

Curriculum formativo, didattico, scientifico e professionale del candidato**Dichiarazione sostitutiva di certificazioni**

(Art. 46, D.P.R. 28 dicembre 2000 n. 445)

Dichiarazione sostitutiva dell'atto di notorietà

(da sottoscrivere davanti all'impiegato addetto o da presentare o spedire con la fotocopia di un documento di identità)

(Art. 47, D.P.R. 28 dicembre 2000 n. 445)

Estremi del bando di selezione	Bando n.42/2024 – “Studio e implementazione di algoritmi di offloading di servizi di rete per applicazioni Digital Twin” – Responsabile Scientifico prof. Maurizio Murroni – SSD IINF-03/A
Informazioni aggiornate al	11/09/2024
Nome e Cognome	Claudia Carballo González

Si raccomanda di indicare con precisione tutti gli elementi valutabili ai sensi del bando di selezione (aggiungere o togliere righe secondo necessità).

Esperienza professionale

Periodo	Ente	Principali attività e responsabilità
1/10/2021-30/9/2024	University of Cagliari	PhD Student, research “Dynamic Radio Access Selection and Slice Allocation for Differentiated Traffic Management Beyond 5G Networks”
1/07/2021-30/09/2021	University of Cagliari	Research Grant for the project “Machine learning techniques for radio resource allocation in sixth generation systems”
2018-2021	ETECSA, Cuba	Full Time Main Specialist in the Transmission Planning Department
2017-2021	Havana University of Technologies (CUJAE)	Partial Time Staff Member as an Instructor (Lecturer)
2015-2018	ETECSA, Cuba	Full Time Specialist in the Strategic Planning Department

Istruzione, formazione (es. titoli di studio, certificazioni professionali/linguistiche/informatiche)

Data	Titolo / Principali tematiche	Ente
09/2010-07/2015	Telecommunications and Electronics Engineering	Havana University of Technologies (CUJAE)
04/2018-02/2020	Master in Telecommunications and Telematics	Havana University of Technologies (CUJAE)
28/11/2016-05/01/2017	Training on “OTN Operation and Maintenance Training”	Huawei University, China
06/01/2017-13/01/2017	Training on “S9300E Products Installation Planning and Design Training”	Huawei University, China
29/11/2021-01/12/2021	Fourth Edition of 5G International PhD School	National Interuniversity Consortium for Telecommunications, Rome
04/07/2022-10/07/2022	Jacob T. Schwartz International School for Scientific Research - Lipari School on Advanced Networking Systems	University of Catania
08/09/2023 – 14/09/2023	2023 IEEE SPS / EURASIP Summer School on Metaverse Technologies	University of Cagliari

25/01/2024 – 28/01/2024	Contamination Bootcamp	CREA University of Cagliari
04/03/2024 – 08/03/2024	Workshop on Advanced Digital Technologies	i2CAT, Barcelona

Publicazioni / Convegni

Journal Papers

1. **C. C. González**, E. F. Pupo, D. P. Ruisánchez, D. Plets, and M. Murrone, "From MFN to SFN: Performance Prediction Through Machine Learning," in *IEEE Transactions on Broadcasting*, vol. 68, no. 1, pp. 180-190, March 2022, doi: 10.1109/TBC.2021.3132804.
2. **C. C. González**, E. F. Pupo, L. Atzori and M. Murrone, "Dynamic Radio Access Selection and Slice Allocation for Differentiated Traffic Management on Future Mobile Networks," in *IEEE Transactions on Network and Service Management*, vol. 19, no. 3, pp. 1965-1981, Sept. 2022, doi: 10.1109/TNSM.2022.3150978.
3. **C. C. González**, S. Pizzi, M. Murrone and G. Araniti, "Multicasting Over 6G Non-Terrestrial Networks: A Softwarization-Based Approach," in *IEEE Vehicular Technology Magazine*, vol. 18, no. 1, pp. 91-99, March 2023, doi: 10.1109/MVT.2022.3232919.
4. E. F. Pupo, **C. C. González**, J. Montalban, P. Angueira, M. Murrone, and E. Iradier, "Artificial Intelligence Aided Low Complexity RRM Algorithms for 5G-MBS," in *IEEE Transactions on Broadcasting*, 2023, doi: 10.1109/TBC.2023.3311337.
5. **C. C. González**, E. F. Pupo, E. Iradier, P. Angueira, M. Murrone, and J. Montalban, "Network Selection over 5G Advanced Heterogeneous Networks Based on Federated Learning and Cooperative Game Theory," in *IEEE Transactions on Vehicular Technology*, 2024, doi: 10.1109/TVT.2024.3373638.

Conference Papers (Last 3 years)

1. **González, C. C.**, Pupo, E. F., Ruisánchez, D. P., Plets, D., & Murrone, M. (2021, August). Three-stages concatenated Machine Learning model for SFN prediction. in *IEEE BMSB*, 2021, Chengdu, China.
2. **González, C. C.**, Pupo, E. F., Atzori, L., & Murrone, M. (2021, August). Dynamic access control and slice allocation algorithm for diverse traffic demand over 5G heterogeneous networks. in *IEEE BMSB*, 2021, Chengdu, China.
3. Pupo, E. F., **González, C. C.**, Atzori, L., & Murrone, M. (2021, August). Thresholds of outperformance among Broadcast/Multicast access techniques in 5G networks. in *IEEE BMSB*, 2021, Chengdu, China.
4. Ruisánchez, D. P., Mirabal, D. G., Pupo, E. F., **González, C. C.**, Pérez-Adán, D., & Cesar, F. A. (2021, August). Prediction of Signal Quality and SFN Interference Metrics Using Machine Learning Models. in *IEEE BMSB*, 2021, Chengdu, China.
5. **C. C. González**, E. F. Pupo, D. Pereira-Ruisánchez, L. Atzori and M. Murrone, "Deep Reinforcement Learning for Dynamic Radio Access Selection over Future Wireless Networks," in *IEEE BMSB*, 2022, Bilbao, Spain.
6. E. F. Pupo, **C. C. González**, L. Atzori and M. Murrone, "Dynamic Multicast Access Technique in SC-PTM 5G Networks: Subgrouping with OM/NOM," in *IEEE BMSB*, 2022, Bilbao, Spain.
7. **C. C. González**, E. F. Pupo, J. Montalban, S. Pizzi, E. Iradier and M. Murrone, "Hybrid Terrestrial-Airborne Connectivity for Unicast/Broadcast Services Beyond 5G," in *IEEE BMSB*, 2023, China.
8. E. F. Pupo, **C. C. González**, E. Iradier, J. Montalban and M. Murrone, "5G Link-Level Simulator for Multicast/Broadcast Services," 2023 *IEEE International Symposium on Broadband Multimedia Systems and Broadcasting (BMSB)*, Beijing, China, 2023.
9. E. F. Pupo, **C. C. González**, V. Popescu, D. Giusto and M. Murrone, "Beyond 5G Multicast for XR Communications aided by Pre-computed Multi-beams and NOMA," 2023 *IEEE Globecom*

Workshops (GC Wkshps), Kuala Lumpur, Malaysia, 2023, pp. 738-743, doi: 10.1109/GCWkshps58843.2023.10465216.

10. **C. C. González**, and M. Murrone, "Smart radio access selection and slice allocation for differentiated traffic management over 6G heterogeneous networks," in 15th ACM Multimedia Systems Conference (Doctoral Symposium), 2024, Bari, Italy.

11. **C. C. González**, E. F. Pupo, J. Montalban, E. Iradier, P. Angueira, and M. Murrone, "Federated Learning-based Unicast/Multicast Service Delivery over 6G O-RAN Framework," in IEEE BMSB, 2024, Toronto.

12. E. F. Pupo, **C. C. González**, and M. Murrone, "Multi-rate Multicasting Over Fixed Pre-Computed MIMO Beams," in IEEE BMSB, 2024, Toronto.

13. A. Collu, E. F. Pupo, **C. C. González**, and M. Murrone, "Exploiting the benefits of in-band D2D communications for 5G-MBS use cases," in IEEE BMSB, 2024, Toronto (accepted).

14. **C. C. González**, E. F. Pupo, G. Bingol, A. Floris, S. Porcu, M. Murrone, L. Atzori, "A QoE-based Energy-aware Resource Allocation Solution for 5G Heterogeneous Networks", in QoMEX 2024, Sweden.

Conference Proceedings- C1 (Last 3 years)

1. **González, C.C.**; "SD-WAN, an opportunity for digital transformation", 9th International Symposium of Telecommunications, Informatics Havana, 2020.

2. **González, C.C.**; Pupo, E.F.: "Design of a prediction model for SFN network performance", in Annual Conference of Information Technologies, Multimedia and Telecommunications (ACIMUTT-2020), 08-09 November 2020.

3. **González, C.C.**, Pupo, E.F., Atzori, L. and Murrone, M.: "Dynamic Radio Access Selection and Slice Allocation for Differentiated Traffic Management over Next-Generation Mobile Networks", in Annual Conference of Information Technologies, Multimedia and Telecommunications (ACIMUTT-2021), 01-03 November 2021.

4. Pupo, E.F., **González, C.C.**, Atzori, L. and Murrone, M.: "Thresholds of outperformance among multicast/broadcast access techniques in 5G networks", in Annual Conference of Information Technologies, Multimedia and Telecommunications (ACIMUTT-2021), 01-03 November 2021.

5. **González, C.C.**, Pupo, E.F., Ruisánchez, D. P., Atzori, L. and Murrone, M.: "Dynamic Radio Access Network Selection over Future 6G Heterogeneous Systems", in Annual Conference of Information Technologies, Multimedia and Telecommunications (ACIMUTT-2022), 01-03 November 2022.

6. **González, C.C.**, Pupo, E.F., Montalban J., Pizzi S., Iradier E., and Murrone, M.: "Unicast/Broadcast Services Delivery over a Hybrid Terrestrial-Airborne Connectivity Beyond 5G", in Annual Conference of Information Technologies, Multimedia and Telecommunications (ACIMUTT-2023), 01-03 November 2023.

7. **González, C.C.**, Pupo, E.F., Murrone, M.: "5G Heterogeneous Network Management for XR Applications", in Informatics Havana, March 2024.

Articles-A3

1. **González, C.C.**, "Proposal of access solutions for the introduction by ETECSA of broadband services in Cuba", *Telematica*. Vol. 15. No. 1, 2016, pp. 1-16, ISSN: 1729-3804.

2. **González, C.C.**, "FSO proposal as a complementary technology in the ETECSA network", *Tono*. No. 1, 2017, pp. 30-37, ISSN: 1813-5056.

Altre attività scientifiche

[08/06/2021] IEEE Broadcast Technology Society, IEEE Broadcast Technology Society 2021 Best Student Paper Award E. F. Pupo, **C. C. González**, L. Atzori and M. Murrone, "Thresholds of outperformance among Broadcast/Multicast access techniques in 5G networks," 2021 *IEEE International Symposium on Broadband Multimedia Systems and Broadcasting (BMSB)*, Chengdu, China, 2021, pp. 1-6, doi: 10.1109/BMSB53066.2021.9547169.

[20/12/2023] INGR Satellite WG Second Classified in the Competition "6G and NTN: Challenges and Solutions" **C. C. González**, E. F. Pupo, J. Montalban, E. Iradier, P. Angueira, and M. Murrone, "Terrestrial-Airborne Cooperation for Unicast/Multicast Service Delivery over 6G O-RAN Framework".

Peer Review: IEEE Communications Letters, Physical Communication, The Journal of Supercomputing, Wireless Personal Communications, Cluster Computing

Luogo e data

Cagliari, 11/09/2024