

2022 第十届中国指挥控制大会 特邀专题论坛简介

特邀专题名称

区块链新技术及其在指挥控制领域中的应用

召集人的姓名、职称、单位和邮箱

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特邀专题简介（背景、目的、意见和内容）

区块链已成为学术界和指挥控制界的热门研究领域。区块链是一个不断增长的价值转移交易记录列表，由点对点网络通过分布式共识机制维护。区块链技术具有去中心化、持久性、匿名性和可审计性等特点，可以极大地提高各组织之间业务流程的协作效益。区块链可以应用于多个信息领域，如：指挥控制系统、大数据、云计算、数字经济、智能合同、物联网、安全防护等。基于区块链的技术创新可有效提高指挥控制能力。

本期特刊包含以下区块链和计算技术的新方法，以及在此过程中存在的新挑战和新需求的原创论文。

- 基于区块链的指挥与控制应用服务
- 区块链基础理论与算法
- 区块链即服务（BaaS）以及区块链服务的开发/技术运营/质量保障
- 区块链安全及隐私保护技术
- 区块链系统的可扩展性、可靠性研究
- 区块链应用的设计、优化和智能分析
- 基于区块链的边缘计算、云计算、智能服务

C2-China 2022

Invited Session Summary

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| Title of Session |
| New Trends on Blockchain Technology and Its Application in the Field of Command and Control |
| Name, Salutation, Affiliation and Email of Organizers |
| Tao Feng, Senior Engineer in Academy of Military Sciences, fengt09@163.com Zhenyu Guan, Professor in Beihang University, guanzhenyu@buaa.edu.cn Dawei Li, Assistant Professor in Beihang University, lidawei@buaa.edu.cn |
| Details of Session (background, purpose, significance and scope) |
| <p>Blockchain has become a hot research field in both academia and command and control circles. A blockchain is a growing list of value-transfer transactions, which is maintained by peer-to-peer networks through distributed consensus mechanism. Blockchain has the characteristics of decentralization, persistence, anonymous and auditability, which can greatly improve the cost-effectiveness of business processes among organizations. Blockchain can be applied to many fields of service computing, such as big data, cloud computing, digital economy, intelligence contract, Internet of Things, security, etc. Non-functional innovations in blockchain-based service computing are critical to improving the efficiency of blockchains.</p> <p>This special issue contains the following original papers that introduce new approaches to integrating blockchain and service computing technologies, as well as new challenges and needs along the way.</p> <ul style="list-style-type: none">• Blockchain based command and control application services• Theories and algorithms for blockchain-based services• Blockchain-as-a-Service and blockchain services DevOps• Security and privacy protection for blockchain-based services• Scalability and fault tolerance mechanisms for blockchain-based services• Design, optimization, and learning-based analysis of blockchain-based services• Edge/cloud intelligence for blockchain-based services |