

BLOCKCHAIN TECHNOLOGIES: CHALLENGES AND OPPORTUNITIES

In the last years we have witnessed an impressive and increasing interest around blockchain technologies. Despite being born in the somewhat "wild" context of cryptocurrencies like Bitcoin, today blockchains and their derivations further hold the promise to allow sharing of authoritative transaction logs, data, smart contracts and algorithms across boundaries of trust. Such needs nowadays emerge in several business and industry scenarios including digital identity and asset management, IoT applications, distributed cloud storage, and many others. The main target of the session is to highlight and discuss blockchain applications and early experimental deployments, as well as fundamental issues including but not restricting to scalability and performance, support for cryptographic primitives which may enable "smarter" contracts, and consensus strategies. Submissions concerning prototype applications in specific contexts, like the healthcare and financial sectors, are also welcome.

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Short Curriculum Vitae

Giuseppe Bianchi is Full Professor of Networking at the School of Engineering, University of Roma Tor Vergata since January 2007. His research activity includes programmable network systems, wireless networks, privacy and security, traffic control, and is documented in about 220 peer-reviewed international journal and conference papers, having received more than 14.000 citations (source scholar.google.com). He has carried out pioneering research work on WLAN modelling and assessment, and is currently interested in network programmability in both wireless and wired domains. He has been general or technical co-chair for several major conferences and workshops (IEEE INFOCOM 2014, ACM CoNext 2015, IEEE LANMAN 2016, IEEE WoWMoM 2007 and 2010, ACM WinTech 2011, ACM SRIF 2013, track chair at IEEE PIMRC 2008, etc). G. Bianchi has held general or technical coordination roles in several European projects (FP6-DISCREET, FP7-FLAVIA, FP7-PRISM, FP7-DEMONS, H2020-BEBA, H2020-SCISSOR), and currently participates to seven EU projects on wireless, network programmability and network security topics. He has been (or still is) editor for several journals in his field, including IEEE/ACM Transactions on Networking, IEEE Transactions on Wireless Communications, IEEE Transactions on Network and Service Management, and Elsevier Computer Communications.

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Short Curriculum Vitae

Franco Chiaraluce is an Associate Professor in Telecommunications at the Polytechnic University of Marche since March 2005. His current research activities are mainly focused on error correcting codes, physical layer security and cryptography. On these topics he has been the author or co-author of more than 300 papers published in scientific journals and international conferences, 3 books and 3 patents on code-base cryptography and blockchain. He also cooperates with national and international industries and research centers. In particular, since 2000, he collaborates with the European Space Agency (ESA) on several projects on error correcting codes for space links, also contributing to the standardization activity in the framework of the Consultative Committee for Space Data Systems (CCSDS).