

# Prof. Carlo Augusto Grazia

✉ carloaugusto.grazia@unimore.it

in LinkedIn Page

🌐 [https://web.eng.unimo.it/wiki/index.php/Carlo\\_Augusto\\_Grazia](https://web.eng.unimo.it/wiki/index.php/Carlo_Augusto_Grazia)



## Education

- 2013 – 2015 ■ **Ph.D. in Information and Communication Technology**  
The University of Modena and Reggio Emilia (UniMoRe)  
Winner of the best Ph.D. thesis.
- 2010 – 2012 ■ **Master degree in Computer Science**, The University of Bologna (UniBo) 110/110 cum laude  
Thesis title: *Implementation of a tool for static deadlock analysis over an ABS core* ABS is a formal concurrent Object Oriented language born with a European Project HATS. The tool is based on an Inference Algorithm and an Analyzer.
- 2007 – 2010 ■ **Bachelor degree in Computer Science**, UniMoRe, 110/110 cum laude  
Thesis title: *Analysis of transcription factor binding site tool inside co-regulated genes* Bioinformatic tool is based on statistical representation for DNA mutation.
- 2002 – 2007 ■ **Technical Expert in Electr. & Telecomm.**, I.T. Enrico Fermi, Modena, 100/100

## Employment History

- 2026 – . . . . ■ **Associate Professor in Telecommunications**, University of Modena and Reggio Emilia (UniMoRe), Italy
- 2023 – 2026 ■ **Tenure Track Assistant Professor (RTDb) ING-INF/o3**, University of Modena and Reggio Emilia (UniMoRe), Italy
- 2022 – 2023 ■ **Research Fellow**, UniMoRe, Italy
- 2017 – 2022 ■ **Assistant Professor (RTDa) ING-INF/o3**, UniMoRe, Italy
- 2016 – 2017 ■ **Research Fellow**, UniMoRe, Italy
- 2013 – 2016 ■ **PhD Student in ICT**, UniMoRe, with a PhD Thesis on:  
*Developed networking solutions for QoS provisioning in wireless/satellite environments.*

## Research Topics

- Automotive: ■ Domain-specific applications towards autonomous driving. G2G latency and remote driving. Large-scale real experiments with wireless vehicular technologies (DSRC/11p/11bd, C-V2X, and NR-V2X). Ethernet-based in-vehicle connectivity evolution with 100BASE-T1 and 10BASE-T1S.
- Wireless Nets: ■ TCP-IP stack with emphasis on: (i) **layer 2**: WiFi drivers, with contributions on the Linux mainline kernel about the TCP Small Queues topic, *ath9k* driver and OCB mode; (ii) **layer 3**: several packet schedulers and AQM networking algorithms deployed and published. QoS and bottleneck analysis on ISPs; (iii) **layer 4**: novel algorithms and variations to Google's BBR for wireless domains; (iv) **layer 5**: Flent, the FLExible Network Tester, and the theory behind bottleneck modeling and analysis.

## Editorial Experience

- 2020 – . . . . ■ Topic Board for **Sensors**, MDPI
- 2017 – . . . . ■ Member of Technical Committee for **Computer Communication**, Elsevier
- 2019 – 2020 ■ Guest Editor for **Telecom**, Special Issue "Vehicular Communications", MDPI

## Projects & Collaborations

- 2026 – . . . . .  Industrial collaboration with **ASTRA - IVECO**, *RO.C.C.I.A. – Robotizzazione di Camion da Cava con Intelligenza Artificiale*
-  Industrial collaboration with **ASK**, *ODU4AT: Open DSRC Unit for Antennas' Testing*
- 2025 – . . . . .  Industrial collaboration with **Hipert S.r.L.**, *SCHEDULE*, and *FRODDO* projects.
- 2024 – 2025  **BiREX** Open Project with **Sma-RTy & Smartea**, *ICS: In-City Sensing*
- 2023 – . . . . .  Research Project with **ESA**, *SURPRISE: Standardised groUnd softwaRe comPonents for oR- chestrating hIgh throughput Satellite sErVICES*
-  Regional project **POR-FESR**, *IGNITE 5.0: IntelliGent and secure NetwOrking in IndusTriAl Environments: towards Industry 5.0*
- 2022 – . . . . .  Collaborator in the **PNRR** Spoke 6, *Centro Nazionale per la MObilita' SosTenibile (MOST)*
- 2020 – . . . . .  Scientific partner at **Tesla**, **Bosch**, **Mercedes**, **Ferrari**, **Lamborghini**, **Maserati**, **Ducati**, **EDAG**, **Quest-Global**, and **CNH**.  
Internship and research collaboration in the **MUNER**: Vehicular networking topic.
- 2018 – 2019  Research Project with **Alstom** Group, *V2X communications and architectures for safety-related applications*
- 2017 – . . . . .  Research Project with **EarthCloud** NPO, *IoT-based Seismic Alert Systems*  
Association Web Page for more information
- 2013 – 2015  The European **FP7** Projects **PPDR-TC & E-SPONDER**, *Public Protection and Disaster Relief Transformation Center*
- 2012 – 2013  European Project **EU-FET HATS**, *Highly Adaptable and Trustworthy Software using Formal Method*

## Teaching

- 2018 – . . . . .  **Automotive Connectivity**, Alma Mater Studiorum UniBo & UniMoRe. Master Course available for: Electronic Engineering for Intelligent Vehicles (UniBo), Electronic Engineering and Computer Engineering (UniMoRe)
- 2020 – 2023  **Communication Systems: Theory & Measurement**, Master Course available for Electrical Vehicle Engineering (UniBo)
- 2021 – . . . . .  **In-vehicle connectivity**, Motor-vehicle University of Emilia-Romagna - MUNER, School for higher education on Future of automotive for intelligent mobility

## Awards

- ASN  Ministero dell'Università e della Ricerca, National Scientific qualification as associate in the Italian higher education system for the disciplinary field of 09/F2 - **Telecommunications** and the field of 01/B1 - **Informatics**, 2023
- Best Ph.D. Student  Awarded to the best research activity by the ICT school, UniMoRe, 2017.
- Certificate of Merit  Awarded to the best researcher handed by the Chancellor, UniMoRe, 2014
- Best Presentation  Awarded to the best presentation at the SSIE Summer School in Brixen, University of Padova, 2013
- Letter of Merit  Awarded to the top student posted by the Chancellor, UniBo, 2012
- Scholarship  Awarded to the top bachelor thesis, UniMoRe, 2010

## Research Publications

### Journal Articles

- 1 C. A. Grazia, M. Klapez, and M. Casoni, "Less is More: Reducing Bandwidth to Enable Queueing Control and QoS," *JOURNAL OF COMMUNICATIONS AND NETWORKS*, 2025.  DOI: 10.23919/JCN.2025.000050.
- 2 M. Savarese, A. d. Blasi, C. Zaccagnino, and C. A. Grazia, "P. I. E. N. O.–Petrol-Filling Itinerary Estimation and Optimization," *IEEE Access*, vol. 12, pp. 158 094–158 102, 2024.  DOI: 10.1109/ACCESS.2024.3483959.
- 3 L. Lusvarghi, C. A. Grazia, M. Klapez, M. Casoni, and M. L. Merani, "Awareness Messages by Vulnerable Road Users and Vehicles: Field Tests via LTE-V2X," *IEEE Transactions on Intelligent Vehicles*, vol. 8, no. 10, pp. 4418–4433, 2023.  DOI: 10.1109/TIV.2023.3280744.
- 4 C. A. Grazia, N. Patriciello, T. Høiland-Jørgensen, M. Klapez, and M. Casoni, "Aggregating Without Bloating: Hard Times for TCP on Wi-Fi," *IEEE/ACM Transactions on Networking*, vol. 30, no. 5, pp. 2359–2373, 2022.  DOI: 10.1109/TNET.2022.3171594.
- 5 C. A. Grazia, "Future of TCP on Wi-Fi 6," *IEEE Access*, vol. 9, pp. 107 929–107 940, 2021.  DOI: 10.1109/ACCESS.2021.3102022.
- 6 C. A. Grazia, M. Klapez, and M. Casoni, "The New TCP Modules on the Block: A Performance Evaluation of TCP Pacing and TCP Small Queues," *IEEE Access*, vol. 9, pp. 129 329–129 336, 2021.  DOI: 10.1109/ACCESS.2021.3113891.
- 7 M. Klapez, C. A. Grazia, and M. Casoni, "The Energy Footprint of 5G Multi-RAT Cellular Architectures," *IEEE Access*, vol. 9, pp. 144 493–144 504, 2021.  DOI: 10.1109/ACCESS.2021.3122797.
- 8 M. Klapež, C. A. Grazia, and M. Casoni, "Experimental Evaluation of IEEE 802.11p in High-Speed Trials for Safety-Related Applications," *IEEE Transactions on Vehicular Technology*, vol. 70, no. 11, pp. 11 538–11 553, 2021.  DOI: 10.1109/TVT.2021.3111289.
- 9 C. A. Grazia, "A Performance Model for Wi-Fi Frame Aggregation Considering Throughput and Latency," *IEEE Communications Letters*, vol. 24, no. 7, pp. 1577–1580, 2020.  DOI: 10.1109/LCOMM.2020.2995590.
- 10 C. A. Grazia, M. Klapez, and M. Casoni, "BBRp: Improving TCP BBR Performance Over WLAN," *IEEE Access*, vol. 8, pp. 43 344–43 354, 2020.  DOI: 10.1109/ACCESS.2020.2977834.
- 11 M. Klapez, C. A. Grazia, and M. Casoni, "Application-Level Performance of IEEE 802.11p in Safety-Related V2X Field Trials," *IEEE Internet of Things Journal*, vol. 7, no. 5, pp. 3850–3860, 2020.  DOI: 10.1109/JIOT.2020.2967649.
- 12 M. Klapez, C. A. Grazia, and M. Casoni, "Minimization of IEEE 802.11p Packet Collision Interference through Transmission Time Shifting," *Journal of Sensor and Actuator Networks*, vol. 9, no. 2, 2020, ISSN: 2224-2708.  DOI: 10.3390/jsan9020017.
- 13 C. A. Grazia, N. Patriciello, M. Klapez, and M. Casoni, "Transmission Control Protocol and Active Queue Management together against congestion: cross-comparison through simulations," *SIMULATION*, vol. 95, no. 10, pp. 979–993, 2019.  DOI: 10.1177/0037549718814626.
- 14 M. Klapez, C. A. Grazia, M. Casoni, S. Zennaro, and M. Cozzani, "Processing and Communication Delays in EWS: On the Performance of the Earthcloud Prototype," *Wireless Communications and Mobile Computing*, vol. 2019, no. 1, p. 6 206 854, 2019.  DOI: <https://doi.org/10.1155/2019/6206854>. eprint: <https://onlinelibrary.wiley.com/doi/pdf/10.1155/2019/6206854>.
- 15 M. Klapez, C. A. Grazia, and M. Casoni, "A hybrid algorithm to combine redundancy and concurrency in virtual network resource pooling," *Internet Technology Letters*, vol. 1, no. 2, e18, 2018.  DOI: <https://doi.org/10.1002/itl2.18>.

- 16 M. Casoni, C. A. Grazia, and M. Klapez, "A software-defined 5g cellular network with links virtually pooled for public safety operators," *Transactions on Emerging Telecommunications Technologies*, vol. 28, no. 3, e3092, 2017.  DOI: <https://doi.org/10.1002/ett.3092>.
- 17 M. Casoni, C. A. Grazia, and M. Klapez, "SDN-Based Resource Pooling to Provide Transparent Multi-Path Communications," *IEEE Communications Magazine*, vol. 55, no. 12, pp. 172–178, 2017.  DOI: 10.1109/MCOM.2017.1601214.
- 18 M. Casoni, C. A. Grazia, M. Klapez, and N. Patriciello, "How to avoid TCP congestion without dropping packets: An effective AQM called PINK," *Computer Communications*, vol. 103, pp. 49–60, 2017, ISSN: 0140-3664.  DOI: <https://doi.org/10.1016/j.comcom.2017.02.010>.
- 19 C. A. Grazia, M. Klapez, and M. Casoni, "Achieving a high throughput and a low latency through a modular packet scheduler," *International Journal of Communication Networks and Distributed Systems (IJCNDS)*, vol. 20, no. 1, 2017.  DOI: 10.1504/IJCNDS.2018.088505.
- 20 M. Casoni, C. A. Grazia, M. Klapez, and N. Patriciello, "A congestion control middleware layer with dynamic bandwidth management for satellite communications," *International Journal of Satellite Communications and Networking*, vol. 34, no. 6, pp. 739–758, 2016.  DOI: <https://doi.org/10.1002/sat.1129>.
- 21 M. Casoni, C. A. Grazia, M. Klapez, and N. Patriciello, "QRM: A queue rate management for fairness and TCP flooding protection in mission-critical networks," *Computer Networks*, vol. 93, pp. 54–65, 2015, ISSN: 1389-1286.  DOI: <https://doi.org/10.1016/j.comnet.2015.10.010>.
- 22 M. Casoni, C. A. Grazia, M. Klapez, N. Patriciello, A. Amditis, and E. Sdongos, "Integration of satellite and LTE for disaster recovery," *IEEE Communications Magazine*, vol. 53, no. 3, pp. 47–53, 2015.  DOI: 10.1109/MCOM.2015.7060481.
- 23 M. Casoni, C. A. Grazia, and P. Valente, "TEMPEST: a new Test EnvironMent for Performance Evaluation of the Scheduling of packeTs," *Simulation Modelling Practice and Theory*, vol. 49, pp. 258–276, 2014, ISSN: 1569-190X.  DOI: <https://doi.org/10.1016/j.simpat.2014.10.005>.

## Conference Proceedings

- 1 G. O. Cauchi, A. Solida, S. Iandolo, M. Klapez, M. Casoni, and C. A. Grazia, "Ptlm: Passive rtt measurement for tcp flows," in *2026 IEEE 23rd Consumer Communications Networking Conference (CCNC)*, 2026, pp. 1–2.  DOI: 10.1109/CCNC65079.2026.11366487.
- 2 F. Franco, L. Lamazzi, M. Picone, M. Savarese, C. A. Grazia, and L. Bedogni, "Customizing human machine interfaces leveraging digital twins and large language models," in *2026 IEEE 23rd Consumer Communications Networking Conference (CCNC)*, 2026, pp. 1–6.  DOI: 10.1109/CCNC65079.2026.11366401.
- 3 M. Grasselli, A. Porrello, and C. A. Grazia, "Camnet: Leveraging cooperative awareness messages for vehicle trajectory prediction," in *2026 IEEE 23rd Consumer Communications Networking Conference (CCNC)*, 2026, pp. 1–6.  DOI: 10.1109/CCNC65079.2026.11366398.
- 4 A. Masola, P. Burgio, C. A. Grazia, and L. Bedogni, "Measuring and understanding visualization latency performance for smart city applications," in *2026 IEEE 23rd Consumer Communications Networking Conference (CCNC)*, 2026, pp. 1–6.  DOI: 10.1109/CCNC65079.2026.11366340.
- 5 E. Rossini, M. Pietri, M. Picone, L. Bedogni, C. A. Grazia, and M. Mamei, "Bridging edge and cloud for smart city data and service continuity: The masa approach," in *2026 IEEE 23rd Consumer Communications Networking Conference (CCNC)*, 2026, pp. 1–6.  DOI: 10.1109/CCNC65079.2026.11366388.
- 6 M. Savarese, A. De Blasi, C. Zaccagnino, *et al.*, "Ri-pieno – revised and improved petrol-filling itinerary estimation and optimization," in *2026 IEEE 23rd Consumer Communications Networking Conference (CCNC)*, 2026, pp. 1–6.  DOI: 10.1109/CCNC65079.2026.11366496.

- 7 M. Savarese, C. Zaccagnino, A. De Blasi, *et al.*, “A workflow for cost- and time-aware refueling itinerary optimization,” in *2026 IEEE 23rd Consumer Communications Networking Conference (CCNC)*, 2026, pp. 1–2.  DOI: 10.1109/CCNC65079.2026.11366260.
- 8 A. Semeraro, C. A. Grazia, and L. Bedogni, “A glass-to-glass testbed: Towards effective latency analysis,” in *2026 IEEE 23rd Consumer Communications Networking Conference (CCNC)*, 2026, pp. 1–6.  DOI: 10.1109/CCNC65079.2026.11366273.
- 9 A. Solida, G. O. Cauchi, S. Iandolo, M. Klapez, M. Casoni, and C. A. Grazia, “Ptlm: A passive tcp latency monitor for enterprise and living lab networks,” in *2026 IEEE 23rd Consumer Communications Networking Conference (CCNC)*, 2026, pp. 1–6.  DOI: 10.1109/CCNC65079.2026.11366256.
- 10 A. Solida, C. A. Grazia, M. Klapez, and M. Casoni, “Optimizing decentralized congestion control: Performance evaluation on ieee 802.11p networks,” in *2026 IEEE 23rd Consumer Communications Networking Conference (CCNC)*, 2026, pp. 1–6.  DOI: 10.1109/CCNC65079.2026.11366413.
- 11 L. Bedogni, C. A. Grazia, and R. Scalise, “On the latency performance of mobile mapping services: Towards vulnerable road users safety,” in *2025 IEEE 22nd Consumer Communications Networking Conference (CCNC)*, 2025, pp. 1–6.  DOI: 10.1109/CCNC54725.2025.10976011.
- 12 L. Farina, M. Piccoli, S. Iandolo, *et al.*, “Hardware-in-the-loop demo of a cooperative intersection where cars don’t stop,” in *2025 IEEE Conference on Standards for Communications and Networking (CSCN)*, 2025, pp. 401–403.  DOI: 10.1109/CSCN67557.2025.11230601.
- 13 L. Farina, M. Piccoli, S. Iandolo, *et al.*, “Low cost c-its stations using raspberry pi and the open source software oscar,” in *2025 IEEE 101st Vehicular Technology Conference (VTC2025-Spring)*, 2025, pp. 1–6.  DOI: 10.1109/VTC2025-Spring65109.2025.11174862.
- 14 G. Ferraro, S. Iandolo, A. Solida, *et al.*, “Towards smart cities with ai-cam: Assisted by infrastructure cooperative awareness messages,” in *2025 IEEE Conference on Standards for Communications and Networking (CSCN)*, 2025, pp. 1–6.  DOI: 10.1109/CSCN67557.2025.11230591.
- 15 S. Iandolo, C. A. Grazia, M. Klapez, and M. Casoni, “Odu: Open dsrc unit toward effective dissemination of v2x applications,” in *2025 IEEE 101st Vehicular Technology Conference (VTC2025-Spring)*, 2025, pp. 1–5.  DOI: 10.1109/VTC2025-Spring65109.2025.11174844.
- 16 M. Picone, A. Barbone, R. Morandi, *et al.*, “From physical to digital: Exploring digital twins within the modena automotive smart area,” in *2025 IEEE 22nd Consumer Communications Networking Conference (CCNC)*, 2025, pp. 1–9.  DOI: 10.1109/CCNC54725.2025.10976222.
- 17 E. Rossini, M. Pietri, M. Picone, C. A. Grazia, and M. Mamei, “Experimental assessment of 5g mec architectures for intelligent applications in smart cities,” in *2025 IEEE International Conference on Communications Workshops (ICC Workshops)*, 2025, pp. 439–444.  DOI: 10.1109/ICCWorkshops67674.2025.11162425.
- 18 A. Solida, G. O. Cauchi, S. Iandolo, M. Klapez, M. Casoni, and C. A. Grazia, “Remote driving over its-g5: Experimental insights from the masa living-lab,” in *2025 IEEE Conference on Standards for Communications and Networking (CSCN)*, 2025, pp. 1–6.  DOI: 10.1109/CSCN67557.2025.11230759.
- 19 A. Castellano, M. Klapez, C. A. Grazia, E. Landini, M. Casoni, and M. Bertogna, “Human-machine interfaces in safety-related cooperative driving automation systems,” 2024, pp. 186–192.  DOI: 10.1109/WiMob61911.2024.10770450.
- 20 C. A. Grazia, S. Iandolo, M. Klapez, and M. Casoni, “Preliminary test on the modena automotive smart area backbone,” 2024, pp. 74–79.  DOI: 10.1109/WiMob61911.2024.10770429.
- 21 E. Rossini, M. Pietri, M. Picone, C. A. Grazia, and M. Mamei, “Vulnerable road users accident prevention via smart city data fusion: Experimental evaluation of a 5g mec architecture,” 2024, pp. 37–44.  DOI: 10.1109/NCA61908.2024.00018.

- 22 C. A. Grazia, M. Klapez, and M. Casoni, "Comparing different gps solutions for the cooperative awareness messages distribution," in *2023 19th International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob)*, 2023, pp. 419–424.  DOI: 10.1109/WiMob58348.2023.10187798.
- 23 B. Ivar Teigen, N. Davies, K. Olav Ellefsen, T. Skeie, C. Augusto Grazia, and J. Torresen, "A lower bound on latency spikes for capacity-seeking network traffic," in *2023 IEEE International Conference on Communications Workshops (ICC Workshops)*, 2023, pp. 1124–1129.  DOI: 10.1109/ICCWorkshops57953.2023.10283644.
- 24 M. Klapez, C. A. Grazia, and M. Casoni, "The impact of transmission power on the safety-related performance of ieee 802.11p," in *2021 17th International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob)*, 2021, pp. 60–67.  DOI: 10.1109/WiMob52687.2021.9606396.
- 25 C. A. Grazia, M. Klapez, and M. Casoni, "Ironman: Infrastructured rssi-based opportunistic routing in mobile adhoc networks," in *2020 16th International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob)*, 2020, pp. 14–19.  DOI: 10.1109/WiMob50308.2020.9253398.
- 26 C. A. Grazia, N. Patriciello, M. Klapez, and M. Casoni, "Bbr+: Improving tcp bbr performance over wlan," in *ICC 2020 - 2020 IEEE International Conference on Communications (ICC)*, 2020, pp. 1–6.  DOI: 10.1109/ICC40277.2020.9149220.
- 27 C. A. Grazia, "Ieee 802.11n/ac wireless network efficiency under different tcp congestion controls," in *2019 International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob)*, 2019, pp. 1–6.  DOI: 10.1109/WiMOB.2019.8923418.
- 28 M. Klapez, C. A. Grazia, and M. Casoni, "Ieee 802.11p field trials on interference minimization for safety-related v2x applications," in *2019 International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob)*, 2019, pp. 235–240.  DOI: 10.1109/WiMOB.2019.8923276.
- 29 M. Klapez, C. A. Grazia, L. Rold, and M. Casoni, "Ieee 802.11p under congestion in an infrastructure-to-vehicle communication approach," in *2019 AEIT International Conference of Electrical and Electronic Technologies for Automotive (AEIT AUTOMOTIVE)*, 2019, pp. 1–6.  DOI: 10.23919/EETA.2019.8804505.
- 30 C. A. Grazia, "On the performance of ieee 802.11p outside the context of a bss networks," in *2018 IEEE 29th Annual International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC)*, 2018, pp. 1388–1393.  DOI: 10.1109/PIMRC.2018.8580785.
- 31 C. A. Grazia, "Towards 1 ms wlan latency," in *2018 14th International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob)*, 2018, pp. 278–284.  DOI: 10.1109/WiMOB.2018.8589131.
- 32 C. A. Grazia, M. Klapez, and M. Casoni, "The bufferboost effect: When drops and redundancy boost the throughput," in *2018 International Symposium on Networks, Computers and Communications (ISNCC)*, 2018, pp. 1–6.  DOI: 10.1109/ISNCC.2018.8530998.
- 33 C. A. Grazia, N. Patriciello, T. Høiland-Jørgensen, M. Klapez, M. Casoni, and J. Manges-Bafalluy, "Adapting tcp small queues for ieee 802.11 networks," in *2018 IEEE 29th Annual International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC)*, 2018, pp. 1–6.  DOI: 10.1109/PIMRC.2018.8581048.
- 34 M. Klapez, C. A. Grazia, and M. Casoni, "Energy savings of sleep modes enabled by 5g software-defined heterogeneous networks," in *2018 IEEE 4th International Forum on Research and Technology for Society and Industry (RTSI)*, 2018, pp. 1–6.  DOI: 10.1109/RTSI.2018.8548508.
- 35 M. Klapez, C. A. Grazia, and M. Casoni, "Quantifying sleep-related energy savings in indoor lte hetnets radio access," in *2018 International Conference on Selected Topics in Mobile and Wireless Networking (MoWNeT)*, 2018, pp. 1–8.  DOI: 10.1109/MoWNet.2018.8428900.

- 36 M. Klapetz, C. A. Grazia, S. Zennaro, M. Cozzani, and M. Casoni, "First experiences with earthcloud, a low-cost, cloud-based iot seismic alert system," in *2018 14th International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob)*, 2018, pp. 262–269.  DOI: 10.1109/WiMOB.2018.8589155.
- 37 C. A. Grazia and M. Casoni, "Technology independent scheduling architecture for v2x communications: A flexible approach," in *2017 IEEE 13th International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob)*, 2017, pp. 235–240.  DOI: 10.1109/WiMOB.2017.8115826.
- 38 C. A. Grazia, N. Patriciello, M. Klapetz, and M. Casoni, "A cross-comparison between tcp and aqm algorithms: Which is the best couple for congestion control?" In *2017 14th International Conference on Telecommunications (ConTEL)*, 2017, pp. 75–82.  DOI: 10.23919/ConTEL.2017.8000042.
- 39 C. A. Grazia, N. Patriciello, M. Klapetz, and M. Casoni, "Mitigating congestion and bufferbloat on satellite networks through a rate-based aqm," in *2017 IEEE International Conference on Communications (ICC)*, 2017, pp. 1–6.  DOI: 10.1109/ICC.2017.7996776.
- 40 C. A. Grazia, N. Patriciello, M. Klapetz, and M. Casoni, "Which aqm fits iot better?" In *2017 IEEE 3rd International Forum on Research and Technologies for Society and Industry (RTSI)*, 2017, pp. 1–6.  DOI: 10.1109/RTSI.2017.8065903.
- 41 T. Høiland-Jørgensen, C. A. Grazia, P. Hurtig, and A. Brunstrom, "Flent: The flexible network tester," ser. VALUETOOLS 2017, Venice, Italy: Association for Computing Machinery, 2017, pp. 120–125, ISBN: 9781450363464.  DOI: 10.1145/3150928.3150957.
- 42 M. Klapetz, C. A. Grazia, and M. Casoni, "Reducing cellular networks power consumption: The role of resource pooling and cooperation," in *2017 14th International Conference on Telecommunications (ConTEL)*, 2017, pp. 107–114.  DOI: 10.23919/ConTEL.2017.8000046.
- 43 M. Casoni, C. A. Grazia, and M. Klapetz, "An sdn and cps based opportunistic upload splitting for mobile users," in *Internet of Things. IoT Infrastructures*, B. Mandler, J. Marquez-Barja, M. E. Mitre Campista, et al., Eds., Cham: Springer International Publishing, 2016, pp. 67–76, ISBN: 978-3-319-47063-4.
- 44 M. Casoni, C. A. Grazia, and M. Klapetz, "Enabling resource pooling in wireless networks through software-defined orchestration," in *2016 IEEE International Conference on Communications Workshops (ICC)*, 2016, pp. 730–735.  DOI: 10.1109/ICCW.2016.7503874.
- 45 C. A. Grazia, N. Patriciello, M. Klapetz, and M. Casoni, "Enabling smart environments by avoiding tcp congestion through pink: A no-drop aqm," in *2016 IEEE 12th International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob)*, 2016, pp. 1–7.  DOI: 10.1109/WiMOB.2016.7763180.
- 46 M. Klapetz, C. A. Grazia, and M. Casoni, "Towards massively multipath transmissions for public safety communications," in *2016 IEEE 12th International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob)*, 2016, pp. 1–7.  DOI: 10.1109/WiMOB.2016.7763189.
- 47 N. Patriciello, C. A. Grazia, J. Núñez-Martínez, J. Baranda, J. Manges-Bafalluy, and M. Casoni, "Performance evaluation of backpressure routing in integrated satellite-terrestrial backhaul for ppdr networks," in *2016 IEEE 12th International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob)*, 2016, pp. 1–8.  DOI: 10.1109/WiMOB.2016.7763187.
- 48 M. Casoni, C. A. Grazia, M. Klapetz, and N. Patriciello, "A cooperative middleware for enhancing tcp performance over high delay networks," in *2015 IEEE Global Communications Conference (GLOBECOM)*, 2015, pp. 1–6.  DOI: 10.1109/GLOCOM.2015.7417253.
- 49 M. Casoni, C. A. Grazia, M. Klapetz, and N. Patriciello, "Dybra: A dynamic bandwidth reservation algorithm to enhance satellite communications," in *2015 IEEE Global Communications Conference (GLOBECOM)*, 2015, pp. 1–6.  DOI: 10.1109/GLOCOM.2015.7417217.

- 50 M. Casoni, C. A. Grazia, M. Klapez, and N. Patriciello, "Implementation and validation of tcp options and congestion control algorithms for ns-3," in *Proceedings of the 2015 Workshop on Ns-3*, ser. WNS3 '15, Barcelona, Spain: Association for Computing Machinery, 2015, pp. 112–119, ISBN: 9781450333757.  DOI: 10.1145/2756509.2756518.
- 51 M. Casoni, C. A. Grazia, M. Klapez, and N. Patriciello, "Towards emergency networks security with per-flow queue rate management," in *2015 IEEE International Conference on Pervasive Computing and Communication Workshops (PerCom Workshops)*, 2015, pp. 493–498.  DOI: 10.1109/PERCOMW.2015.7134087.
- 52 C. A. Grazia, M. Klapez, N. Patriciello, *et al.*, "Performance evaluation and economic modelling of ppdr communication systems," in *2015 IEEE 11th International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob)*, 2015, pp. 75–82.  DOI: 10.1109/WiMOB.2015.7347943.
- 53 C. A. Grazia, M. Klapez, N. Patriciello, and M. Casoni, "Pink: Proactive injection into ack, a queue manager to impose fair resource allocation among tcp flows," in *2015 IEEE 11th International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob)*, 2015, pp. 132–137.  DOI: 10.1109/WiMOB.2015.7347952.
- 54 M. Casoni, C. A. Grazia, M. Klapez, and N. Patriciello, "Reducing latency in satellite emergency networks through a cooperative transmission control," in *2014 IEEE Global Communications Conference*, 2014, pp. 2850–2855.  DOI: 10.1109/GLOCOM.2014.7037240.
- 55 M. Casoni, C. A. Grazia, and P. Valente, "A low-latency and high-throughput scheduler for emergency and wireless networks," in *2014 IEEE International Conference on Communications Workshops (ICC)*, 2014, pp. 231–236.  DOI: 10.1109/ICCW.2014.6881201.
- 56 C. A. Grazia, M. Klapez, N. Patriciello, *et al.*, "Integration between terrestrial and satellite networks: The ppdr-tc vision," in *2014 IEEE 10th International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob)*, 2014, pp. 77–84.  DOI: 10.1109/WiMOB.2014.6962153.
- 57 C. A. Grazia, M. Casoni, and P. Valente, "Tempest: Test environment for performance evaluation of the scheduling of packets," in *2014 IEEE 10th International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob)*, 2014, pp. 231–238.  DOI: 10.1109/WiMOB.2014.6962176.
- 58 M. Casoni, C. A. Grazia, and N. Patriciello, "On the performance of linux container with netmap/vale for networks virtualization," in *2013 19th IEEE International Conference on Networks (ICON)*, 2013, pp. 1–6.  DOI: 10.1109/ICON.2013.6781957.
- 59 E. Giachino, C. A. Grazia, C. Laneve, M. Lienhardt, and P. Y. H. Wong, "Deadlock analysis of concurrent objects: Theory and practice," in *Integrated Formal Methods*, E. B. Johnsen and L. Petre, Eds., Berlin, Heidelberg: Springer Berlin Heidelberg, 2013, pp. 394–411, ISBN: 978-3-642-38613-8.

## Publications and Datasets: ORCID

---

<https://orcid.org/0000-0003-0534-995X>