Curriculum Vitae

INFORMAZIONI PERSONALI

Nome AQEEL
Cognome UR RAHMAN
Recapiti Dipartimento di Ingegneria

Telefono 39-3487861685
E-mail aqeel.urrahman@unipa.it

RICERCHE FINANZIATE

• NextGenerationEU - National Sustainable Mobility Center CN00000023, Italian Ministry of University and Research Decree n. 1033—
17/06/2022, Spoke 2,3,4 and 12 CUP B73C22000760001
• SAMOTHRACE (MUR, PNRR-M4C2, ECS-00000022),spoke 3 - Università degli Studi di Palermo
• Network 4 Energy Sustainable Transition – NEST, CUP B73C22001280006, Project code PE0000021, Concession Decree No. 1561 of
11.10.2022
• PON “Ricerca e Innovazione” 2014-2020, Asse IV “Istruzione e ricerca per il recupero”, Azione IV.4 and IV.5, DM 1061/2021.

PUBBLICAZIONE

Journal Articles:

1. Rahman, Aqeel Ur, Nicola Campagna, Filippo Pellitteri, Antonino Oscar Di Tommaso, and Rosario Miceli. "Stability-Centric Design of a Droop-Mounted Adaptive Nonlinear Control for EV Charging in DC Microgrid." *IEEE Access* (2024). Link: https://doi.org/10.1109/ACCESS.2024.3451008

1. Zehra, Syeda Shafia, Aqeel Ur Rahman, Hammad Armghan, Iftikhar Ahmad, and Umme Ammara. "Artificial intelligence-based nonlinear control of renewable energies and storage system in a DC microgrid." *ISA transactions* 121 (2022): 217231. Link: https://doi.org/10.1016/j.isatra.2021.04.004
2. Zehra, Syeda Shafia, Aqeel Ur Rahman, and Iftikhar Ahmad. "Fuzzy-barrier sliding mode control of electric-hydrogen hybrid energy storage system in DC microgrid: Modelling, management and experimental investigation." *Energy* 239 (2022): 122260. Link: https://doi.org/10.1016/j.energy.2021.122260
3. Rahman, Aqeel Ur, Syeda Shafia Zehra, Iftikhar Ahmad, and Hammad Armghan. "Fuzzy supertwisting sliding mode-based energy management and control of hybrid energy storage system in electric vehicle considering fuel economy." *Journal of Energy Storage* 37 (2021): 102468. Link: https://doi.org/10.1016/j.est.2021.102468
4. Rahman, Aqeel Ur, Iftikhar Ahmad, and Ali Shafiq Malik. "Variable structure-based control of fuel cell-supercapacitor-battery based hybrid electric vehicle." *Journal of Energy Storage* 29 (2020): 101365.Link: https://doi.org/10.1016/j.est.2020.101365
5. Siffat, Syed Ahmad, Iftikhar Ahmad, Aqeel Ur Rahman, and Yasir Islam. "Robust integral backstepping control for unified model of hybrid electric vehicles." *IEEE Access* 8 (2020): 49038-49052.Link: https://doi.org/10.1109/ACCESS.2020.2978258

Conference Articles:

1. Rahman, Aqeel Ur, Filippo Pellitteri, Nicola Campagna, A. O. Di Tommaso, and Rosario Miceli. "Decoupled Robust Backstepping Control of Multiphase Interleaving Converters for Power-to-Hydrogen Systems in DC Microgrids." In *2024 IEEE 15th International Symposium on Power Electronics for Distributed Generation Systems (PEDG)*, pp. 1-6. IEEE, 2024.Link: https://doi.org/10.1109/PEDG61800.2024.10667450
2. Rahman, Aqeel Ur, Filippo Pellitteri, Nicola Campagna, A. O. Di Tommaso, and Rosario Miceli. "Decoupled Robust Backstepping Control of Multiphase Interleaving Converters for Power-to-Hydrogen Systems in DC Microgrids." In *2024 IEEE 15th International Symposium on Power Electronics for Distributed Generation Systems (PEDG)*, pp. 1-6. IEEE, 2024. Link: https://doi.org/10.1109/PEDG61800.2024.10667450

3. Rahman, A. Ur, N. Campagna, A. O. Di Tommaso, R. Miceli, A. Damiano, and A. Floris. "Advanced Control Analysis of Single Inductor Four Switch Non-Inverting Buck-Boost Converter for Energy Storage Units." In *2023 International Conference on Clean Electrical Power (ICCEP)*, pp. 267-272. IEEE, 2023. Link: https://doi.org/10.1109/ICCEP57914.2023.10247454
4. Rahman, Aqeel Ur, Nicola Campagna, Vincenzo Castiglia, Antonino Oscar Di Tommaso, Fabio Massaro, Rosario Miceli, and Fabio Viola. "Master-slave control of battery/supercapacitor-based hybrid energy storage system for e-vehicle application." In *2022 11th International Conference on Renewable Energy Research and Application (ICRERA)*, pp. 158-163. IEEE, 2022. Link: https://doi.org/10.1109/ICRERA55966.2022.9922855
5. Zehra, Syeda Shafia, Aqeel Ur Rahman, Francesco Grimaccia, Alessandro Niccolai, and Marco Mussetta. "Neuro-fuzzy based energy management of PV-FC based grid-connected microgrid for e-mobility." In *2022 IEEE International Conference on Environment and Electrical Engineering and 2022 IEEE Industrial and Commercial Power Systems Europe (EEEIC/I&CPS Europe)*, pp. 1-6. IEEE, 2022. Link: https://doi.org/10.1109/EEEIC/ICPSEurope54979.2022.9854546

AMBITI DI RICERCA

Power Electronics, Advanced Controls Theory, Energy Conversion System, DC Power Networks