ISSRE 2022 Program at a Glance

On-site program

Monday October 31

Local Time (EDT)	Room 1	Room 2	Room 3	Room 4
	New Facluty Symposium	1st Workshop on Assured Autonomy, Artificial Intelligence and Machine Learning (WAAM)	7th Workshop on Resiliency, Security, Defenses and Attacks (RSDA)	12th Workshop on Software Certification (WoSoCer)
8:25 - 8:30	Welcome & Introduction			
8:30 - 10:00	NFS 1	WAAM 1	RSDA 1: Keynote	WoSoCer 1: Keynote
10:00 - 10:30	Coffee Break			
10:30 - 11:00	NFS 2	WAAM 2	RSDA 2	WoSoCer 2
12:00 - 13:30	Lunch			
13:30 - 15:00	NFS 3	WAAM 3	RSDA 3	WoSoCer 3
15:00 - 15:30	Coffee Break			
15:30 - 17:00		WAAM 4		
18:00 - 20:00	Recepion			

Tuesday November 1

Local Time (EDT)	Room 1	Room 2		
8:30 - 9:00	Welcome & Openning			
9:00 - 10:00	Keynote 1			
10:00 - 10:30	Coffee Break			
10:30 - 12:00	Resaerch Track: Best Paper Candidates			
12:00 - 13:30	Lunch			
13:30 - 15:00	Research Track 1: Autonomous Systems	Industry Track 1: Security and Vulnerability Analysis		
15:00 - 15:30	Coffee Break			
15:30 - 17:00	Research Track 2: Machine Learning for Security	Research Track 3: Error Handling		
18:00 - 20:00	Recepion			

Wednesday November 2

Local Time (EDT)	Room 1	Room 2		
9:00 - 10:00	Keynote 2			
10:00 - 10:30	Coffee Break			
10:30 - 12:00	Industry Track: Best Paper Candidates			
12:00 - 13:30	Lunch			
13:30 - 15:00	Research Track 4: Autonomous Systems 2	Industry Track 2: Software Quality Improvement		
15:00 - 15:30	Coffee Break			
15:30 - 17:00	Research Track 5: Functional and Security Testing	Tutorial: Pete Rotella		
18:00 - 20:00	Banquet			

Thursday November 3

Local Time (EDT)	Room 1	Room 2		
9:00 - 10:00	Keynote 3			
10:00 - 10:30	Coffee Break			
10:30 - 12:00	Research Track 6: Models and Analysis	Industry Track 3: Cloud and DevOps		
12:00 - 13:30	Lunch			
13:30 - 15:00	Closing & Business Meeting			

Online program

Sunday October 30

Local Time (EDT)	CST (UTC+8)	CET (UTC+1)				
			2nd Workshop on Reliability of Autonomous Intelligent Systems (RAIS)			
20:40 - 21:00	8:40 - 9:00	1:40 - 2:00	RAIS Opening			
21:00 - 24:00	9:00 - 12:00	2:00 - 5:00	RAIS 1			
2:00 - 6:00	14:00 - 18:00	7:00 - 11:00	RAIS 2			

Monday October 31

Local Time (EDT)	CST (UTC+8)	CET (UTC+1)				
			Doctoral Symposium	14th Workshop on Software Aging and Rejuvenation (WoSAR)	6th Workshop on Software Faults & 4th Workshop on Software Hardware Interaction Faults (IWSF&SHIFT)	2nd Workshop on Safety and Security of Software Using Machine Learning in Cyber-physics System (SSSML)
8:30 -	20:30 -	13:30 -	8:30 - 9:30 Opening & Keynote 9:30 - 10:30 Student Presentations 10:45 - 12:10 Panel & Networking	8:50 - 9:40 Opening & Keynote 9:40 - 10:40 Paper presentations 10:40 - 11:20 Keynote 11:20 - 13:00 Paper presentations	9:00 - 9:55 Opening & Keynote 9:55 - 13:00 Paper sessions	8:30 - 10:00 Paper presentations

Tuesday November 1

Local Time (EDT)	CST (UTC+8)	CET (UTC+1)				
20:00 - 21:00	8:00 - 9:00	1:00 - 2:00	Research Track 7: Fault Injection	Research Track 8: Software Evolution and Re-engineering	Fast Abstract 1	
21:00 - 22:00	9:00 - 10:00	2:00 - 3:00	Research Track 9: Anomaly Detection and Data generation	Research Track 10: Program Analysis		
22:00 - 23:00	10:00 - 11:00	3:00 - 4:00	Research Track 11: Software Testing 1	Industry Track 4: Security and Vulnerability Analysis 2		

Wednesday November 2

Local Time (EDT)	CST (UTC+8)	CET (UTC+1)				
20:00 - 21:00	8:00 - 9:00	1:00 - 2:00	Research Track 12: Software Testing 2	Research Track 13: Software Aging and Monitoring	Fast Abstract 2	
21:00 - 22:00	9:00 - 10:00	2:00 - 3:00	Research Track 14: Fault Localization and Root Cause Analysis	Research Track 15: Reliability of AI-based Software		

Thursday November 3

Local Time (EDT)	CST (UTC+8)	CET (UTC+1)				
10:30 - 12:00	22:30 - 24:00	15:30 - 17:00	Industry Track 5: Cloud and DevOps 2	J1C2: Luigi De Simone		

Keynote talks

Keynote 1	**Nov 1 - 9:00-10:00**
AI software is software and we, as software engineers, have to understand how to use and refactor and modify it *Tim Menzies*	
Keynote 2	**Nov 2 - 9:00-10:00**
TBD	
Keynote 3	**Nov 3 - 9:00-10:00**
TBD	

Tutorial

Tutorial	**Nov 1 - 15:30-17:00**
TBD	
Pete Rotella	

J1C2

J1C2: Luigi De Simone	**Nov 3 - 10:30-11:00**
ThorFI: A Novel Approach for Network Fault Injection as a Service *Domenico Cotroneo, Luigi De Simone and Roberto Natella*	

Research Track

Resaerch Track: Best Paper Cnadidates	**Nov 1 - 10:30-12:00**
TaintSQL: Dynamically Tracking Fine-Grained Implicit Flows for SQL Statements *Wei Lin, Lu Zhang, Haotian Zhang, Kailai Shao, Mingming Zhang and Tao Xie* Minimizing Link Generation in Constraint Checking for Context Inconsistency Detection *Chuyang Chen, Huiyan Wang, Lingyu Zhang, Chang Xu and Ping Yu* Share or Not Share? Towards the Practicability of Deep Models for Unsupervised Anomaly Detection in Modern Online Systems *Zilong He, Pengfei Chen and Tao Huang*	
Research Track 1: Autonomous Systems	**Nov 1 - 13:30-15:00**
StellaUAV: A Tool for Testing the Safe Behavior of UAVs with Scenario-Based Testing (TAR) *Tabea Schmidt and Alexander Pretschner* What to Check: Systematic Selection of Transformations for Analyzing Reliability of Machine Vision Components *Boyue Caroline Hu, Lina Marsso, Krzysztof Czarnecki and Marsha Chechik* Verifiable Obstacle Detection *Ayoosh Bansal, Hunmin Kim, Simon Yu, Bo Li, Naira Hovakimyan, Marco Caccamo and Lui Sha*	
Research Track 2: Machine Learning for Security	**Nov 1 - 15:30-17:00**
Explainable AI for Android Malware Detection: Towards Understanding Why the Models Perform So Well? *Yue Liu, Chakkrit Tantithamthavorn, Li Li and Yepang Liu* Automatic Mapping of Unstructured Cyber Threat Intelligence: An Experimental Study (PER) *Vittorio Orbinato, Mariarosaria Barbaraci, Roberto Natella and Domenico Cotroneo* Federated Learning on Tabular Data: Exploring Potential Privacy Risk *Han Wu, Zilong Zhao, Lydia Chen and Aad van Moorsel*	
Research Track 3: Error Handling & J1C2	**Nov 1 - 15:30-17:00**
Graceful ECC-uncorrectable Error Handling in the Operating System Kernel *Takumi Iguchi and Hiroshi Yamada* Going through the Life Cycle of Faults in Clouds: Guidelines on Fault Handling Xiaoyun Li, Guangba Yu, Pengfei Chen, Hongyang Chen and Zhekang Chen	
Research Track 4: Autonomous Systems 2	**Nov 2 - 13:30 - 15:00**
A Framework for Trusted and Resilient Autonomous Vehicles (PER) *Kevin Leach, Christopher S. Timperley, Kevin Angstadt, Anh Nguyen-Tuong, Jason Hiser, Aaron Paulos, Partha Pal, Patrick Hurley, Carl Thomas, Jack W. Davidson, Stephanie Forrest, Claire Le Goues and Westley Weimer* BRAUM: Analyzing and Protecting Autonomous Machine Software Stack *Yiming Gan, Paul Whatmough, Jingwen Leng, Bo Yu, Shaoshan Liu and Yuhao Zhu* Bootstrapping Confidence in Future Safety based on Past Safe Operation *Peter Bishop, Andrey Povyakalo and Lorenzo Strigini*	
Research Track 5: Functional and Security Testing	**Nov 2 - 15:30 - 17:00**
CEMENT: On the use of Evolutionary Coupling between tests and code units. A case study on fault localization Jeongju Sohn and Mike Papadakis Search-based Testing for Accurate Fault Localization in CPS Ezio Bartocci, Leonardo Mariani, Dejan Nickovic and Drishti Yadav Covariate Software Vulnerability Discovery Model to Support Cybersecurity Test & Evaluation (PER) Julia Sorrentino, Priscila Silva, Gaspard Baye, Gokhan Kul and Lance Fiondella	
Research Track 6: Models and Analysis	**Nov 3 - 10:30 - 12:00**
Software Rejuvenation Meets Moving Target Defense: Modeling of Time-Based Virtual Machine Migration Approach *Matheus Torquato, Paulo Maciel and Marco Vieira* An Empirical Analysis of Compatibility Issues for Industrial Mobile Games (PER) *Zihe Song, Yingfeng Chen, Lei Ma, Shangjie Lu, Honglei Lin, Changjie Fan and Wei Yang* REACH: Refining Alloy Scenarios by Size (TAR) *Ana Jovanovic and Allison Sullivan*	
Research Track 7: Fault Injection	**Nov 1 - 20:00-21:00**
SlowCoach: Mutating Code to Simulate Performance Bugs *Yiqun Chen, Oliver Schwahn, Roberto Natella, Matthew Bradbury and Neeraj Suri* FRATFI: Framework Agnostic Fault Injection for Machine Learning Applications (TAR) *Udit Agarwal, Abraham Chan and Karthik Pattabiraman* VECROsim: A Versatile Metric-oriented Microservice Fault Simulation System (TAR) *Tingzhu Bi, Yicheng Pan, Xinrui Jiang, Meng Ma and Ping Wang*	
Research Track 8: Software Evolution and Re-engineering	**Nov 1 - 20:00-21:00**
Enhancing Traceability Link Recovery with Unlabeled Data *Jianfei Zhu, Guanping Xiao, Zheng Zheng and Yulei Sui* Detecting and Refactoring Feature Envy Based on Graph Neural Network *Dongjin Yu, Yihang Xu, Lehui Weng, Jie Chen, Xin Chen and Quanxin Yang*	

AexPy: Detecting API-breaking Changes in Python Packages
Xingliang Du and Jun Ma

Research Track 9: Anomaly Detection and Data generation **Nov 1 - 21:00-22:00**

PUTraceAD: Trace Anomaly Detection with Partial Labels based on GNN and PU Learning
Ke Zhang, Chenxi Zhang, Xin Peng and Chaofeng Sha
String Test Data Generation for Java Programs
Miaomiao Wang, Baoquan Cui, Jiwei Yan, Jun Yan and Jian Zhang
A Novel Counterexample-Guided Inductive Synthesis Framework for Barrier Certificate Generation
Mi Ding, Kaipeng Lin, Wang Lin and Zuohua Ding

Research Track 10: Program Analysis **Nov 1 - 21:00-22:00**

A Naming Pattern-based Approach for Method Name Recommendation
Yanping Yang, Ling Xu, Meng Yan, Zhou Xu and Zhongyang Deng
A Sanitizer-centric Analysis to Detect Cross-Site Scripting in PHP Programs
He Su, Lili Xu, Huina Chao, Feng Li, Zimu Yuan, Jianhua Zhou and Wei Huo
Identifying Erroneous Software Changes through Self-Supervised Contrastive Learning on Time Series Data
Xuanrun Wang, Kanglin Yin, Qianyu Ouyang, Xidao Wen, Shenglin Zhang, Wenchi Zhang, Li Cao, Jiuxue Han, Xing Jin and Dan Pei

Research Track 11: Software Testing 1 **Nov 1 - 22:00-23:00**

DALT: Deep Activity Launching Test via Intent-constraint Extraction
Ao Liu, Chenkai Guo, Naipeng Dong, Yinjie Wang and Jing Xu
Learning to Prune Infeasible Paths in Generalized Symbolic Execution
Facundo Molina, Pablo Ponzio, Nazareno Aguirre and Marcelo Frias
Feedback-Driven Incremental Symbolic Execution
Qiuping Yi and Guowei Yang

Research Track 12: Software Testing 2 **Nov 2 - 20:00-21:00**

Failure Classification For System-Level Testing Using Only Test Step Results
Claudius Jordan, Philipp Foth, Matthias Fruth and Alexander Pretschner
RemGen: Remanufacturing A Random Program Generator for Compiler Testing
Haoxin Tu, He Jiang, Xiaochen Li, Zhilei Ren, Zhide Zhou and Lingxiao Jiang
Multi-Objective Metamorphic Test Case Selection: an Industrial Case Study (PER)
Jon Ayerdi, Aitor Arrieta, Ernest Pobee and Maite Arratibel

Research Track 13: Software Aging and Monitoring **Nov 2 - 20:00-21:00**

Unifying Evaluation of Machine Learning Safety Monitors
Joris Guerin, Raul Sena Ferreira, Kevin Delmas and Jérémie Guiochet
Taxonomy of Aging-related Bugs in Deep Learning Libraries
Zhihao Liu, Xiaoting Du, Yang Zheng, Zheng Hu, Yanming Miao, Zheng Zheng and Wenjie Ding
The Impact of Software Aging and Rejuvenation on the User Experience for Android System
Kai Jia, Xiao Yu, Chen Zhang, Wenhua Hu, Dongdong Zhao and Jianwen Xiang

Research Track 14: Fault Localization and Root Cause Analysis **Nov 2 - 21:00-22:00**

Improving the Performance of Mutation-based Fault Localization via Mutant Bias
Bin Du, Yuxiaoyang Cai, Haifeng Wang, Yong Liu and Xiang Chen
Effective Attribute Selection for Multi-dimensional Root Cause Analysis
Yiran Cheng, Bo Cheng, Pengxiang Jin, Yongqian Sun, Xiaohui Nie, Nengwen Zhao, Zhang Shenglin and Dan Pei
MC-FLoc: Learning from Traces to Locate Fault in Petri Net Model Checking
Ning Ge and Yuchen Liu

Research Track 15: Reliability of AI-based Software **Nov 2 - 21:00-22:00**

Resilient Mechanism Against Byzantine Failure for Distributed Deep Reinforcement Learning
Mingyue Zhang, Zhi Jin, Jian Hou and Renwei Luo
Adversarial Input Detection Based on Critical Transformation Robustness
Jing Su, Zhen Zhang, Peng Wu, Xuran Li and Jian Zhang
Towards the Robustness of Multiple Object Tracking Systems
Xiaoyuan Xie, Ying Duan, Songqiang Chen and Jifeng Xuan

Industry Track

Industry Track: Best Paper Candidates	**Nov 2 - 10:30-12:00**
Cache Antagonists Identification: A Practice from Alibaba Colocation Datacenter *Kangjin Wang, Chuanjia Hou, Ying Li, Yaoyong Dou, Cheng Wang, Yang Wen, Jie Yao and Liping Zhang* An unsupervised approach to discover filtering rules from diagnostic logs *Marcello Cinque, Raffaele Della Corte, Giorgio Farina and Stefano Rosiello* A Page-mapping Consistency Protecting Method for Soft Error Damage in Flash-based Storage *Jung-Hoon Kim and Young-Sik Lee*	
Industry Track 1: Security and Vulnerability Analysis	**Nov 1 - 13:30-15:00**
An Automated Approach to Re-Hosting Embedded Firmware by Removing Hardware Dependencies *Austin Ketterer, Asha Shekar, Edgardo Barsallo Yi, Saurabh Bagchi and Abraham Clements* Autonomic ZTA-based Network Management Engine (AZNME) *Cihan Tunc, James Durflinger, Charif Mahmoudi and Valerio Formicola* When malloc() Never Returns NULL-Reliability as an Illusion *Gunnar Kudrjavets, Jeff Thomas, Aditya Kumar, Nachiappan Nagappan and Ayushi Rastogi*	
Industry Track 2: Software Quality Improvement	**Nov 2 - 13:30-15:00**
Early Software Defect Prediction: Right-Shifting Software Effort Data into a Defect Curve *Kazuhira Okumoto* Fast Analysis of Evolving Software Systems *Anushri Jana, Bharti Chimdyalwar, Shrawan Kumar and Venkatesh R* Using Complexity Metrics with Hotspot Analysis to Support Software Sustainability *James Willenbring and Gursimran Walia*	
Industry Track 3: Cloud and DevOps	**Nov 3 - 10:30-12:00**
Automated Validation of Insurance Applications against Calculation Specifications *Advaita Datar, Amey Zare, Asia A, R Venkatesh, Dr. Shrawan Kumar and Ulka Shrotri* Prevalence of continuous integration failures in industrial systems with hardware-in-the-loop testing *Han Fu, Sigrid Eldh, Kristian Wiklund, Andreas Ermedahl and Cyrille Artho* Managing Service Dependency for Cloud Reliability: The Industrial Practice *Tianyi Yang, Baitong Li, Jiacheng Shen, Yuxin Su, Yongqiang Yang and Michael Lyu*	
Industry Track 4: Security and Vulnerability Analysis 2	**Nov 1 - 22:00-23:00**
Characterizing Python Method Evolution with PyMevol: An Essential Step Towards Enabling Reliable Software Systems *Haowei Quan, Jiawei Wang, Bo Li, Xiaoning Du, Kui Liu and Li Li* Detecting and Defending CSRF at API-Level *Shun Wang, Chao Ni, Jianbo Wang and Changhai Nie* VulDeBERT: A Vulnerability Detection System Using BERT *Soolin Kim, Jusop Choi, Muhammad Ejaz Ahmed, Surya Nepal and Hyoungshick Kim*	
Industry Track 5: Cloud and DevOps 2	**Nov 3 - 10:30-12:00**
A Method for Component Evaluation for Live Testing of Cloud Systems *Oussama Jebbar, Ferhat Khendek and Maria Toeroe* Automated Dependability Assessment in DevOps Environments *James Cusick, Alberto Avritzer, Allen Tse and Andrea Janes* Code Quality Prediction Under Super Extreme Class Imbalance *Noah Lee, Rui Abreu and Nachiappan Nagappan*	

New Faculty Symposium

NFS1	**October 31 - 8:30-10:00**
Training and Preparing PhD Students Toward Successful Post-PhD Careers *Tao Xie (Peking University)* Everything your PhD Students Always Wanted to Know About Research* (*But Were Afraid to Ask) *Paulo Esteves-Veríssimo (KAUST)*	
NFS2	**October 31 - 10:30-12:00**
How to have a Terrific or a Terrible Life During Your First Three Years as Faculty *Saurabh Bagchi (Purdue University)* Secrets of the Tenured Professor *Tim Menzies (NC State University)*	
NFS3	**October 31 - 13:30-15:00**
Building a Collaborative Research Network *Myra Cohen (Iowa State University)* Do I Have to Stop Programming? The Plight of the "Hackademic" *Brendan Dolan-Gavitt (NYU Tandon)*	

Doctoral Symposium

Doctoral Symposium Keynote	**Nov 1 - 8:30-9:30**
From Padawan to Jedi Knight: The Nine Trials of a PhD Student *Karthik Pattabiraman*	
Doctoral Symposium Student Presentations	**Nov 1 - 9:30-10:30**
Green Resilience of Cyber-Physical Systems *Diaeddin Rimawi* AgentFuzz: Fuzzing for Deep Reinforcement Learning Systems Tiancheng Li A Stochastic Petri net Model of Continuous Integration and Continuous Delivery Sushovan Bhadra Towards automatic validation of composite heterogeneous systems in edge situations Lukáš Černý	
Doctoral Symposium Panel	**Nov 1 - 10:45-11:30**
Moderator: *Hadi Hemmati* - Associate Professor York University, Canada *Foutse Khomh, Professor, École Polytechnique de Montréal, Canada* *Fuqun Huang*, PhD, Researcher at Centre for Informatics and Systems, University of Coimbra, Portugal *Jianwen Xiang*, Professor, Wuhan University of Technology, China *Lei Ma*, Associate Professor, University of Alberta, Canada *Zheng Zheng*, Professor, Beihang University, China	

2nd Workshop on Reliability of Autonomous Intelligent Systems (RAIS)

RAIS1: Keynote talks	**October 30 - 21:00-24:00**
Software and Hardware Reliability of Autonomous Systems *Min Xie* Commercialization and Operation Promotion of Large-Scale Simulation Test for Autonomous Driving Cars *Zi-Jiang Yang*	
RAIS2: All in One	**October 31 - 2:00-6:00**
Safety Assessment: From Black-Box to White-Box *Iwo Kurzidem, Adam Misik, Philipp Schleiss and Simon Burton* A Survey on Autonomous Driving System Simulators *Jixiang Zhou, Yi Zhang, Shengjian Guo and Yan Guo* Arguing safety of an improved autonomous vehicle from safe operation before the change: new results *Robab Aghazadeh Chakherlou, Kizito Salako and Lorenzo Strigini* Colour Space Defence: Simple, Intuitive, but Effective *Pei Yang, Jing Wang and Huan Wang* A systematic approach to develop an autopilot sensor monitoring system for autonomous delivery vehicle based on STPA method *Guangshuang Ge , Yan-Fu Li and Liangliang Sun* Disclosing the Fragility Problem of Virtual Safety Testing for Autonomous Driving Systems *Zhisheng Hu and Shengjian Guo* A simulation study of UAS risk-aware path planning in mitigating third-party risks considering fight volume *Xinyu He, Chengper Jiang, Lishuai li and Henk A. P. Blom* Biologically Plausible Spiking Neural Network for Fault Diagnosis of Intelligent Autonomous Systems *Huan Wang and Yan-Fu Li* Joint optimization of production lot sizing and preventive maintenance threshold based on nonlinear degradation *Li Qu , Junli Liao, Kaiye Gao and Li Yang* Remaining useful lifetime analysis based on functional variance process *Linjie Qin and Yan Shen* Disclosing the Pringles Syndrome in Tesla FSD Vehicles *Shengjian Guo and Zhisheng Hu* A Spiral-FMEA approach for continuous reliability enhancement of autonomous delivery vehicle (ADv) *Liangliang Sun and Yan-Fu Li*	

1st Workshop on Assured Autonomy, Artificial Intelligence and Machine Learning (WAAM)

WAAM1	**October 31 - 8:00-10:00**
Assuring Safety-Critical Machine Learning Enabled Systems: Challenges and Promise *Alwyn Goodloe* Machine-Learned Specifications for the Verification and Validation of Autonomous Cyberphysical Systems *Matthew Litton, Doron Drusinsky and James Michael*	
WAAM2	**October 31 - 10:30-12:00**
Assurance Guidance for Machine Learning in a Safety-Critical System *Martin Feather, Philip Slingerland, Steven Guerrini and Max Spolaor* A Taxonomy of Critical AI System Characteristics for Use in Proxy System Testing *Joanna DeFranco, Mohamad Kassab and Phillip Laplante* AI and Stochastic Terrorism Should it be done? *Bart Kemper*	
WAAM3	**October 31 - 13:30-15:00**
Combinatorial Coverage for Assured Autonomy *Rick Kuhn, M. S. Raunak and Raghu Kacker* XAI for Communication Networks *Joanna DeFranco, Mohamad Kassab and Phillip Laplante* Investigating Bugs in AI-Infused Systems: Analysis and Proposed Taxonomy *Bart Kemper*	
WAAM4	**October 31 - 15:30-17:00**
Safety-Critical Adaptation in Self-Adaptive Systems *Simon Diemert and Jens Weber* Evaluating Human Locomotion Safety in Mobile Robots Populated Environments *Boyi Hu, Yue Luo and Yuhao Chen* Classification Analysis of Bearing Contrived Dataset under Different Levels of Contamination *Shamanth Manjunath, Ethan Wescoat, Vinita Gangaram Jansari, Matthew Krugh and Laine Mears*	

7th Workshop on Resiliency, Security, Defenses and Attacks (RSDA)

RSDA Keynote	**October 31 - 8:45-10:00**
Moving Target Defense (MTD): Recent Advances and Future Research Challenges *Dongseong Dan Kim*	
RSDA2: Dependability of Machine Learning and Security-related Practices	**October 31 - 10:30-12:00**
TENSORFI+: A Scalable Fault Injection Framework for Modern Deep Learning Neural Networks *Sabuj Laskar, Md Hasanur Rahman and Guanpeng Li* Sentinel: A Multi-institution Enterprise Scale Platform for Data-driven Cybersecurity Research *Alastair Nottingham, Molly Buchanan, Mark Gardner, Jason Hiser and Jack Davidson* (Invited Talk) SECOM: Towards a convention for security commit messages *Rui Abreu*	
RSDA3: Artificial Intelligence for Testing and Monitoring	**October 31 - 13:30-15:00**
Automated Test Case Generation from Input Specification in Natural Language *Tianyu Li, Xiuwen Lu and Hui Xu* D2MON: Detecting and Mitigating Real-Time Safety Violations in Autonomous Driving Systems *Bohan Zhang, Yafan Huang, Rachael Chen and Guanpeng Li* The AID4TRAIN project and Closing Remarks *Raffaele Della Corte, Marta Catillo, João F. Ferreira and Guanpeng (Justin) Li*	

12th Workshop on Software Certification (WoSoCer)

WoSoCer Keynote	**October 31 - 9:00-10:00**
How Safe Is Safe Enough for Autonomous Vehicles? *Philip Koopman*	
WoSoCer3: Performance, Safety/Security, and Machine Learning Assessment	**October 31 - 10:30-11:50**
Towards Assessing Isolation Properties in Partitioning Hypervisors *Carmine Cesarano, Domenico Cotroneo and Luigi De Simone* Continuous Verification of Open Source Components in a World of Weak Links *Thomas Hastings and Kristen Walcott* Performance Bottleneck Analysis of Drone Computation Offloading to a Shared Fog Node *Qingyang Zhang, Fumio Machida and Ermeson Andrade* Towards the Quantitative Verification of Deep Learning for Safe Perception *Philipp Schleiss, Yuki Hagiwara, Iwo Kurzidem and Francesco Carella*	
WoSoCer2: Safety in Avionic Domain	**October 31 - 13:30-15:00**
Improving Documentation Agility in Safety-Critical Software Systems Development For Aerospace *Joaquim Rodrigues, Eduardo Ribeiro and Ademar Aguiar* Programming Language Evaluation Criteria for Safety-Critical Software in the Air Domain *Rob Ashmore, Andrew Howe, Rhiannon Chilton and Shamal Faily* A Domain Specific Language for the ARINC 653 Specification *Ikram Darif, Cristiano Politowski, Ghizlane El Boussaidi and Sègla Kpodjedo* Closing Remarks + Discussion	

6th Workshop on Software Faults & 4th Workshop on Software Hardware Interaction Faults (IWSF&SHIFT)

IWSF & SHIFT1	**October 31 - 10:00-11:15**
(Keynote) Model-based Network Fault Injection for IoT Protocols *Cyrille Artho* Improve Counterexample Quality for Failed Program Verification *Li Huang, Bertrand Meyer and Manuel Oriol*	
IWSF & SHIFT2	**October 31 - 11:30-12:15**
Correlating Test Events With Monitoring Logs For Test Log Reduction And Anomaly Prediction *Bahareh Afshinpour, Roland Groz and Massih-Reza Amini* (Keynote) Explainable Vulnerabilities Descriptions with NIST BF *Irena Bojanova*	
IWSF & SHIFT3	**October 31 - 12:30-13:00**
Improving Flexibility in Embedded System Runtime Verification with Python *Wanjin Zhou, Feifei Hu and Junyan Ma* Closing	

14th Workshop on Software Aging and Rejuvenation (WoSAR)

WoSAR1: Software Rejuvenation Models	**October 31 - 9:00-10:40**
(Keynote) Rejuvenation On-The-Go: Addressing Software Aging in Android Mobile Systems *Roberto Natella* A Markov Regenerative Model of Software Rejuvenation Beyond the Enabling Restriction *Laura Carnevali, Marco Paolieri, Riccardo Reali, Leonardo Scommegna and Enrico Vicario* Sequential Performance Analysis of Systems that Age and Rejuvenate *Leonardo Nascimento, Cabral Lima, Daniel Menasché and Guilherme Domingues* Towards Making Unikernels Rejuvenatable *Takeru Wada and Hiroshi Yamada*	
WoSAR2: Software Rejuvenation and Runtime Models	**October 31 - 10:40-11:40**
(Keynote) Software Rejuvenation and Cybersecurity Issues in Model Predictive Control *Jose Maria Maestre Torreblanca* Software rejuvenation and runtime reliability monitoring *Alessandro Fantechi, Gloria Gori and Marco Papini*	
WoSAR3: Software Aging Models	**October 31 - 11:40-12:40**
Analysis of Software Aging in a Blockchain Platform *Douglas Dias, Fumio Machida and Ermeson Andrade* Crash Injection to Persistent Memory for Recovery Code Validation *Soichiro Sakamoto, Keita Suzuki and Kenji Kono* A Software Aging-Related Bug Prediction Framework Based on Deep Learning and Weakly Supervised Oversampling *Yancai Zhou, Jianwen Xiang and Chen Zhang*	

2nd Workshop on Safety and Security of Software Using Machine Learning in Cyber-physics System (SSSML)

SSSML	**October 31 - 8:30-9:30**
Software Supply Chain Attacks: Investigating Novel Approaches to Mitigate SSC Threats *Md Jobair Hossain FaruK, Masrura Tasnim, Shahriar Hossain, Akond Rahman, Fan Wu and Maria Valero* Homomorphic multi-label classification of virus strains *Junwei Zhou, Botian Lei and Lang Huile*	