Biography Ninoslav Marina

Prof. Ninoslav Marina is Rector of the University of Information Science and Technology (UIST) in Ohrid since 2012. He was President of the Rector's Conference of the public universities in the Republic of Macedonia (2015-2018). Dr. Marina graduated at the Faculty of Electrical Engineering Skopje in 1998 and obtained his Ph.D. degree at École Polytechnique Fédérale de Lausanne (EPFL) in 2004. In partnership with Nokia Research Centre in Helsinki, his thesis was in the information theory with application to wireless communications. Ninoslav Marina was Director of R&D at Sowoon Technologies (2005 – 2007), visiting scholar at University of Hawaii at Manoa in Honolulu (2007 – 2008), postdoctoral researcher at University of Oslo (2008 – 2009) and postdoctoral Marie Curie Fellow at Princeton University (2009 – 2012). Prof. Marina co-authored more than 100 scientific papers, books and popular texts and has been a guest professor at more than twenty universities in countries including United States, Japan, United Kingdom, Italy, Israel, Russia, Brazil, China, Hong Kong, Norway, Finland, Indonesia, Malaysia, Morocco, Portugal, Azerbaijan and the Czech Republic. Dr. Marina is a Senior Member of the Institute of Electrical and Electronics Engineers (IEEE), and is one of the co-founders of the Macedonian Chapter of the IEEE Information Theory Society. He was also Technical Program Committee Chair of the International Congress on Ultra Modern Telecommunications and Control Systems (ICUMT) and a panel member at the United Nations General Assembly informal interactive consultations on World Summit on the Information Society.

Keynote lectures
1. Blockchains Technologies in Real Estate, XXIII International Scientific Conference on Advance In Civil Engineering (FORM 2020), Hanoi, Vietnam, September 2020 (online)
2. Everything you wanted to know about Blockchain but were afraid to ask, 11-th Int. Congress on Ultra Modern Telecommunications and Control Systems (ICUMT), Dublin), Éire, October 2019,
3. Blockchains for Industry 4.0, IEEE International Conference on Industry 4.0, Artificial Intelligence and Communications Technology, Bali, Indonesia, July 2019,
4. 4-th International Scientific Conference "Industry 4.0" Borovets, Bulgaria, December 2018

Funded Projects
1. Smart soclal media ecosystem in a blockchain federated environment (ARTICONF). Horizon 2020 Collaborative Project. Total: EUR 4'000'000 (NM: EUR 137'375)
2. Blockchain-based IoT-Platform for Smart Supply Chains (Circular Block). Applied research and development project, CTI Innosuisse. CHF 660'000 (NM: CHF 220'000).
3. The future of blockchain - synergy between the legal and technical challenges (BlockARC). Fonds d'Impulsion, Haute Ecole Arc. CHF 59'965 (NM: CHF 30'000).
4. Design and analysis of codes for storage systems with applications to secure cloud storage systems. Brazilian Swiss Joint Research Programme (NM: CHF 17'975).
5. Cooperative Communications with Confidential Messages (CCCM). FP7-PEOPLE-IOF-2008 - Marie Curie Action: "International Outgoing Fellowships for Career Development", NM: EUR 251'049.
6. Cooperative communication for wireless networks. Fellowship for advanced researchers, Swiss National Science Foundation. NM: CHF 74'075.
7. ConsUmer BEhaviour Monitoring System (CUBES). Applied research and development project, CTI Innosuisse. CHF 414'023.
8. Entraining the Circadian Clock (EUCLOCK). Sub-Project 1: Humans, LSHM-CT-2006-018741, Integrated Project, European Commission. EUR 16'036'195, (NM EUR 790'000).
9. Multisensor Headset for Fatigue and Stress Measuring (FaStMe). Applied research and development project, CTI Innosuisse. CHF 272'400.
10. Intelligent Cross Border Accelerator (iCBA). INTERREG IPA Cross border cooperation program Greece - Macedonia. EUR 695'000 (NM EUR 206'000).

11. Sustainable management and treatment of Bio Wastes by using Bio fuel production methods (SumBio). INTERREG IPA Cross-border cooperation program Greece - Macedonia. EUR 1'046'455
12. Erasmus+ strategic partnership in the field of higher education 2015-1-MK01-KA203-002856 (KA203). Erasmus + strategic partnership. EUR 134'970.
13. Launching phone-based primary health care counseling in Macedonia (Tele-care). Bilateral project with Estonia. EUR 21'500.
14. N. Marina. Big Data, distributed storage systems, cloud computing, security, malicious intruder. EUR 6'500.
15. Open Data Initiatives (ODI). Individual contract. EUR 5'000.

Keynote: Ninoslav Marina

Blockchain for traveling in post-Covid era

Bitcoin, Ether, Ripple, Litecoin, darkweb, blockchain, hyperledger. Some keywords that appeared lately in our lives. Disruptive technologies or fraud? Enablers for the society or hidden tools of the villains? Revolution or a scam?

Blockchain Technologies or Distributed Ledger Technologies (DLT) are based on a distributed database that maintains a continuously growing list of ordered records called blocks. Each block contains data, a timestamp, and a link to the previous block, which makes it inherently resistant to modification. Once recorded, the data cannot be altered retroactively. The whole concept is based on the well-established cryptographic hash functions. With a peer-to-peer network and a distributed time-stamping server, the blockchain is managed autonomously. Blockchains are secure by design and provide a high level of trust. It makes them suitable for storing events and other records, while proving the data provenance, while keeping anonymity if necessary. The two most popular blockchains are the digital currency Bitcoin and the smart-contract platform Ethereum. Besides the use for cryptocurrency, the blockchain offers all the communications among machines, sensors and persons, and will improve the customized records to track the whole production, supply chain and movements of goods and humans.

In this keynote speech, we will present the use of the blockchain technologies for increasing the efficiency of the airline traveling while reducing the risk of having Covid passangers. This information recorded on the blockchain will produce a precious big data to get further knowledge about the spread of the pandemics, while preserving the privacy of the subjects. The same concept can be applied in other environments where the density of people brings the risk of close contacts among them: hotels, stadia, sport arenas, concert halls, and similar. At the same time we will try to address some of the questions that many of you were hesitating to ask elsewhere. I will also list some of the advantages that the distributed ledger technologies offer in various applications.