

QRS 2022 Session Schedule
 All the sessions are based on the time in Beijing, China (UTC+8)

Monday, December 5, 2022		
19:00 – 19:30	• Log in to Zoom	Zoom
19:30 – 20:10	• Session I-A: Software Defect Prediction • Session I-B: Intrusion Detection and Prevention	Zoom
20:10 – 20:50	• Session II-A: Software Vulnerability • Session II-B: Security	Zoom
20:50 – 21:00	• Break	
21:00 – 21:15	• Opening Session	Zoom
21:15 – 22:15	• Keynote Speech: AI for Software Dependability: How Far Can We Go?	Zoom
22:15 – 22:20	• Break	Zoom
22:20 – 23:00	• Session III-A: System and Software Reliability • Session III-B: Information and Software Quality Assurance • Session III-C: Formal Methods • Session III-D: Optimization	Zoom

Tuesday, December 6, 2022		
19:00 – 19:30	• Log in to Zoom	Zoom
19:30 – 20:10	• Session IV-A: Test Case Generation • Session IV-B: Program Debugging • Session IV-C: Malware Detection and Analysis • Session IV-D: Internet of Things and Cloud Computing	Zoom
20:10 – 20:50	• Session V-A: Software Testing and Verification (I) • Session V-B: Machine Learning/Deep Learning Systems (I) • Session V-C: Program Comprehension (I) • Session V-D: Simulation and Evaluation	Zoom
20:50 – 21:30	• Session VI-A: Software Testing and Verification (II) • Session VI-B: Machine Learning/Deep Learning Systems (II) • Session VI-C: Program Comprehension (II) • Session VI-D: Empirical Studies	Zoom
21:30 – 22:10	• Session VII-A: Mobile and Smartphone Applications • Session VII-B: Fault Prediction, Localization, and Prevention (I) • Session VII-C: Blockchain and Smart Contracts (I) • Session VII-D: Cyber Forensics, Security, and E-discovery	Zoom
22:10 – 22:50	• Session VIII-A: Security and Vulnerability • Session VIII-B: Fault Prediction, Localization, and Prevention (II) • Session VIII-C: Blockchain and Smart Contracts (II) • Session VIII-D: Data Quality and Data Driven-based Decision for Software Engineering	Zoom

Wednesday, December 7, 2022		
19:00 – 19:30	• Log in to Zoom	Zoom
19:30 – 20:10	• Session IX-A: Automated and Intelligent Software Testing (I) • Session IX-B: Dependability Testing and Evaluation of Safety-Critical Systems (I) • Session IX-C: Human and Social Aspects of Software Quality • Session IX-D: Intelligent Evolutionary Computation (I)	Zoom
20:10 – 20:50	• Session X-A: Automated and Intelligent Software Testing (II) • Session X-B: Dependability Testing and Evaluation of Safety-Critical Systems (II) • Session X-C: Software Defect Prediction and Analysis • Session X-D: Intelligent Evolutionary Computation (II)	Zoom

20:50 – 21:30	<ul style="list-style-type: none"> • Session XI-A: Reliability and Resilience of Complex Systems • Session XI-B: Fast Abstract (I) • Session XI-C: Software Engineering and Knowledge Management (I) • Session XI-D: Software Engineering and Big Data 	Zoom
21:30 – 22:10	<ul style="list-style-type: none"> • Session XII-A: Creative Computing (I) • Session XII-B: Fast Abstract (II) • Session XII-C: Software Engineering and Knowledge Management (II) 	Zoom
22:10 – 22:50	<ul style="list-style-type: none"> • Session XIII-A: Creative Computing (II) • Session XIII-B: Fast Abstract (III) • Session XIII-C: Maintenance and Cyber Physical Systems 	Zoom

Link to join Zoom meetings: 19:00 – 23:00
All the sessions are based on the time in Beijing, China (UTC+8)

Day 1 (December 5, Monday)

- Opening Session + Keynotes + Sessions I-A + II-A + III-A
<https://us02web.zoom.us/j/83447314682?pwd=MkwxWk41dTFqbC9QZDkwSENpOSkUT09>
Meeting ID: 834 4731 4682
Passcode: QRS2022
- Sessions I-B + II-B + III-B
<https://us02web.zoom.us/j/88639684722?pwd=M0EycXZ6bVRHaUZVODBOU05VMWczUT09>
Meeting ID: 886 3968 4722
Passcode: QRS2022
- Sessions III-C
<https://us02web.zoom.us/j/85005826367?pwd=aVVyYVh2enJaOGdqYUFwcnlvdm11Zz09>
Meeting ID: 850 0582 6367
Passcode: QRS2022
- Sessions III-D
<https://us02web.zoom.us/j/84446304985?pwd=c3ZNZkkyUDY5VlhYeUFaak9PUGQ0QT09>
Meeting ID: 844 4630 4985
Passcode: QRS2022

Day 2 (December 6, Tuesday)

- Sessions IV-A+V-A + VI-A + VII-A + VIII-A
<https://us02web.zoom.us/j/84426276274?pwd=MjRSY3A2UVIVT3EyL1dBWlJPTlBBZz09>
Meeting ID: 844 2627 6274
Passcode: QRS2022
- Sessions IV-B+V-B + VI-B + VII-B + VIII-B
<https://us02web.zoom.us/j/83136971366?pwd=NkVKcnVXWjczNlVIN3Izc1lyU2k0QT09>
Meeting ID: 831 3697 1366
Passcode: QRS2022
- Sessions IV-C+V-C + VI-A + VII-C + VIII-C
<https://us02web.zoom.us/j/88576330300?pwd=UytBQUphHV0ZHL1FCTUhsZ0lFUzZtUT09>
Meeting ID: 885 7633 0300
Passcode: QRS2022
- Sessions IV-D+V-D + VI-D + VII-D + VIII-D
<https://us02web.zoom.us/j/89422360355?pwd=T0Z2K3lqTGIYd0M2ejBSNGtrbE1XUT09>
Meeting ID: 894 2236 0355
Passcode: QRS2022

Day 3 (December 7, Wednesday)

- Sessions IX-A+X-A + XI-A + XII-A + XIII-A
<https://us02web.zoom.us/j/82549658869?pwd=VkcxdVV5emh1a0Nyd1NSTXc0M0FPZz09>
Meeting ID: 825 4965 8869
Passcode: QRS2022

- Sessions IX-B+X-B + XI-B + XII-B + XIII-B
<https://us02web.zoom.us/j/85914802352?pwd=ZWM5WWpvYTJWTFpJMUVHbkJObGQ5dz09>
Meeting ID: 859 1480 2352
Passcode: QRS2022
- Sessions IX-C+X-C + XI-C + XII-C + XIII-C
<https://us02web.zoom.us/j/84475130417?pwd=QnNmdlVvWkdScmdFTEJpQ2hiU1RTUT09>
Meeting ID: 844 7513 0417
Passcode: QRS2022
- Sessions IX-D +X-D + XI-D
<https://us02web.zoom.us/j/84219422012?pwd=dWNyRWl0STFNb1VoZkZ0U3ozc1RvUT09>
Meeting ID: 842 1942 2012
Passcode: QRS2022

QRS 2022 will be moved to online

Due to the ongoing pandemic, certain districts of Guangzhou have been listed as COVID-19 high-risk infectious areas. As a result, QRS 2022 will cancel all the in-person sessions and move the entire conference to online via Zoom.

This is going to be a very difficult task because attendees are from different time zones. It is almost impossible to find appropriate slots that are good for everyone. Moreover, a session may include authors from various regions which can be inconvenient for some of them to give a *live* presentation during a pre-assigned block of time.

In response to all the challenges, the conference will take a mixed approach such that each paper has two parts of presentations: video and at conference.

Part I: Presentation via video

Authors will submit a video with a maximum of 30 minutes to explain the details of their papers and upload it to the following website

<https://app.oatos.com/link?code=qmDSqJE>
(password QRS2022)

The deadline is November 25, 2022. These videos will be made available for all the attendees before the conference so that they can watch them at their own convenience.

Part II: Presentation during the conference

Videos submitted before the conference (see Part 1) will not be played during the conference. Authors of each paper must give a 5-minute short presentation to summarize their methodologies and findings followed by a Q/A. They will log in to a prescheduled live session via Zoom to give their presentations and answer questions. Details of log in information for Zoom meetings will be posted soon on the conference website (<http://qrs.techconf.org>).

Please refer to the following announcements for more details

- Video preparation and submission [[More](#)]
- Paper Presentation (Video & at Conference) [[More](#)]

It is very important that all the attendees and authors visit the conference website regularly for the most recent updates. If you have any questions, please contact Dongcheng Li at dx1170030@utdallas.edu

QRS 2022 Presentation Schedule
 All the sessions are based on the time in Beijing, China (UTC+8)

Monday, December 5, 2022		
19:00 – 19:30	<ul style="list-style-type: none"> • Log in to Zoom 	Zoom
19:30 – 20:10 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session I-A: Software Defect Prediction <ul style="list-style-type: none"> ○ (R001) Semantic Feature Learning based on Double Sequences Structure for Software Defect Number Prediction ○ (R010) An Empirical Study on Software Defect Prediction using Function Point Analysis ○ (R025) An Empirical Study of the Bug Link Rate ○ (R089) Visualization-Based Software Defect Prediction via Convolutional Neural Network with Global Self-Attention ○ (R223) Telemetry-Based Software Failure Prediction by Concept-Space Model Creation 	Zoom
19:30 – 20:10 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session I-B: Intrusion Detection and Prevention <ul style="list-style-type: none"> ○ (R095) Anomaly Detection in Encrypted Identity Resolution Traffic based on Machine Learning ○ (R101) Evaluating Performance and Security of a Hybrid Moving Target Defense in SDN Environments ○ (R122) An Anomaly-Based Approach for Detecting Modularity Violations on Method Placement ○ (R133) LogGD: Detecting Anomalies from System Logs with Graph Neural Networks ○ (R222) An Ontological Analysis of Safety-Critical Software and Its Anomalies 	Zoom
20:10 – 20:50 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session II-A: Software Vulnerability <ul style="list-style-type: none"> ○ (R006) A Taxonomy of Software Flaws Leading to Buffer Overflows ○ (R022) A Comprehensive Analysis of NVD Concurrency Vulnerability ○ (R081) IntJect: Vulnerability Intent Bug Seeding ○ (R086) Separating the Wheat from the Chaff: using Indexing and Sub-Sequence Mining Techniques to Identify Related Vulnerabilities During Bug Triage ○ (R186) Exploring Transformers for Multi-Label Classification of Java Vulnerabilities 	Zoom
20:10 – 20:50 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session II-B: Security <ul style="list-style-type: none"> ○ (R043) Cast Away: On the Security of DLNA Deployments in the SmartTV Ecosystem ○ (R131) GAN-Based Privacy-Preserving Unsupervised Domain Adaptation ○ (R137) Conceptualizing the Secure Machine Learning Operations (SecMLOps) Paradigm ○ (R226) Identity Authentication Strategy of Mobile Crowd Sensing based on CFL ○ (S008) AuthROS: Secure Data Sharing Among Robot Operating Systems based on Ethereum 	Zoom
20:50 – 21:00	<ul style="list-style-type: none"> • Break 	Zoom
21:00 – 21:15	<ul style="list-style-type: none"> • Opening Session <ul style="list-style-type: none"> ○ Steering Committee Chair Professor W. Eric Wong (University of Texas at Dallas) ○ Program Chairs Andrea Bondavalli Italy (University of Florence, Italy) He Jiang (Dalian University of Technology, China) Tadashi Dohi (Hiroshima University, Japan) 	Zoom

21:15 – 22:15	<ul style="list-style-type: none"> • Keynote Speech <p><i>AI for Software Dependability: How Far Can We Go?</i></p> <p>Professor Tao Xie School of Computer Science Peking University, China</p> <p>IEEE Fellow Awardee of 2021 ACM SIGSOFT Distinguished Service Awardee of 2020 IEEE TCSE Distinguished Service</p>	Zoom
22:15 – 22:20	<ul style="list-style-type: none"> • Break 	Zoom
22:20 – 23:00 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session III-A: System and Software Reliability <ul style="list-style-type: none"> ○ (R041) A BiLSTM-Attention Model for Detecting Smart Contract Defects More Accurately ○ (R159) Security Countermeasure Selection for Component-Based Software-Intensive Systems ○ (R182) A Detection Method for Scarcity Defect of Blockchain Digital Asset based on Invariant Analysis ○ (R190) SALUS: A Novel Data-Driven Approach for Enabling Real-Time Safety of Autonomous Vehicles ○ (R221) Automatic Collaborative Testing of Applications Integrating Text Features and Priority Experience Replay 	Zoom
22:20 – 23:00 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session III-B: Information and Software Quality Assurance <ul style="list-style-type: none"> ○ (R138) Human Error-Based Code Review ○ (R187) Contextual Operationalization of Metrics as Scores: Is My Metric Value Good? ○ (R210) A Collaboration-Aware Approach to Profiling Developer Expertise with Cross-Community Data ○ (S005) Proposing a Quality Model to Evaluate and Identify Opportunities to Improve Clinical Practice Guideline Engines ○ (S023) Emotional Dashboard: A Non-Intrusive Approach to Monitor Software Developers' Emotions and Personality Traits 	Zoom
22:20 – 23:00 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session III-C: Formal Methods <ul style="list-style-type: none"> ○ (R102) A Novel Approach for Bounded Model Checking through Full Parallelism ○ (R113) Safety SysML: An Executable Safety-Critical Avionics Requirement Modeling Language ○ (R119) Model Checking the Safety of Raft Leader Election Algorithm ○ (R144) Formal Verification of Hierarchical Ptolemy II Synchronous-Reactive Models with Bounded Model Checking ○ (R173) Coverage Testing of Industrial Simulink Models using Monte-Carlo and SMT-Based Methods 	Zoom
22:20 – 23:00 (40 minutes/ 6 papers)	<ul style="list-style-type: none"> • Session III-D: Optimization <ul style="list-style-type: none"> ○ (R067) Availability and Cost Aware Multi-Domain Service Deployment Optimization ○ (R093) Cache Optimizations for Test Case Reduction ○ (R114) Toward Speed Up Function Signature Recovery via Input Resizing and Multi-Task Learning ○ (R199) The Reuse of Test Case based on Attributes Weight Optimization ○ (S003) GOV: A Verification Method for Smart Contract Gas-Optimization ○ (R065) Stateful Depletion and Scheduling of Containers on Cloud Nodes for Efficient Resource Usage 	Zoom

Tuesday, December 6, 2022		
19:00 – 19:30	<ul style="list-style-type: none"> • Log in to Zoom 	Zoom
19:30 – 20:10 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session IV-A: Test Case Generation <ul style="list-style-type: none"> ○ (R038) Test Case Generation for Ethereum Smart Contract based on Data Dependency Analysis of State Variable ○ (R079) Extracting Temporal Models from Data Episodes ○ (R156) MC/DC Test Case Automatic Generation for Safety-Critical Systems ○ (R193) Generating Abstract Test Cases from User Requirements using MDSE and NLP ○ (R273) DeepRTest: A Vulnerability-Guided Robustness Testing and Enhancement Framework for Deep Neural Networks 	Zoom
19:30 – 20:10 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session IV-B: Program Debugging <ul style="list-style-type: none"> ○ (R107) Towards Extending the Range of Bugs That Automated Program Repair Can Handle ○ (R127) Division by Zero: Threats and Effects in Spectrum-Based Fault Localization Formulas ○ (R149) CGMBL: Combining GAN and Method Name for Bug Localization ○ (R151) The Use of Pretrained Model for Matching App Reviews and Bug Reports ○ (R174) Context-Aware Program Simplification to Improve Information Retrieval-Based Bug Localization 	Zoom
19:30 – 20:10 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session IV-C: Malware Detection and Analysis <ul style="list-style-type: none"> ○ (R011) Understanding and Mitigating Label Bias in Malware Classification: An Empirical Study ○ (R050) Can PoW Consensus Protocol Resist the Whale Attack? ○ (R058) Towards Improving Multiple Authorship Attribution of Source Code ○ (R088) CBSDI: Cross-Architecture Binary Code Similarity Detection based on Index Table ○ (R216) PDG2VEC: Identify the Binary Function Similarity with Program Dependence Graph 	Zoom
19:30 – 20:10 (40 minutes/ 4 papers)	<ul style="list-style-type: none"> • Session IV-D: Internet of Things and Cloud Computing <ul style="list-style-type: none"> ○ (R112) Uncertainty-Aware Behavior Modeling and Quantitative Safety Evaluation for Automatic Flight Control Systems ○ (R189) UcXception: A Framework for Evaluating Dependability of Software Systems ○ (R211) SAS-GKE: A Secure Authenticated Scalable Group Key Exchange Mechanism ○ (R261) Assessing the Quality of Low-Code and Model-Driven Engineering Platforms for Engineering IoT Systems 	Zoom
20:10 – 20:50 (40 minutes/ 6 papers)	<ul style="list-style-type: none"> • Session V-A: Software Testing and Verification (I) <ul style="list-style-type: none"> ○ (R017) A Pattern-Based Test Platform for Families of Smart Health Products ○ (R021) cPV - Simulation and Verification for Membrane Computing ○ (R035) Multi-Transaction Sequence Vulnerability Detection for Smart Contracts based on Inter-Path Data Dependency ○ (R073) Valkyrie: Improving Fuzzing Performance through Deterministic Techniques ○ (R076) Automated Grey-Box Testing of Microservice Architectures ○ (R120) TokenAuditor: Detecting Manipulation Risk in Token Smart Contract by Fuzzing 	Zoom

20:10 – 20:50 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session V-B: Machine Learning/Deep Learning Systems (I) <ul style="list-style-type: none"> ○ (R012) An Effective Low-Dimensional Software Code Representation using BERT and ELMo ○ (R034) Building Safe and Stable DNN Controllers using Deep Reinforcement Learning and Deep Imitation Learning ○ (R083) Evaluating the Robustness of Deep Reinforcement Learning for Autonomous Policies in a Multi-Agent Urban Driving Environment ○ (R087) ParGCN: Abnormal Transaction Detection based on Graph Neural Networks ○ (R109) A Survey on Backdoor Attack and Defense in Natural Language Processing 	Zoom
20:10 – 20:50 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session V-C: Program Comprehension (I) <ul style="list-style-type: none"> ○ (R037) Parameter Description Generation with the Code Parameter Flow ○ (R044) GitHub Considered Harmful? Analyzing Open-Source Projects for the Automatic Generation of Cryptography API Call Sequences ○ (R053) Improved Methods of Pointer Mixture Network for Code Completion ○ (R070) Automated Identification of Performance Changes at Code Level ○ (R075) Cross Platform API Mappings based on API Documentation Graphs 	Zoom
20:10 – 20:50 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session V-D: Simulation and Evaluation <ul style="list-style-type: none"> ○ (R032) A Proactive Self-Adaptation Approach for Software System based on Environment-Aware Model Predictive Control ○ (R061) MetaA: Multi-Dimensional Evaluation of Testing Ability via Adversarial Examples in Deep Learning ○ (R105) MiSim: A Simulator for Resilience Assessment of Microservice-Based Architectures ○ (R264) Quantity-Simulation-Analysis Method Based Novel RSA Timing Attack Algorithm ○ (R268) Continuous Usability Requirements Evaluation based on Runtime User Behavior Mining 	Zoom
20:50 – 21:30 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session VI-A: Software Testing and Verification (II) <ul style="list-style-type: none"> ○ (R272) Crowdsourced Testing Task Assignment based on Knowledge Graphs ○ (R195) A Functional FMECA Approach for the Assessment of Critical Infrastructure Resilience ○ (R207) Predictive Mutation Analysis of Test Case Prioritization for Deep Neural Networks ○ (S019) Automated Synthesis of Quantum Circuits using Neural Network ○ (S020) Test Reuse based on Adaptive Semantic Matching Across Android Mobile Applications 	Zoom
20:50 – 21:30 (40 minutes/ 6 papers)	<ul style="list-style-type: none"> • Session VI-B: Machine Learning/Deep Learning Systems (II) <ul style="list-style-type: none"> ○ (R146) Mutation Testing Based Safety Testing and Improving on DNNs ○ (R164) Focus on New Test Cases in Continuous Integration Testing based on Reinforcement Learning ○ (R184) A Distance-Based Dynamic Random Testing Strategy for Natural Language Processing DNN Models ○ (R213) EDDNet: An Efficient and Accurate Defect Detection Network for the Industrial Edge Environment ○ (S012) Evaluation of the Concurrency Alternatives for Real-Time Intrusion Detection Systems for Vehicles ○ (S030) Strategies for Improving the Error Robustness of Convolutional Neural Networks 	Zoom

20:50 – 21:30 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session VI-C: Program Comprehension (II) <ul style="list-style-type: none"> ○ (R080) CodeBERT-nt: Code Naturalness via CodeBERT ○ (R106) RetCom: Information Retrieval-Enhanced Automatic Source-Code Summarization ○ (R125) API Misuse Detection Method based on Transformer ○ (R165) CRUST: Towards a Unified Cross-Language Static Analysis Framework for Rust ○ (R167) Comprehensive, Automated and Lifecycle: A New Perspective for Rust Security 	Zoom
20:50 – 21:30 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session VI-D: Empirical Studies <ul style="list-style-type: none"> ○ (R020) A Study of Adopting Misclassification Detection and Outlier Modification to Fault Correction in Deep Learning-Based Systems ○ (R072) Quantitative Analysis of Sparsely Synchronized Fail-Safe Processors ○ (R150) An Empirical Study on Source Code Feature Extraction in Preprocessing of IR-Based Requirements Traceability ○ (R181) Pain Pickle: Bypassing Python Restricted Unpickler for Automatic Exploit Generation ○ (R201) An Empirical Study on Software Aging of Long-Running Object Detection Algorithms 	Zoom
21:30 – 22:10 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session VII-A: Mobile and Smartphone Applications <ul style="list-style-type: none"> ○ (R048) Scriptless GUI Testing on Android and iOS Applications ○ (R116) An Exploratory Study for GUI Posts on Stack Overflow ○ (R171) Fine-Tuning Pretrained Model to Extract Undesired Behaviors from App Reviews ○ (R183) A Framework for Scanning Privacy Information based on Static Analysis ○ (R228) EWDLL: Software Aging State Identification based on LightGBM-LR Hybrid Model 	Zoom
21:30 – 22:10 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session VII-B: Fault Prediction, Localization, and Prevention (I) <ul style="list-style-type: none"> ○ (FLRAS01) The Real-time General Display and Control Platform Designing Method based on Software Product Line ○ (FLRAS03) Metamorphic Testing for the Medical Image Classification Model ○ (FLRAS04) Application and Development Prospect of Monitoring Screen based on Three.js Unit Equipment Control System ○ (FPDRE01) A Software Multi-Fault Clustering Ensemble Technology ○ (FPDRE02) Requirements-Related Fault Prevention Mechanism for SOFL Formal Specification-based Programming 	Zoom
21:30 – 22:10 (40 minutes/ 4 papers)	<ul style="list-style-type: none"> • Session VII-C: Blockchain and Smart Contracts (I) <ul style="list-style-type: none"> ○ (BSC06) A Scalable Storage Scheme for On-Chain Big Data using Historical Blockchains ○ (BSC07) Multi Pair Swap-Based Weather Derivative DeFi ○ (BSC08) PTLC: Protect the Identity Privacy during Cross-Chain Asset Transaction More Effectively ○ (BSC10) Modeling Trust Relationships in Blockchain Applications: The Case of Reconfigurable Systems-on-Chip 	Zoom
21:30 – 22:10 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session VII-D: Cyber Forensics, Security, and E-discovery <ul style="list-style-type: none"> ○ (CFSE01) Trial Application of Risk Assessment Method for Metaverse ○ (CFSE02) Machine Learning Based Re-Identification of Location Histories using Contact Information Collected from Social Networking Services ○ (CFSE04) Breaking Anonymity of Social Media by Profiling from Multimodal Information ○ (CFSE05) Analyzing Metadata in PDF Files Published by Police Agencies in Japan ○ (CFSE07) Hierarchical Action Embedding for Effective Autonomous Penetration Testing 	Zoom

<p>22:10 – 22:50 (40 minutes/ 6 papers)</p>	<ul style="list-style-type: none"> • Session VIII-A: Security and Vulnerability <ul style="list-style-type: none"> ○ (S006) A Hierarchical Deep Neural Network for Detecting Lines of Codes with Vulnerabilities ○ (REU01) Social Media Safety Practices and Flagging Sensitive Posts ○ (CFSE08) Security Resilience - Considerations from the Application of the Functional Resonance Method (FRAM) to Information Security Incidents ○ (CFSE06) Generalized Network Temperature for DDoS Detection through Rényi Entropy ○ (R057) A Stochastic Model for Calculating Well-Founded Probabilities of Vulnerability Exploitation ○ (R161) Simulation of Sensor Spoofing Attacks on Unmanned Aerial Vehicles using the Gazebo Simulator 	<p>Zoom</p>
<p>22:10 – 22:50 (40 minutes/ 5 papers)</p>	<ul style="list-style-type: none"> • Session VIII-B: Fault Prediction, Localization, and Prevention (II) <ul style="list-style-type: none"> ○ (FPDRE03) A Fault Localization Method based on Similarity Weighting with Unlabeled Test Cases ○ (FPDRE04) Detecting Security Vulnerabilities with Vulnerability Nets ○ (FPDRE05) Bug Patterns in Probabilistic Programming Systems ○ (R077) CFIWSE: A Hybrid Preprocessing Approach for Defect Prediction on Imbalance Real-World Datasets ○ (R002) Automatic Labeling of SDN Controller Defect Text based on Neural Topic Model 	<p>Zoom</p>
<p>22:10 – 22:50 (40 minutes/ 5 papers)</p>	<ul style="list-style-type: none"> • Session VIII-C: Blockchain and Smart Contracts (II) <ul style="list-style-type: none"> ○ (BSC11) Technical Usability Assessment of Security Analysis Tools for Ethereum Based Smart Contracts ○ (BSC03) Hyperledger Fabric-Based Copyright Management System for Clothing Design Drawings ○ (BSC09) Transferable Unique Copyright Across AI Model Trading: A Blockchain-Driven Non-Fungible Token Approach ○ (SEBD03) Application of Blockchain in Trusted Data Provenance ○ (SRR02) Real-Time Control Algorithm of Intelligent Energy-Saving Lights based on IoT 	<p>Zoom</p>
<p>22:10 – 22:50 (40 minutes/ 3 papers)</p>	<ul style="list-style-type: none"> • Session VIII-D: Data Quality and Data Driven-based Decision for Software Engineering <ul style="list-style-type: none"> ○ (DDBDM09) TTAG+R: A Dataset of Google Play Store’s Top Trending Android Games and User Reviews ○ (DDBDM05) A Vision of DevOps Requirements Change Management Standardization ○ (DQIS01) Towards a Comprehensive Dataset for Next-Day Wildfire Prediction 	<p>Zoom</p>

Wednesday, December 7, 2022		
19:00 – 19:30	<ul style="list-style-type: none"> • Log in to Zoom 	Zoom
19:30 – 20:10 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session IX-A: Automated and Intelligent Software Testing (I) <ul style="list-style-type: none"> ○ (AIST02) Evaluation of Software Testing Adequacy based on AHP and BPNN ○ (AIST04) DeepBoundary: A Coverage Testing Method of Deep Learning Software based on Decision Boundary Representation ○ (AIST07) TSDTest: A Efficient Coverage Guided Two-Stage Testing for Deep Learning Systems ○ (AIST08) An Empirical Study towards Characterizing Neural Machine Translation Testing Methods ○ (AIST09) Evaluation of Intelligent Information System 	Zoom
19:30 – 20:10 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session IX-B: Dependability Testing and Evaluation of Safety-Critical Systems (I) <ul style="list-style-type: none"> ○ (DTES01) Dependability Analysis and Verification Technology of Artificial Intelligence Software ○ (DTES02) Multiphysics Simulation Methods for Microsystem Interconnections ○ (DTES03) Analysis of Velocity Deviation of Satellite-Rocket Separation and Orbit Accuracy of Satellite Caused by Multiple Factors ○ (DTES04) Software Bug Prediction based on Complex Network Considering Control Flow ○ (DTES05) A Multi-layer Fault Triggering Framework based on Evolutionary Strategy Guided Symbolic Execution for Automated Test Case Generation 	Zoom
19:30 – 20:10 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session IX-C: Human and Social Aspects of Software Quality <ul style="list-style-type: none"> ○ (HASQ01) CIL-BSP: Bug Report Severity Prediction based on Class Imbalanced Learning ○ (HASQ02) Internet Governance: Social Mentality and Public Emotion Analysis on Online Media during the COVID-19 Epidemic in Mainland China ○ (HASQ03) Face Recognition Fairness Assessment based on Data Augmentation: An Empirical Study ○ (HASQ04) Similarity Analysis in Data Element Matching based on Word2vec ○ (HASQ05) SemirFL: Boosting Fault Localization via Combining Semantic Information and Information Retrieval 	Zoom
19:30 – 20:10 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session IX-D: Intelligent Evolutionary Computation (I) <ul style="list-style-type: none"> ○ (IEC01) Data Driven User Feature Construction and Requirement Generation in Mobile Applications ○ (IEC03) Knowledge Graph Question Answering based on Contrastive Learning and Feature Transformation ○ (IEC04) Exploring the Impact of Grouping Strategies on Cooperative Co-Evolutionary Algorithms for Solving the Advertising Budget Allocation Problem ○ (IEC05) A Comparison Analysis of Constraint-Handling Techniques on Rule Selection Problem in Credit Risk Assessment: An Industrial View ○ (IEC06) Colonization Strategy Algorithm: A Deviation Algorithm Optimization based on Spatial Autocorrelation Theory 	Zoom
20:10 – 20:50 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session X-A: Automated and Intelligent Software Testing (II) <ul style="list-style-type: none"> ○ (AIST01) IMGGA: Improved Microbial Genetic Algorithm ○ (STV01) Automated Modeling of Web Service Composition and Testing: A UML Sequence Diagram-Based Approach ○ (STV02) Integration- and System-Testing Aligned with Cloud-Native Approaches for DevOps ○ (S022) An Improved Test Case Generation Method based on Test Requirements for Testing Software Component ○ (R265) Attribute-based Non-Interactive Privacy-Protected Crowd-Sourcing Software Testing Engineer Selection Mechanism 	Zoom

20:10 – 20:50 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session X-B: Dependability Testing and Evaluation of Safety-Critical Systems (II) <ul style="list-style-type: none"> ○ (DTES07) Prefilter: A Fault Localization Method using Unlabelled Test Cases based on K-Means Clustering and Similarity ○ (DTES08) Visual-ISAM: A Visualization Method for Software Failure Analysis and Evaluation based on Knowledge Graph Utilizing Improved SALKU Model ○ (DTES09) A Software Defect Prediction Classifier based on Three Minimum Support Threshold Association Rule Mining ○ (HASQ07) IEMT: Inequality-Based Metamorphic Testing for Autonomous Driving Models ○ (R016) Quantifying the Effectiveness of Mutant Sets 	Zoom
20:10 – 20:50 (40 minutes/ 4 papers)	<ul style="list-style-type: none"> • Session X-C: Software Defect Prediction and Analysis <ul style="list-style-type: none"> ○ (SDPA01) Software Defect Prediction via GIN with Hybrid Graphical Features ○ (SDPA02) Generalized Perceptual Modeling: Virtual Human Face Modeling and Expression Recognition Considering Emotion Understanding ○ (SDPA03) Recommendation Algorithm for Graph Convolutional Networks based on Multi-relational Knowledge Graph ○ (SDPA04) A Dead Code Evaluation Method based on Complex Network 	Zoom
20:10 – 20:50 (40 minutes/ 6 papers)	<ul style="list-style-type: none"> • Session X-D: Intelligent Evolutionary Computation (II) <ul style="list-style-type: none"> ○ (IEC07) Mapping Method between 2D Landscape Image and 3D Spatial Data based on Adversarial Relative Depth Constraint Network ○ (IEC08) Prototype Algorithm: Number Chain Features in Spatial Similarity Calculation of Time-Series Graph Sources ○ (IEC11) A Crawler-Based Vulnerability Detection Approach for Cross-Site Scripting ○ (IEC12) A Light-Weight Deep Neural Network for Facial Expression Recognition using Convolutional Neural Networks ○ (ISSR05) A FANETs System for Autonomous Aircraft Flying Formation ○ (IEC16) Software Technology Status Management under the Trend of Ship Informatization 	Zoom
20:50 – 21:30 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session XI-A: Reliability and Resilience of Complex Systems <ul style="list-style-type: none"> ○ (RRCS02) A Selective Maintenance Strategy on Network-Based System with Constrained Flow ○ (RRCS05) An Excellence Level Evaluation Model of Intelligent Manufacturing Unit ○ (RRCS06) Resilience of Double-Layer Urban Transportation Network under Large Passenger Flow ○ (RRCS01) Calculation of Conditional Reliability of Residual Lifetime for Network under Shocking Subject to A Weibull Process ○ (SRCB01) Reliability Analysis of a Computer-Based Interlocking System with a Double 2-out-of-2 Redundancy Structure using Algebraic Binary Decision Diagrams 	Zoom
20:50 – 21:30 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session XI-B: Fast Abstract (I) <ul style="list-style-type: none"> ○ (FA17) Towards Research on Information Gravitation ○ (FA18) Deep Reinforcement Learning for Video Summarization with Semantic Reward ○ (FA01) What should Abeha do? An Activity for Phishing Awareness ○ (FA21) Degradation Data Analysis with Asymmetric Drift and Random Errors ○ (R196) On Securing the Communication in IoT Infrastructure using Elliptic Curve Cryptography 	Zoom

20:50 – 21:30 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session XI-C: Software Engineering and Knowledge Management (I) <ul style="list-style-type: none"> ○ (SEKM01) Elevator Maintenance Site Selection Optimization via Fine-Tuned K-Means ○ (SEKM02) Intelligent Guidance Method for Elevator Emergency Treatment based on Automatic Recommendation and Fault Prediction ○ (SEKM03) A Learning Path Recommendation Method for Knowledge Graph of Professional Courses ○ (SEKM04) Code Generation Method Based on Structured Tree Input and AST Decoder Attention Augmentation ○ (SEKM05) Code Search Method based on Multimodal Representation 	Zoom
20:50 – 21:30 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session XI-D: Software Engineering and Big Data <ul style="list-style-type: none"> ○ (SEBD01) IRRT: An Automated Software Requirements Traceability Tool based on Information Retrieval Model ○ (SEBD02) An Empirical Study on Software Requirements Classification Method based on Mobile App User Comments ○ (SEBD04) Anti-Money Laundering Risk Identification of Financial Institutions based on Aspect-Level Graph Neural Networks ○ (SEBD05) Multi-Chain Model and Cross-Chain Communication Protocol for Financial Transactions ○ (SEBD06) Question Answering Algorithm for Grid Fault Diagnosis based on Graph Neural Network 	Zoom
21:30 – 22:10 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session XII-A: Creative Computing (I) <ul style="list-style-type: none"> ○ (STCC01) A Natural Language-Enabled Virtual Assistant for Human-Robot Interaction in Industrial Environments ○ (STCC02) A General Characterization of Representing Spatiotemporal Knowledge Graph based on OWL ○ (STCC03) A Data-Efficient Method of Deep Reinforcement Learning for Chinese Chess ○ (STCC04) Script Based Pattern Recognition for A Portrait Tracking System on Broadcast Online Scenes ○ (STCC05) LLCF: A Load- and Location-Aware Collaborative Filtering Algorithm to Predict QoS of Web Service 	Zoom
21:30 – 22:10 (40 minutes/ 6 papers)	<ul style="list-style-type: none"> • Session XII-B: Fast Abstract (II) <ul style="list-style-type: none"> ○ (R166) RUSTY: Effective C to Rust Conversion via Unstructured Control Specialization ○ (R215) Log Anomaly Detection Method based on Hybrid Transformer-BiLSTM Models ○ (R027) RandomMix: An Effective Framework to Protect User Privacy Information on Ethereum ○ (R042) TrustAuction: A TEE Based Privacy Protection Framework for Auction Contracts ○ (R055) Feature Difference Based Misclassified Sample Detection for CNN Models Deployed in Online Environment ○ (R097) Systematic Transformation Method from UML to Event-B 	Zoom
21:30 – 22:10 (40 minutes/ 5 papers)	<ul style="list-style-type: none"> • Session XII-C: Software Engineering and Knowledge Management (II) <ul style="list-style-type: none"> ○ (SEKM06) Chinese Character Creation Algorithm: Evaluation of the Effectiveness of Topological Similarity of Remote Sensing Images Considering the Description of Sparse Geographic Structure ○ (QOE01) An Empirical Study of Software Testing Quality based on Natural Experiments ○ (QOE02) Quantum Random Access Codes with Mutually Unbiased Bases in Three-dimensional Hilbert Space ○ (QOE03) Characterization of Nonlocality in Chained Quantum Networks ○ (HASQ06) An Approach of Locating Minimal Failure-Causing Schema for Boolean-Specifications 	Zoom

<p>22:10 – 22:50 (40 minutes/ 6 papers)</p>	<ul style="list-style-type: none"> • Session XIII-A: Creative Computing (II) <ul style="list-style-type: none"> ○ (R091) An Empirical Study of the Impact of COVID-19 on OSS Development ○ (STCC06) A IoT Service Agent Model based on Federated Learning to Improve Service Quality ○ (STCC07) A Creative Computing Approach to Optimizing Citizens' Fashion Education based on Design Thinking for Responding to Micro-Level Needs of Smart City Development ○ (STCC08) A Banana Curve Inspired Digital Colour Model ○ (STCC09) A Quantum Information and Cybernetics-Based Algorithm for Creativity Applying in Cultural Heritage Products Design ○ (STCC10) Risk Evaluation of the Destination Port Logistics based on Self-Organizing Map Computing 	<p>Zoom</p>
<p>22:10 – 22:50 (40 minutes/ 6 papers)</p>	<ul style="list-style-type: none"> • Session XIII-B: Fast Abstract (III) <ul style="list-style-type: none"> ○ (R111) Deep Learning Fuzz Testing Methods for Unstructured Case ○ (R121) Design and Implementation of OOM Module based on Rust ○ (R049) A New Method for Quality Analysis of Multi-Process Manufacture ○ (S013) Resilience Analysis Under the Impact of Cell Failures in the Practical Telecommunication Base Station Networks ○ (Poster01) A Novel Coverage-Guided Greybox Fuzzing Method based on Grammar-Aware with Particle Swarm Optimization ○ (Poster04) Using Fuzzing to Help Abstract Interpretation Based Program Verification 	<p>Zoom</p>
<p>22:10 – 22:50 (40 minutes/ 5 papers)</p>	<ul style="list-style-type: none"> • Session XIII-C: Maintenance and Cyber Physical Systems <ul style="list-style-type: none"> ○ (PM01) Maintenance Optimization for Dependent Two-Unit Systems Considering Stochastic Degradation and Imperfect Maintenance ○ (PM02) End-to-End Reliability Evaluation of 5G Private Communication Networks ○ (PM03) Flexible and Dependable Manufacturing Beyond Xurllc: A Novel Framework for Communication-Control Co-Design ○ (SSCPS01) Modeling Method and Correctness Verification of Power Grid Safety and Stability Control Strategy System ○ (SSCPS02) Modeling and Real-Time Verification for CPS based on Time Automata 	<p>Zoom</p>