



Frontier Technologies for Future “Space 2.0” Communications (3rd edition)

Summer PhD School sponsored by IEEE AESS Glue-Tech Panel

Organization: IEEE AESS

Modality: remote by Zoom

Dates: 29 August – 1 September 2023

Lecture schedule (first and second day)

FIRST DAY: Tuesday August 29, 2023

H. 8.45 a.m. - 9.00 a.m. CEST

Welcome to the participants (Claudio Sacchi, University of Trento, Trento, Italy)

H. 9.00 a.m. – 12.00 p.m. CEST

“Space 2.0”: the new Space Revolution (Claudio Sacchi, University of Trento, Italy, Marina Ruggieri, University of Rome Tor Vergata, Rome, Italy, Cosimo Stallo, Thales, Rome, Italy)

H.4.30 p.m. -7.30 p.m. CEST

End-to-End System Considerations for Space Communications Systems (Kar-Ming Cheung, JPL, Pasadena, CA)

SECOND DAY: Wednesday August 30, 2023

H. 9.00 a.m. – 12.00 p.m. CEST

Space Softwarization: from Physical Layer to Services: a new paradigmatic vision of Space networks (Fabrizio Granelli, Claudio Sacchi, University of Trento, Trento, Italy, Alessandro Guidotti, University of Bologna, Italy)

H. 3.00 p.m. – 6.00 p.m. CEST

Space Quantum Communications (R. Bassoli, R. Ferrara, J. Notzel, Technical University of Dresden, Dresden, Germany)

Lecture schedule (third and fourth day)

THIRD DAY: Thursday August 31, 2023

H. 9.00 a.m. - 12.00 p.m. CEST

EHF for Satellite Communications: the latest developments and experimentations (Giorgia Parca, Giuseppe Codispoti, Italian Space Agency – ASI, Rome, Italy, Tommaso Rossi, University of Rome “Tor Vergata”, Rome, Italy)

H. 4.30 p.m. - 7.30 p.m. CEST

Software Defined Radio for Satellite Communications: applications for on board and ground processing and Internet of Remote Things (Eugene Grayver, Aerospace Corporation, El Segundo, CA, Vlad Popescu, University of Transylvania, Brasov, Romania)

FOURTH DAY: Friday September 1st, 2023

H. 9.00 a.m. - 12.00 p.m. CEST

Satellite networking in “5G and beyond 5G” scenarios (Mohammed Slim Alouini, King Abdullah University of Science and Technology, Saudi Arabia, Mario Marchese, Fabio Patrone, University of Genoa, DITEN, Italy)

H. 4.00 p.m. - 6.00 p.m. CEST

Final exam