mobile Computing*, MobiHoc '23, pages 376–381, New York, NY, USA. Association for Computing Machinery

9. Emami, N., Di Maio, A., and Braun, T. (2023b). GTP-Force: Game-Theoretic Trajectory Prediction through Distributed Reinforcement Learning. In *The 20th IEEE International Conference on Mobile Ad-Hoc and Smart Systems (MASS 2023)*, Toronto, Canada

10. Emami, N., Di Maio, A., and Braun, T. (2023a). FedForce: Network-adaptive Federated Learning for Reinforced Mobility Prediction. In *The 48th IEEE Conference on Local Computer Networks (LCN)*, Daytona Beach, FL, USA

11. Xenakis, D., Samikwa, E., Ajayi, J., Di Maio, A., Braun, T., and Schlegel, K. (2023b). Towards Personality Detection and Prediction using Smartphone Sensor Data. In *2023 21st Mediterranean Communication and Computer Networking Conference (MedComNet)*, pages 121–130

12. Xenakis, D., Di Maio, A., and Braun, T. (2023a). ARLCL: Anchor-free Ranging-Likelihood-based Cooperative Localization. In *2023 IEEE 24th International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM)*, pages 36–45. ISSN: 2770-0542

13. Schaerer, J., Di Maio, A., and Braun, T. (2023). APS: An Auditable Positioning System Based on Angle-of-Arrival Proof of Location and Graph of Trust. In *2023 IEEE International Conference on Pervasive Computing and Communications Workshops and other Affiliated Events (PerCom Workshops). Workshop: The 7th International Workshop on Annotation of User Data for Ubiquitous Systems (ARDUOUS 2023)*, pages 446–452. ISSN: 2766-8576

14. Ajayi, J., Di Maio, A., Braun, T., and Xenakis, D. (2023). An Online Multi-dimensional Knapsack Approach for Slice Admission Control. In *2023 IEEE 20th Consumer Communications & Networking Conference (CCNC)*, pages 152–157. ISSN: 2331-9860

15. Medeiros, A., Di Maio, A., Braun, T., and Neto, A. (2022). Service Chaining Graph: Latency- and Energy-aware Mobile VR Deployment over MEC Infrastructures. In *IEEE Global Communications Conference (GLOBECOM 2022)*

16. Schaerer, J., Di Maio, A., and Braun, T. (2022). SecureAoX: A Location Verification System. In *2022 14th IFIP Wireless and Mobile Networking Conference (WMNC)*, pages 38–45. ISSN: 2473-3644

17. Emami, N., Di Maio, A., and Braun, T. (2022a). INTRAFORCE: Intra-Cluster Reinforced Social Transformer for Trajectory Prediction. In *The 18th International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob2022)*

18. Samikwa, E., Di Maio, A., and Braun, T. (2022a). Adaptive Early Exit of Computation for Energy-Efficient and Low-Latency Machine Learning over IoT Networks. In *2022 IEEE 19th Annual Consumer Communications & Networking Conference (CCNC)*, pages 200–206. ISSN: 2331-9860

19. Emami, N., Pacheco, L., Di Maio, A., and Braun, T. (2022b). RC-TL: Reinforcement Convolutional Transfer Learning for Large-scale Trajectory Prediction. In *NOMS 2022-2022 IEEE/IFIP Network Operations and Management Symposium*, pages 1–9. ISSN: 2374-9709

20. Manzo, G., Kalogeiton, E., Di Maio, A., Braun, T., Palattella, M. R., Turcanu, I., Soua, R., and Rizzo, G. (2020). DeepNDN: Opportunistic Data Replication and Caching in Support of Vehicular Named Data. In *Proceedings of the 21st IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WOWMOM 2020)*, Cork, Ireland. IEEE

21. Di Maio, A., Palattella, M. R., and Engel, T. (2019a). Multi-Flow Congestion-Aware Routing in Software-Defined Vehicular Networks. In *Proceedings of the 90th IEEE Vehicular Technology Conference (VTC2019-Fall)*, pages 1–6, Honolulu, HI, USA. IEEE

22. Di Maio, A., Palattella, M. R., and Engel, T. (2019b). Performance Analysis of MANET Routing Protocols in Urban VANETs. In Palattella, M. R., Scanzio, S., and Coleri Ergen, S., editors, *Ad-Hoc, Mobile, and Wireless Networks*, volume 11803 of *Lecture Notes in Computer Science*, pages 432–451, Luxembourg City, Luxembourg. Springer International Publishing

23. Di Maio, A., Soua, R., Palattella, M. R., and Engel, T. (2018). ROADNET: Fairness- and Throughput-Enhanced Scheduling for Content Dissemination in VANETs. In *Proceedings of the 54th IEEE International Conference on Communications Workshops (ICC Workshops 2018)*, pages 1–6, Kansas City, MO, USA. IEEE

24. Di Maio, A., Soua, R., Palattella, M. R., Engel, T., and Rizzo, G. A. (2017). A centralized approach for setting floating content parameters in VANETs. In *Proceedings of the 14th IEEE Consumer Communications & Networking Conference (CCNC 2017)*, pages 712–715, Las Vegas, NV, USA. IEEE

25. Manzo, G., Soua, R., Di Maio, A., Engel, T., Palattella, M. R., and Rizzo, G. A. (2017). Coordination mechanisms for floating content in realistic vehicular scenario. In *Proceedings of the 36th IEEE International Conference on Computer Communications Workshops (INFOCOM Workshops 2017)*, pages 589–594, Atlanta, GA, USA. IEEE

26. Soua, R., Kalogeiton, E., Manzo, G., Duarte, J. M., Palattella, M. R., Di Maio, A., Braun, T., Engel, T., Villas, L. A., and Rizzo, G. A. (2016). SDN Coordination for CCN and FC Content Dissemination in VANETs. In Zhou, Y. and Kunz, T., editors, *Ad Hoc Networks*, volume 184 of *Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering*, pages 221–233, Ottawa, Canada. Springer International Publishing

27. Bevilacqua, V. and Di Maio, A. (2016). A Computer Vision and Control Algorithm to Follow a Human Target in a Generic Environment Using a Drone. In Huang, D.-S., Han, K., and Hussain, A., editors, *Intelligent Computing Methodologies*, Lecture Notes in Computer Science, pages 192–202. Springer International Publishing

28. Bevilacqua, V., Dimauro, G., Marino, F., Brunetti, A., Cassano, F., Di Maio, A., Nasca, E., Trotta, G. F., Girardi, F., Ostuni, A., and Guarini, A. (2016). A novel approach to evaluate blood parameters using computer vision techniques. In *Proceedings of the 2016 IEEE International Symposium on Medical Measurements and Applications (MeMeA)*, pages 1–6

Doctoral Thesis

1. Di Maio, A. (2020). *Routing Strategies and Content Dissemination Techniques for Software-Defined Vehicular Networks*. Doctoral Dissertation, University of Luxembourg, Esch-sur-Alzette, Luxembourg

Journal Articles (under review)

1. Xu, Z., Di Maio, A., Samikwa, E., and Braun, T. (2025). Zero-shot Personalized Federated Learning for Psychological Monitoring Using Mobile Sensed Data. *IEEE Transaction on Mobile Computing*

2. Sun, M., Di Maio, A., and Braun, T. (2024). Reinforced Personalized Decentralized Learning for Mobile Virtual Reality Networks. *IEEE/ACM Transaction on Networking*

3. Medeiros, A., Di Maio, A., and Braun, T. (2024a). FLATWISE: Flow Latency and Throughput Aware Sensitive Routing for 6DoF VR over SDN. *IEEE Transactions on Network and Service Management*

4. Xenakis, D., Di Maio, A., and Braun, T. (2024). Sequential position optimization using likelihood-based inferred distances: Evaluation using the twr-cloud-bern framework. *IEEE Journal of Indoor and Seamless Positioning and Navigation*

Conference Articles (under review)

1. Ajayi, J., Di Maio, A., and Braun, T. (2025). Bandit Optimization of Multiple Objectives for Online Network Slice Provisioning. In *11th IEEE International Conference on Network Softwarization (NetSoft 2025)*