The 2019 International Conference on Computer, Information, and Telecommunication Systems, CITS 2019, is an international forum for scientists, engineers, and practitioners to present their latest research and development results in all areas of Computer, Information, and Telecommunication Systems. The conference will feature tutorials, technical paper presentations, workshops and distinguished keynote speeches.

SCOPe: Topics of interest include, but are not limited to:

**Track I: Computer Systems**
- Cloud computing
- Computer architectures
- Computer hardware technology
- Computer-aided designs and technology
- Display technology
- Digital circuits, systems and logic design
- Embedded systems
- Evolutionary algorithms and computing
- Fuzzy systems and fuzzy logic
- Green computing
- Grid computing and architectures
- Hardware and software co-design
- High-performance computing
- Input/output systems
- Low-power computer technology
- Memory systems
- Mobile computing
- Modeling and simulation
- Object Oriented Languages
- Operating system and middleware for mobile computing and networking
- Performance evaluation
- Pervasive computing
- Real-time systems and simulations
- Reconﬁgurable computing
- System integration
- Systems on chip (SoC)
- Scientiﬁc computing algorithms
- Soft computing
- Software design, veriﬁcation and validation
- Software performance and engineering
- Social networking and computing
- VLSI design

**Track II: Information Technology**
- Agents and multi-agents systems
- Artificial intelligence and expert systems
- Adaptive learning automata
- Bioinformatics and biological computing and engineering
- Database and data warehouses
- Data mining
- Future web
- e-Government
- e-Commerce
- e-Health
- Learning and adaptive learning
- Geographical information systems (GIS)
- Global positioning systems (GPS)
- Human-computer interaction (HCI)
- Network systems, proxies and servers
- Neural networks
- Protocols and standards
- Signal and image processing
- System engineering
- Telematics
- Web-Based Simulation Applications

**Track III: Web Technologies**
- Accessibility issues and Technology
- Data Fusion
- Digital Libraries
- Content transformation and adaptation in proxy server
- Metadata and metamodeling
- Multimedia
- Ontology and semantic web
- Personalized web sites/Web site classification and optimization
- Portal strategies
- Quality recommendation for software service provisioning
- Service oriented architecture
- System integration
- User modeling
- Usability and ergonomics
- Web analytics
- Web services and engineering
- Web interfaces and applications
- Web searching, browsing and ranking
- Web information retrieval
- Web intelligence
- Web performance measurement, modeling and caching
- XML and data management

**Track IV: Networking Systems**
- Bio-inspired and nature-inspired solutions in wireless ad hoc and sensor networks
- Broadband access technologies
- Cognitive radio
- Cross-layer design for mobile and wireless networks
- Dynamic spectrum management
- Disruption tolerant networks
- Energy-efﬁcient networks
- Future Internet
- Hybrid networks
- Medium access control protocols
- Network management
- Network services and protocols
- Optical networks
- Opportunistic networks
- Personal area networks
- Performance-oriented design and evaluation focused on networks and mobile applications
- Quality of service provisioning
- Routing protocols
- Sensor networks
- Smart grids
- Testbed design and implementation
- Traffic Eng. & measurements
- Under water networks
- 60 GHz networking
- Wireless networks

**Track V: Telecommunications Systems**
- Adaptive communications
- Channel estimation
- Cooperative communications
- Channel coding
- Interference management
- Modulation techniques
- MIMO systems
- Novel applications enabled by telecommunication networking systems
- OFDM communications
- Power line communication
- Satellite communication
- Spread-spectrum communications
- UWB communications
- Wireless broadcasting
- Wireless communication

**Track VI: Security Systems**
- Authentication and access control
- Biometrics systems
- Computer and communication security
- Cryptography and cryptanalysis
- Digital watermarking, fingerprinting, and traitor tracing schemes
- Detection analysis and prevention of malware
- Denial of service issues
- Intrusion detection systems
- Information systems security
- Keystore dynamic systems
- Multimedia security
- Network security
- Network systems forensics
- Operating systems security
- Program security
- Physical security
- Privacy enhancing technologies
- Public key infrastructure systems
- Quantum cryptography
- Security of E-Systems and applications
- Security modeling, tools & simulation
- Security of personal area networks
- Security of Wi-Fi and WiMAX systems
- Security of web systems
- Secure PHY and MAC protocols
- User & location privacy
- Virtual Private Network systems
- Vulnerability and Virus analysis
- Vulnerability and attack modeling
- Web security and privacy
- Web-based application security

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Extended versions of selected papers will be published in related special issues of Scholarly International Journals.

**Important Dates (tentative)**
- Paper submission: Extended to May 15, 2019
- Invited session, workshop, tutorial proposals: Extended May 15, 2019
- Author notification: June 15, 2019
- Camera-ready paper submission: July 10, 2019