

ESSENTIAL BLOCKCHAIN AND CRYPTO MECHANICS FOR ENGINEERS: DO YOU REALLY OWN BITCOIN?

HYBRID EVENT: Attend IN-PERSON at University of South Florida in ENB 113 or ON-LINE at Microsoft Teams URL provided herein.

ALL ATTENDEES: Please register (at NO COST) - even though the remote attendance URL is provided below.

This talk serves as an introduction to important Web3 technologies such as Decentralized Autonomous Organizations (DAOs), blockchains, cryptocurrencies and Decentralized Finance (DeFi).

The main focus will be on public permissionless blockchains, crypto mechanics, smart contracts and blockchain governance. Consensus algorithms, random number generators, and use of cryptographic hash functions will be discussed as well as "proof-of-work" and "proof-of-stake" techniques employed by most common cryptocurrencies. Also discussed will be the Environmental, Social, and Governance (ESG) issues surrounding mining/minting crypto, crypto money supply, solo/pooled mining and how crypto is typically held by institutions and individuals.

The aim of this talk is to provide a deeper level of understanding of these technologies than the overly simplistic and often inaccurate explanations of blockchain typically espoused by the media.



Dr. Michael A Ramalho of IEEE FWCS SP/COMM Chair and IEEE Blockchain Community

Biography:

Michael A Ramalho, Ph.D. is an IEEE Senior Member and a recipient of the 2021 IEEE Florida Council Outstanding Engineer Award. Dr. Ramalho has extensive experience as a director, lead/chief architect, and principal investigator in networking, media signal processing, unified communications, packet-based error correction, and acoustic spread-spectrum communication technologies. He is IEEE Florida

West Coast Section chair of the Joint Signal Processing and Communication Chapter and an active member of the IEEE Blockchain Community.

Dr. Ramalho was especially active in Internet Telephony in the Web1 era during which time he ran an Internet Telephony research program at Telcordia Technologies, was co-chair of the Voice Over IP Forum, and was Chief Telephony Technologist at Voxware, Inc. during its IPO. He was the first to introduce lossless codec technology to Internet Telephony, resulting in ITU-T Standard G.711.0.

He has also worked for Bell Telephone Laboratories and Cisco Systems. He holds a Ph.D. from Rutgers University and a M.Eng.E.E. from Cornell University. He holds over 55 patents. He has authored many standards in the ITU-T, IETF, and IMTC, and many foundational input documents to ETSI, 3GPP, and ANSI Committee T1 standards.

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Register here: <https://events.vtools.ieee.org/m/327461>