COMPSAC 2017

POLITECNICO DI TORINO

IEEE Computer Society

IEEE

JIC2 Papers at COMPSAC

J1C2 COMPSAC papers have been accepted or published in a journal, and the link to the journal paper is provided in the conference electronic proceedings. Publishing with COMPSAC benefits authors by providing them a venue to present their work to a wider audience in person, discussion, networking with peers, and driving renewed interest in their work. The following papers are part of COMPSAC's J1C2 papers for 2017:

***Combinations of Personal Characteristic Types and Learning Effectiveness of Teams*, by Hironori Washizaki, Yusuke Sunaga, Masashi Shuto, Katsuhiko Kakehi, Yoshiaki Fukazawa, Shoso Yamato, Masashi Okubo, and Bastian Tenbergen**, published in *IEEE Transactions on Emerging Topics in Computing*, Volume 5(1), March 2017. Presented at CELT Symposia, Session 4, Corte Interrata Room 3.

***Physical Attestation in the Smart Grid for Distributed State Verification*, by Thomas P. Roth and Bruce M. McMillin**, published in *IEEE Transactions on Dependable and Secure Computing*, 2016. Presented at SEPT Symposia, Session 3, Corte Interrata Room 6.

***On the Composability of Design Patterns*, by Ian Bayley and Hong Zhu**, published in *IEEE Transactions on Software Engineering*, Vol. 41(11), November 2015. Presented at SETA Symposia, SEssion 14, Corte Interrata Room 2.

***Seer: A Lightweight Online Failure Prediction Approach*, by Burcu Ozcelik and Cemal Yilmaz**, published in *IEEE Transactions on Software Engineering* 42(1), January 2016. Presented at SETA Symposium, Session 5, Corte Interrata Room 6.

Big Data Analytics and Visualization Competition

Data Science is all about the processes and methods to access and analyze data to gain insights for informed decision making. To promote the awareness and analytic technology of Big Data, IEEE COMPSAC and the IEEE Big Data Initiative have organized a Data Analytics Competition. **Participants will present their solutions at the DSAT symposium at 1:00 on Thursday, Corte Interrata Room 8.**

TUESDAY JULY 4 - WORKSHOPS								
Time/Room	Corte Interrata Room 1	Corte Interrata Room 2	Corte Interrata Room 3	Corte Interrata Room 4	Corte Interrata Room 5	Corte Interrata Room 6	Corte Interrata Room 7	Corte Interrata Room 8
8:30 - 10:00		ADMNET 1	STA 1	ESAS 1		SAPSE/CFSE 1	MVDA 1	Medicomp 1
10:00 - 10:30	Coffee Break							
10:30 - 12:00	Fast Abstracts 1	ADMNET 2	STA 2	ESAS 2		SAPSE/CFSE 2	FCN	Medicomp 2
12:00 - 1:00pm	Lunch Break							
1:00 - 2:30pm	Fast Abstracts 2	ADMNET 3	SIS-SS	ESAS 3		CDS 1	DSCAC 1	Medicomp 3
2:30 - 3:00pm	Coffee Break							
3:00 - 4:30pm				ESAS 4		CDS 2		
6:00 - 8:00pm	COMPSAC 2017 WELCOME RECEPTION: CORTE INTERRATA							
WEDNESDAY JULY 5 - MAIN CONFERENCE								
8:30 - 10:00	SETA 1	SETA 2	CELT 1	CAP 1	NCIW 1	SEPT 1	SRS 1	ITIP 1
10:00 - 10:30	Coffee Break							
10:30 - 12:00	Keynote: Francesco Profumo, Politecnico di Torino Location: Magna Aula *Building Digital Autonomy for a Sustainable World:* *Policies and Strategies in Private and Public Organizations*							
12:00 - 1:00pm	Lunch - Corte Interrata							
1:00 - 2:30pm	SETA 3	SETA 4	CELT 2	CAP 2	NCIW 2	SEPT 2	SRS 2	ITIP 2
2:30 - 3:00pm	Coffee Break							
3:00 - 4:15pm	Panel: *Business Drivers and Impacts of Fog Computing* Location: Aula Magna							
4:15 - 5:30pm	Panel: *Future Challenges in Security* Location: Aula Magna							
5:30 - 6:00pm	IEEE Green ICT							
THURSDAY JULY 6 - MAIN CONFERENCE								
8:30 - 10:00	SETA 5	SETA 6	CELT 3		NCIW 3	SEPT 3	PANEL	ITIP 3
10:00 - 10:30	Coffee Break							
10:30 - 12:00	Keynote: Alberto Sangiovanni Vincentelli, University of California, Berkeley, USA *Connected Autonomous Driving Vehicles: Dream or Nightmare?* Location: Aula Magna							
12:00 - 1:00pm	Lunch - Corte Interrata							
1:00 - 2:30pm	SETA 7	SETA 8	CELT 4		NCIW 4			DSAT 1
2:30 - 3:00pm	Coffee Break							
3:00 - 4:40pm	SETA 9	SETA 10	HCSC 1		EATA 1	SEPT 4	Eta Kappa Nu Panel	DSAT 2
4:30 - 5:30pm	Young Professionals Invited Speaker: Gianluca Setti, University of Ferrara *Publication Etiquette and Ethics: Things You Should Know Before Submitting Your Next Paper* Location: Aula Magna							
5:30 - 6:00pm	Young Professionals Training Location: Aula Magna							
7:00 - 9:00pm	COMPSAC Banquet: Museo dell'Automobile - corseo Unita d'Italia 40 *transportation starts at 6:30pm by bus from Politecnico di Torino*							

Time/Room	Corte Interrata Room 1	Corte Interrata Room 2	Corte Interrata Room 3	Corte Interrata Room 4	Corte Interrata Room 5	Corte Interrata Room 6	Corte Interrata Room 7	Corte Interrata Room 8
FRIDAY JULY 7 - MAIN CONFERENCE								
8:30 - 10:00	SETA 11	SETA 12	HCSC 2	MOWU 1	EATA 2	SEPT 5	PANEL	DSAT 3
10:00 - 10:30	Coffee Break							
10:30 - 12:00	Keynote: Flavio Bonomi, Nebbiolo Technologies *Fog Computing and its Role in the Evolution of the Industrial Internet and of Industry 4.0* Location: Aula Magna							
12:00 - 1:00pm	Lunch -Corte Interrata							
1:00 - 2:30pm	SETA 13	SETA 14	HCSC 3	MOWU 2	EATA 3		PANEL	DSAT 4
2:30 - 3:00pm	Coffee Break							
3:00 - 4:15pm	Plenary Panel: Internet, Industry and Society Location: Aula Magna							
4:15 - 5:30pm	Plenary Panel: Future of Computing Chair: Stephen S. Yau Location: Aula Magna							
5:30 - 6:30pm	COMPSAC 2018 Planning Meeting Location: Aula Magna							
SATURDAY JULY 8 - WORKSHOPS								
8:30 - 10:00	QUORS 1	BIOT 1	STPSA 1	UCDAS 1	NETSAP 1	CORCS/IEESD 1	DSCAC 2	SSERV 1
10:00 - 10:30	Coffee Break							
10:30 - 12:00	QUORS 2	eIoT 1	STPSA 2	UCDAS 2	NETSAP 2	OER 1	DSCAC 3	SSERV 2
12:00 - 1:30pm	Lunch Break							
1:30 - 3:00pm	QUORS 3			UCDAS 3	SIMICE 1	OER 2	SSMSC 1	SSERV 3
3:00 - 3:30pm	Coffee Break							
3:30 - 5:00pm	QUORS 4			UCDAS 4	SIMICE 2		SSMSC 2	

COMPSAC Symposia/Topics
CELT: Computer Education and Learning Technologies
CAP: Computer Architecture and Platforms
DSAT: Data Sciences, Analytics and Technologies
EATA: Emerging Advances in Technologies and Applications
HCSC: Human and Social Computing
ITiP: IT in Practice
MOWU: Mobile, Wearable and Ubiquitous Computing
NCIW: Networks, Communications, Internet and Web Computing
SEPT: Security, Privacy & Trust in Computing
SETA: Software Engineering Technology & Applications

COMPSAC Workshops/Topics
ADMNET: Architecture, Design, Deployment and Management of Networks and Applications
BIoT: Big Data Management for the Internet of Things
CFSE: Computer Forensics in Software Engineering
CORCS: Component-Based Design of Resource-Constrained Systems
DASC: Data Science Challenges in Algorithm and Complexity
ESAS: E-Health Systems and Semantic Web
FCN: Fog Computing and Networking
IEESD: Industrial Experience in Embedded Systems Design

MediComp: Medical Computing
MEDIS: Mobile and Embedded Devices Integrated Supercomputing
MVDA: Modeling and Verifying of Distributed Applications
NETSAP: Network Technologies for Security, Administration and Protection
OER: Open Educational Resources for Computer Science and Information Technology
QUORS: Quality Oriented Reuse of Software
SAPSE: Security Aspects in Processes and Services Engineering
SIMICE: Secure Identity Management in the Cloud Environment
SIS-SS: Smart IoT Sensors and Social Systems for eHealth and Well-being Applications
SSERV: Social Services through Human and Artificial Agent Models
SSMC: Smart and Sustainable Mobility in Smart Cities
STA: The 8th IEEE International Workshop on Software Test Automation
STPSA: Security, Trust and Privacy for Software Applications
UCDAS: User Centered Design and Adaptive Systems

Tuesday July 4 – Workshops

8:30 – 10:00

ADMNET: The 4th IEEE International Workshop on Architecture, Design, Deployment and Management of Networks and Applications
Session 1: Test, Measurement
Location: Corte Interrata Room 2
Session Chair: Takashi Yamanoue, Fukuyama University

DNetSpec: A Distributed Network Testing Toolset for Middleware Developers
Shintaro Ishihara, Masahiro Fujita, Toyokazu Akiyama

Improving Packet Capture Trace Import in Trace Compass with a Data Transformation DSL
Ruediger Gad

Interest ACK: A Fast Packet Loss Detection mechanism for Content-Centric Networking
Tsuyoshi Yabuuchi, Ryo Nakamura, Hiroyuki Ohsaki

STA: The 9th IEEE International Workshop on Software Test Automation
Session 1: Feature and Interface Based Testing
Location: Corte Interrata Room 3
Session Chair:

Applying Feature Selection to Software Defect Prediction using Multi-objective Optimization
Xiang Chen, Yuxiang Shen, Zhanqi Cui, Xiaolin Ju

A Model-based Testing Framework for Cloud API Testing
Junyi Wang, Xiaoying Bai, Linyi Li, Zhicheng Ji, Haoran Ma

FORMAT: A Tool for Adapting Test Models Based on Feature Models
Burcu Ergun, Ceren Sahin Gebizli, Hasan Sozer

OpenFlow Modeling Based on CPN for Evolution Consideration and Executable Test Case Generation
Hongwei Ruan, Lu Wang, Xiao Yang, Lulu Dong, Hua Li

ESAS: The 12th IEEE International Workshop on E-Health Systems and Semantic Web
Session 1
Location: Corte Interrata Room 4
Session Chair: Kathy L. Grise, IEEE Future Directions

A Deep-learning-based Method of Estimating Water Intake
Yutaro Yamada, Takato Saito, Satoshi Kawasaki, Daizo Ikeda, Masaji Katagiri, Masafumi Nishimura, Hiroshi Mineno

Blood. Health. FOAF: Extending FOAF with Blood Ontology
Okan Bursa, Emine Sezer, Ozgu Can, Murat Osman Unalir

Standardizing the Crowdsourcing of Healthcare Data Using Modular Ontologies
Hengyi Hu, Larry Kerschberg

CDS: The 5th IEEE International Workshop on Consumer Devices & Systems
Session 1
Location: Corte Interrata Room 5
Session Chair: Toru Kobayashi, Nagasaki University

Design of Common Software Architecture as Based for Application Generator and Meta-Generator for Interactive Systems
Atsushi Esaka, Masami Noro, Atsushi Sawada

Dynamically Exposing and Controlling Physical Devices by Expanding Web of Things Scheme
Takuya Sakamoto, Hidenobu Ito, Kazuaki Nimura

Wrist Player: A Smartwatch Gesture Controller for SmartTVs
Mateus Machado Luna, Fabrizzio Alphonsus A.M.N. Soares, Thyago Peres Carvalho, Ronaldo Martins da Costa, Hugo Alexandre Dantas do Nascimento

A Collusion-resilient Hybrid P2P Framework for Massively Multiplayer Online Games
Kazuma Matsumoto, Yasuo Okabe

SAPSE: The 9th IEEE International Workshop on Security Aspects in Processes and Services Engineering
and
CFSE: The 9th IEEE International Workshop on Computer Forensics in Software Engineering
Session 1: Distributed Services
Location: Corte Interrata Room 6
Session Chair: Chiara Braghin, University of Milan, Italy

Trust-aware and Location-based Collaborative Filtering for Web Service QoS Prediction
Kai Chen, Hongyan Mao

RPUCC-RM: Permission-Role-Usage Cardinality Constrainted Role Mining
Carlo Blundo, Stelvio Cimato, Luisa Siniscalchi

Adaptive Cost Efficient Framework for Cloud-based Machine Learning
Rezvan Pakdel, John Herbert

MVDA: The 6th IEEE International Workshop on Modeling and Verifying Distributed Applications
Session 1
Location: Corte Interrata Room 7
Session Chair: Leila Jemni Ben Ayed, University of Tunis, Tunisia

A Modeling Approach for Flexible Workflow Applications of Cloud Services
Imen Ben Frai, Yousra Ben Daly Hlaoui

Towards an ASM Specification for Monitoring and Adaptation Services of Large-Scale Distributed Systems
Andreea Buga, Sorana Tania Nemes

From Sequence Diagrams to Event B: A Specification and Verification Approach of Flexible Workflow Applications of Cloud Services Based on Meta-model Transformation
Yousra Ben Daly Hlaoui, Ahlem Ben Younes, Leila Jemni Ben Ayed, Manel Fathalli

MEDICOMP: The 4th IEEE International Workshop on Medical Computing
Session 1: Predictive Data Analysis
Location: Corte Interrata Room 6
Session Chair: Ji-Jiang Yang, Tsinghua University, China

Chronic Kidney Disease Prediction on Imablanced Data by Multilayer Perceptron: Chronic Kidney Disease Prediction
Pinar Yildirim

Identify Biological Modules and Hub MiRNAs for Oral Squamous Cell Carcinomas
Doudou Zhou, Ji-Jiang Yang, Weiliang Qiu, Jianqiang Li, Shi Chen, Qing Wang, Minhua Lu

An Initial Screening Method for Tuberculosis Diseases using a Multi-objective Gradient Evolution-based Support Vector Machine and C5.0 Decision Tree
Ferani E. Zulvia, R.J. Kuo, Eddy Roflin

SLC25A36 and ZFAND5 Expression Levels Altered by the Interaction of EtOH Dosage and Exposure Time in Human Dental Pulp Stem Cells
Zhirui Wang, Jianqiang Li, Weiliang Qiu, Ji-Jiang Yang, Rui Mao, Shi Chen

10:00 – 10:30   **Coffee Break**

10:30 – 12:00   **Fast Abstracts**
Session 1
Location: Corte Interrata Room 1
Session Chair: Michiharu Takemoto, NTT, Japan

Infusing Topic Modeling into Interactive Program Comprehension: An Empirical Study
Tianxia Wang, Yan Liu

First Meeting Time Formula of Two Random Walkers toward Understanding Epidemic Information Dissemination
Yusuke Sakumoto, Hirouki Ohsaki

Toward Design of Garbled Circuits Using Quantum Gates
Maryam Ehsanpour

Design of a Node Status Visualizing Software Utilizing the AR Technology for Multihop Wireless Networks
Tomoyuki Ohta, Ryota Ito, Yoshiaki Kakuda

New Strategies for Selecting Reuse Candidates on Automated Program Repair
Akito Tanikado, Haruki Yokoyama, Masahiro Yamamoto, Soichi Soichi, Yoshiki Higo, Shinji Kusumoto

Investigation and Detection of Split Commit
Ryo Arima, Yoshiki Higo, Shinji Kusumoto

ADMNET: The 4th IEEE International Workshop on Architecture, Design, Deployment and Management of Networks and Applications
Session 2: Resource Balancing
Location: Corte Interrata Room 2
Session Chair: Yong Jin, Tokyo Institute of Technology, Japan

A Method of Mobile core Network Load Reduction Using Autonomous Clustering-based Two-Layered Structure for Information Dissemination in Wireless Networks
Toshikazu Terami, Tomoyuki Ohta, Yoshiaki Kakuda

Resource Allocation methods Considered Residual Link Bandwidth for Service Function

Chaining Design
Naoki Akutsu, Kenichi Baba

LXC Container Migration in Cloudlets under Multipath TCP
Yuqing Qiu, Chung-Horng Lung, Samuel Aiila, Pradeep Srivastava

STA: The 9th IEEE International Workshop on Software Test Automation
Session 2: Formal Methods
Location: Corte Interrata Room 3
Session Chair:

Theoretical, Weak and Strong Accuracy Graphs of Spectrum-based Fault Localization Formulas
C.M. Tang, Y.T. Yu, W.K. Chan

A Case Study on Context Maintenance in Dynamic Hybrid Race Detectors
Jialin Yang, W.K. Chan

How Does GUI Testing Exercise Application Logic Functionality?
Abdulaziz Alkhalid, Yvan Labiche

ESAS: The 12th IEEE International Workshop on E-Health Systems and Semantic Web
Session 2
Location: Corte Interrata Room 4
Session Chair: Okan Bursa, Agean University

Towards Detecting Sex Offenders in Social Networks
Sai Vallapu, Thoshitha Gamage

A Mathematical Model for a Hybrid System Framework for Privacy Preservation of Patient Health Records
Kingsford Kissi Mireku, Fengli Zhang, Dennis Mensah

CDS: The 5th IEEE International Workshop on Consumer Devices & Systems
Session 2
Location: Corte Interrata Room 5
Session Chair: Yasuo Okabe, Kyoto University, Japan

On-demand Barrier-free Street View System Using Sensor Information from General-Purpose Wheelchair Users
Kenichi Arai, Takuya Tateishi, Toru Kobayashi, Noboru Sonehara

Visualization Method Using Probe Bicycle to Analyze Bicycle Rider's Control Behavior
Ryoichi Takahashi, Kazuki Miki, Shigeo Kaneda

VID: Virtual Information Desk
Navid Seidi, Farshad Eshghi, Manoochehr Kelarestaghi

SAPSE: The 9th IEEE International Workshop on Security Aspects in Processes and Services Engineering
and
CFSE: The 9th IEEE International Workshop on Computer Forensics in Software Engineering
Session 2: Data Protection
Location: Corte Interrata Room 6

Session Chair: Stelvio Cimato, University of Milan, Italy

Querying Encrypted OLAP Data
Alfredo Cuzzocrea

*Is Pokemon GO Watching You? A Survey on the Privacy Awareness of Location-based Apps'
Users*
Chiara Braghin, Marillisa Del Vecchio

Digital Media Tampering Detection Techniques: An Overview
Songpon Teerakanok, Tetsutaro Uehara

FCN: The 1ˢᵗ IEEE International Workshop on Fog Computing and Networking
Session 1
Location: Corte Interrata Room 8
Session Chair: Tao Zhang, Cisco Systems Inc., USA

On the Deployment of Healthcare Applications over Fog Computing Infrastructure
Orestis Akrivopoulos, Ioannis Chatzigiannakis, Christos Tselios, Athanasios Antoniou

Towards Container Orchestration in Fog Computing Infrastructures
Saiful Hoque, Mathias Santos de Brito, Alexander Willner, Florian Schreiner, Thomas Magedanz

MEDICOMP: The 4ᵗʰ IEEE International Workshop on Medical Computing
Session 2: Medical Association Analysis
Location: Corte Interrata Room 6
Session Chair: Bruce McMillin, Missouri University of Science & Technology, USA

Alcohol-induced Differential Variable Genes
Siyuan Liang, Jianqiang Li, Weiliang Qiu, Juan Li, Ji-Jiang Yang, Caiyun Yang, Rui Mao, Zhihua
Sun

*A Novel Real-time Non-invasive Hemoglobin Level Detection Using Video Images from
Smartphone Camera*
Golam Mushih Tanimul Ahsan, Md. Osman Gani, Md. Kamrul Hasan, Sheikh Iqbal Ahamed,
William Chu, Mohammad Adibuzzaman, Joshua Field

Re-structuring and Specific Similarity Computation of Electronic Medical Records
Yunxuan Zhang, Ziping He, Ji-Jiang Yang, Qing Wang, Jianqiang Li

12:00 – 1:00   **Lunch - Corte Interrata**

1:00 – 2:30   **Fast Abstracts**
Session 2
Location: Corte Interrata Room 1
Session Chair: Dave Towey, University of Nottingham at Ningbo, China

What Makes Software Energy Efficient? Make it Faster
Hiroyuki Matsuo, Shinsuke Matsumoto, Shinji Kusumoto

Identifying Fundamental Goals from Objects in a Scenario to Facilitate System Introduction
Yoshihide Chubachi, Haruhiko Kaiya

Computer Literacy Education: Challenges in Multicultural Environments

Simona Vasilache

FATDOG: Hadoop based Test Generation Tool for RESTful Web Service
Jing Liu, Wenjie Chen

A Secure and Lightweight IoT Device Remote Monitoring and Control Mechanism Using DNS
Yong Jin, Masahiko Tomoishi, Nariyoshi Yamai

Development of the Edge Computing Platform Based on Functional Modulation Architecture
Tohru Kondo, Hidenobu Watanabe, Toshihiro Ohigashi

Traceability Link Mining – Focusing on Usability
Shinpei Ogata, Yukiya Yazawa, Kozo Okano, Haruhiko Kaiya, Hironori Washizaki

ADMNET: The 4ᵗʰ IEEE International Workshop on Architecture, Design, Deployment and Management of Networks and Applications
Session 3: Security and Invited Talk
Location: Corte Interrata Room 2
Session Chair: Hiroki Kashiwagi, Osaka University, Japan

Cache Function Activation on a Client Based DNSSEC Validation and Alert System by Multithreading
Kunitaka Kakoi, Yong Jin, Nariyoshi Yamai, Naoya Kitagawa, Masahiko Tomoishi

A Spoofed E-mail Countermeasure Method by Scoring the Reliability of DKIM Signature Using Communication Data
Kanako Konno, Kenya Dan, Naoya Kitagawa

Invited Talk: *Deployment of Multilanguage Security Awareness Education Online Course on Federated Moodle in Japan*
Hiroshi Ueda, Kyoto University and Motonori Nakamrua, National Institute of Informatics, Japan
Chaired by Takashi Yamanoue, Fukuyama University

SIS-SS: The 1ˢᵗ IEEE International Workshop on Smart IoT Sensors and Social Systems for eHealth and Well-being Applications
Session 1: Security, IoT Systems and Devices for eHealth
Location: Corte Interrata Room 3
Session Chair: Luca Vollero, University Campus Bio-Medico of Rome, Italy

Performance Assessment of BLE Nano BAN Micro-infrastructures
Luca Vollero, Marco Sabatini

Cybersecurity of Wearable Devices: An Experimental Analysis and a Vulnerability Assessment Method
Eng. Matteo Langone, Roberto Setola, Javier Lopez

LoRaWAN as an e-Health Communication Technology
M. Talha Buyukakkaslar, Mehmet Ali Erturk, Muhammed Ali Aydin, Luca Vollero

Contactless Detection of ECG Signals: Sensor Architecture and Simulation
Marco Santonico, Alessandro Zompanti, Giorgio Pennazza, Giuseppe Ferri, Francesca Romana Parente, Mario Benassai

Security in Cross-Border Medical Data Interchange: A Technical Analysis and a Discussion of

Possible Improvements
Raffaele Martino, Salvatore D'Antonio, Luigi Coppolino, Luigi Romano

ESAS: The 12th IEEE International Workshop on E-Health Systems and Semantic Web
Session 3
Location: Corte Interrata Room 4
Session Chair: Alfredo Cuzzocrea, University of Trieste

Technological Module for Unsupervised, Personalized Cardiac Rehabilitation Exercising
Anargyros Chatzitofis, Dimitrios Zarpalas, Dimitris Filos, Andreas Triantafyllidis, Ioanna Chouvarda, Nicos Maglaveras, Petros Daras

A Semantic Extraction and Sentimental Assessment of Risk Factors (SESARF): An NLP Approach for Precision Medicine
Susan Sabra, Khalid Mahmood, Mazen Alobaidi

An Intelligent Tracking System: Application to Acute Respiratory Infections (TrackARTI)
Duygu Celik Ertugrul, Atilla Elci, Yiltan Bitirim

DSCAC: The 1st IEEE International Workshop on Data Science Challenges in Algorithm and Complexity
Session 1
Location: Corte Interrata Room 7
Session Chair: Aki Hiro Sato

Finding All Breadth First Full Spanning Trees in a Directed Graph
Hoda Khalil, Yvan Labiche

Incremental Learning from Multi-level Monitoring Data and its Application to Component Based Software Engineering
Salman Taherizadeh, Vlado Stankovski

Tackling Disruption, Fostering Positive Impact: Policy Priorities and Citizens' Expectations for the Next Generation Internet
Fiorenza Lipparini

Understanding the Impact of ICT-enabled Innovation in Supporting Welfare Reforms in Europs: Towards a Data-driven Approach for Dynamic Modelling and Simulation
Gianluca Misuraca, Cristiano Codagnone

MEDICOMP: The 4th IEEE International Workshop on Medical Computing
Session 3: Medical System and Evaluation
Location: Corte Interrata Room 6
Session Chair: Rui Mao, ShenZhen University, China

A Study of Machine Learning Technologies in Healthcare
Rohan Bhardwaj, Ankita Nambiar, Aayush Patel, Debojyoti Dutta

Breaking Implicit Trust in Point-of-Care Medical Technology: A Cyber-Physical Attestation Approach
Frederick Love, Bruce McMillin

Gene Network Modules Associated to DPSCs Differentiation
Wenjing Xu, Weiliang Qiu, Juan Li, Jianqiang Li, Ji-Jiang Yang, Siyuan Liang, Chunjie Guo, Yue Li

The Investigation on Effectiveness Evaluation Methods for One Medical Material Used for Surgery Patients Based on Electronic Medical Records Data
Bio Liu, Kelu Yao, Lan Wei, Xiaolu Fei

2:30 – 3:00   **Coffee Break**

3:00 – 4:30   **ESAS: The 12ᵗʰ IEEE International Workshop on E-Health Systems and Semantic Web Session 4**
Location: Corte Interrata Room 4
Session Chair: Atilla Elci, Aksaray University, Turkey

Panel: Semantic Web & E-Health
Participants: Invited Speaker, ESAS Session Chairs, ESAS Authors

6:00 – 8:00   **Welcome Reception – Corte Interrata**

Wednesday July 5 – Main Conference

8:30 – 10:00   **SETA: Software Engineering Technology and Applications**
Session 1
Location: Corte Interrata Room 1
Session Chair: Xiaoguang Mao, National University of Defense, China

An Empirical Comparison of Similarity Measures for Model Input Prioritization
Jinfu Chen, Weiwen Zong, Dave Towey, Yunan Zhou, Rubing Huang

Identifying Core Objects for Trace Summarization Using Reference Relations and Access Analysis
Kunihiro Noda, Takashi Kobayashi, Tatsuya Toda, Noritoshi Atsumi

LeakDAF: An Automated Tool for Detecting Leaked Activities and Fragments of Android Applications
Ma Jun, Liu Sheng, Yue Shengtao, Tao Xianping, Lu Jian

SETA: Software Engineering Technology & Applications
Session 2
Location: Corte Interrata Room 2
Session Chair:

Measurement of Source Code Readability Using Word Concreteness and Memory Retention of Variable Names
Weifeng Xu, Dianxiang Xu, Lin Deng

Modeling and Analysis of the Security Protocol in C-DAX Based on Process Algebra
Ailun Liu, Huibiao Zhu, Yuan Fei, Shuangqing Xiang, Gang Lu, Wanling Xie

A Proof System for mCWQ
Wanling Xie, Xi Wu, Huibiao Zhu, Gang Lu, Ailun Liu

FeSCH: A Feature Selection Method using Clusters of Hybrid-data for Cross-Project Defect Prediction
Chao Ni, Wangshu Liu, Qing Gu, Xiang Chen, Daoxu Chen

CELT: Computer Education and Learning Technologies
Session 1
Location: Corte Interrata Room 3
Session Chair:

Mining Capstone Project Wikis for Knowledge Discovery
Swapna Gottipati, Venky Shankararaman, Melvrick Goh

Experimental Validation of a Massive Educational Service in a Blended Learning Environment
Elena Baralis, Luca Cagliero, Laura Farinetti, Marco Mezzalama, Enrico Venuto

A Microservice-based MOOL in Acoustics Addressing the Learning-at-Scale Scenario
Antonella Longo, Marco Zappatore

CAP: Computer Architecture and Platforms

Session 1
Location: Corte Interrata Room 4
Session Chair: Cristina Seceleanu, Malardalen University, Sweden

Invited Talk: *Open Tool Chains – A Solution for System Design Efficiency*
Tiberiu Seceleanu, ABB Corporate Research, Sweden

An Extensible Pervasive Platform for Large-scale Anticipatory Mobile Computing
Antonella Longo, Marco Zappatore, Christian Meurisch, Bennet Jeutter, Wladimir Schmidt,
Nickolas Gündling, Benedikt Schmidt, Fabian Herrlich, Max Mühlhäuser

A Novel Integrated Architecture for Ambient Assisted Living Systems
Ashalatha Kunnappilly, Alexandru Sorici, Imad Alex Awada, Irina Mocanu, Cristina Seceleanu,
Adina Madga Florea

NCIW: Networks, communications, Internet and Web Technologies
Session 1
Location: Corte Interrata Room 5
Session Chair: Hossein Fotouhi, Mälardalen University, Sweden

Formalization and Verification of the PKMv3 Protocol Using CSP
Yuanmin Xu, Huibial zhu, Xiaoran Zhu, Xi Wu, Jian Guo, Gang Lu

Cardinality Counting Circuit for Real-time Abnormal Traffic Detection
Shuji Sannomiya, Akira Sato, Kenichi Yoshida, Hiroaki Nishikawa

Cache Effect of Shared DNS Resolver
Kazunori Fujiwara, Akira Sato, Kenichi Yoshida

SEPT: Security, Privacy and Trust
Session 1: Model Based Research
Location: Corte Interrata Room 6
Session Chair: Takeshi Yagi, NTT, Japan

Enforcing Generalized Refinement-based Noninterference for Secure Interface Composition
Cong Sun, Ning Xi, Jianfeng Ma

Securing Link State Routing for Wireless Networks against Byzantine Attacks: A Monitoring Approach
Babatunde Ojetunde, Naoki Shibata, Juntao Gao

Processing Multiple User Spatial Queries
Xiaoran Duan, Yong Wang, Juguang Chen, Junhao Zhang

SRS: Student Research Symposium
Session 1
Location: Corte Interrata Room 7
Session Chair: Kenichi Yoshida, University of Tsukuba, Japan

Research on Integrated Authentication Using Passwordless Authentication Method
Michitomo Morii, Hiroki Tanioka, Kenji Ohira, Masahiko Sano, Kenji Matsuura, Yosuke Seki,
Tetsushi Ueta

On the Effect of Scale-Free Structure of Network Topology on Performance of Content-Centric

Networking
Ryo Nakamura, Hiroyuki Ohsaki

A Fluid-Based Model of Transport Protocol in Content-Centric Networking
Tsuyoshi Yabuuchi, Ryo Nakamura, Hiroyuki Ohsaki

ITIP: IT in Practice
Session 1
Location: Corte Interrata 8
Session Chair: San Murugesan, Editor-in-Chief, IT Professional, BRITE Professional
Services, Australia

The Adoption of Emerging Technology: Technology Before Requirements
Stephen J. Andriole

Process Pattern: A Reusable Design Artifact for Business Process Models
Muhammad Ashad Kabir, Zhenchang Xing, Prakash Chandrasekaran, Shang-Wei Lin

Situation-aware Data-driven Decision Making in Smart Environments Using the MapReduce
Hoda Gholami, Carl K. Chang

10:00 – 10:30 **Coffee Break**

10:30 – 12:00 **Keynote: Francesco Profumo, Professor of Electrical Machines at the Politecnico di Torino,**
Chairman of the Compagnia di San Paolo, former President of the National Research
Council and Former Minster of Education, Italy
Building Digital Autonomy for a Sustainable World: Policies and Strategies in Private and
Public Organizations
Location: Aula Magna

12:00 – 1:00 **Lunch - Corte Interrata**

1:00 – 2:30 **SETA: Software Engineering Technology and Applications**
Session 3
Location: Corte Interrata Room 1
Session Chair: Jun Ma, Nanjing University, China

Toward Understanding Information Models of Fault Localization: Elaborate is Not Always Better
Yan Lei, Xiaoguang Mao, Min Zhang, Jingan Ren, Yinhua Jiang

Comprehensive Static Analysis for Configurable Software via Combinatorial Instanstiation
Dong Yan, Linjie Pan, Rongjie Yan, Jun Yan, Jian Zhang

Who Should Be Selected to Perform a Task in Crowdsourced Testing?
Qiang Cui, Junjie Wang, Guowei Yang, Miao Xie, Qing Wang, Mingshu Li

SETA: Software Engineering Technology & Applications
Session 4
Location: Corte Interrata Room 2
Session Chair:

A Constraint-pattern Based Method for Reachability Determination
Yuexing Wang, Zuxing Gu, Xi Cheng, Min Zhou, Xiaoyu Song, Ming Gu, Jiaguang Sun

Defining and Validating a Client-based Cohesion Metric for Object-Oriented Classes
Musaad Alzahrani, Austin Melton

Towards an Agent-oriented Framework for Multidisciplinary Decision Support and its Application to Triple Assessment of Breast Cancer

Revisiting the Correlation Between Alerts and Software Defects: A Case Study on MyFaces, Camel, and CXF
Meng Yan, Xiaohong Zhang, Ling Xu, Haibo Hu, Song Sun, Xin Xia

CELT: Computer Education and Learning Technologies
Session 2
Location: Corte Interrata Room 3
Session Chair:

Test-driven Summarization: Combining Formative Assessment with Teaching Document Summarization
Luca Cagliero, Laura Farinetti, Elena Baralis

Self-paced Approach in Synergistic Model for Supporting and Testing Students: The Transition from Secondary School to University
Lorenza Operti, Marina Marchisio, Sergio Rabellino, Francesco Floris, Alessandro Bogino, Alice Barana, Michele Fioravera

CAP: Computer Architecture and Platforms
Session 2
Location: Corte Interrata Room 4
Session Chair: Tiberiu Seceleanu, ABB Corporate Research, Sweden

RefCRE: A Reference Count Based Rewriting Framework for VM Image Restoration
Jiwei Xu, Xiaozhao Xing, Tao Wang, Zhigang Lu, Wenbo Zhang

xB+-Tree: Access-Pattern-Aware Cache-Line-Based Tree for Non-Volatile Main Memory Architecture
Li-Zheng Liang, Ming-Chang Yang, Yuan-Hao Chang, Tseng-Yi Chen, Shuo-Han Chen, Hsin-Wen Wei, Wei-Kuan Shih

Multicore Cache Coherence Control by a Parallelizing Compiler
Hironori Kasahara, Keiji Kimura, Boma A. Adhi, Yuhei Hosokawa, Yohei Kishimoto, Masayoshi Mase

NCIW: Networks, communications, Internet and Web Technologies
Session 2
Location: Corte Interrata Room 5
Session Chair: Chung-Horng Lung, Carleton University, Canada

A Framework for User-friendly Verification-oriented VNF Modeling
Guido Marchetto, Riccardo Sisto, Matteo Virgilio, Jalolliddin Yusupov

Router Position-based Cooperative Caching for video-on-Demand in Information-Centric Networking
Zhe Zhang, Chung-Horng Lung, Ioannis Lambardaris, marc St-Hilaire, Sankarshan Sakkarepattana Nagaraja Rao

SEPT: Security, Privacy and Trust
Session 2: Web Security
Location: Corte Interrata Room 6
Session Chair: Yong Jin, Tokyo Institute of Technology, Japan

Detecting Malacious Websites by Integrating Malacious, Benign and Compromised Redirection Subgraph Similarities
Toshiki Shibahara, Yuta Takata, Mitsuaki Akiyama, Takeshi Yagi, Takeshi Yada

TLS Connection Validation by Web Browsers: Why Do Web Browsers Still Not Agree?
Ahmad Sarner Wazan, Romain Laborde, David Chadwick, Francois Barrere, Abdelmalek Benzekri

An Inferential Metamorphic Testing Approach to Eliminating False Positives in SQLIV Penetration Test
Lei Liu, Guoxing Su, Jing Xu, Biao Zhang, Jiehui Kang, Peng Li

SRS: Student Research Symposium
Session 2
Location: Corte Interrata Room 7
Session Chair: Luigi De Russis, Politecnico di Torino, Italy

How GitHub Contributing.md Contributes to Contributor
Naoki Kobayakawa, Kenichi Yoshida

On the Effectiveness of Link Addition for Improving Robustness of Multiplex Networks against Layer Node-based Attack
Yui Kazawa, Sho Tsugawa

On Message Delivery Delay of Epidemic DTN Routing with Broadcasting ACKs
Natsuko Kawabata, Yasuhiro Yamasaki, Hiroyuki Ohsaki

ITIP: IT in Practice
Session 2
Location: Corte Interrata 8
Session Chair: Steve Andriole, Villanova University

Tool Integration in the Aerospace Domain: A Case Study
Iacopo Vagliano, Davide Ferretto, Eugenio Brusa, Maurizio Morisio, Laura Valacca

Strategies and Challenges on the Accessibility and Interoperability of e-government Web Portals: A Case Study on the Brazilian Federal Universities
Alberto Dumont Alves Oliveira, Marcelo Medeiros Eler

Software Industry Practice in Africa; Case Study Sudan
Saleh Alamdy, Rasha Osman

2:30 – 3:00   **Coffee Break**

3:00 – 4:15   **Plenary Panel: *Fog Computing and Networking – Technology Drivers and Impacts***
                       Location: Aula Magna
                       Panel Chair: Tao Zhang, CISCO Systems
                       Panelists: Antonio Brogi, Department of Computer Science, University of Pisa, Italy
                       Bruce McMillin, Associate Dean for Research & Outreach, College of Engineering and

Computing, Missouri University of Science & Technology, USA
Mehmet Ulema, Manhattan College, USA; IEEE ComSoc Director of Standards Development
Yang Yang, Shanghai Institute of Microsystem and Information Technology; Chinese Academy of Sciences

4:15 – 5:30   **Panel – Future Challenges in Security**
Location: Aula Magna
Panel Chair: Elisa Bertino, Purdue University, USA
Panelists: Clifford Liem, Irdeto Canada, Ottawa, Canada
William Claycomb, Carnegie Mellon University, USA
Hiroyuki Sato, University of Tokyo, Japan

5:30 – 6:00   **IEEE Green ICT – Charles Despins**
Location: Aula Magna

Thursday July 6 – Main Conference

8:30 – 10:00

SETA: Software Engineering Technology and Applications
Session 5
Location: Corte Interrata Room 1
Session Chair:

Quality Assessment of Interaction Techniques in Immersive Virtual Environments Using Physiological Measures
Rafael Rieder, Christian Haag Kristensen, Márcio Sarroglia Pinho

Interactively Decomposing Composite Changes to Support Code Review and Regression Testing
Bo Guo, Myoungkyu Song

Can Developers' Interaction Data Improve Change Recommendation?
Akihiro Yamamori, Anders Mikael Hagward, Takashi Kobayashi

SETA: Software Engineering Technology & Applications
Session 6
Location: Corte Interrata Room 2
Session Chair:

An Approach to Proving Proof Obligation of Hybrid Event B Based on Differential Invariants
Jie Liu, Jing Liu, Miaomiao Zhang, Haiying Sun, Xiaohong Chen, Dehui Du, Mingsong Chen

Preserving the Benefits of Open Government Data by Measuring and Improving Their Quality: An Empirical Study
Marco Torchiano, Antonio Vetrò, Francesca Iuliano

Assertion Recommendation for Formal Program Verification
Cong Wang, Fei He, Xiaoyu Song, Yu Jiang, Ming Gu, Jiaguang Sun

CELT: Computer Education and Learning Technologies
Session 3
Location: Corte Interrata Room 3
Session Chair:

Toward Blocks-Text Parity
Chris Johnson, Adrian Abundez-Arce

Teaching Test-First Programming: Assessment and Solutions
Marcello Missiroli, Daniel Russo, Paolo Ciancarini

SEABED: An Open Source Software Engineering Case Based Learning Database
Veena Saini, Paramvir Singh, Ashish Sureka

Adaptive Teaching Supported by ICTs to Reduce the School Failure in the Project "Scuola dei Compiti"
Alice Barana, Michele Fioravera, Marina Marchisio, Sergio Rabellino

NCIW: Networks, communications, Internet and Web Technologies
Session 3

Location: Corte Interrata Room 5
Session Chair: Michiharu Takemoto, NTT Labs, Japan

Automatic Construction of Name-Bound Virtual Networks for IoT
Kenji Fujikawa, Ved P. Kafle, Pedro Martinez-Julia, Abu Hena Al Muktadir, Hiroaki Harai

Analysis of Geographic DTN Routing under Random Walk Mobility Model
Daiki Matsui, Ryo Hagihara, Yasuhiro Yamasaki, Hiroyuki Ohsaki

Formal Modelling and Verification of Requirements of Adaptive Routing Protocol for Mobile Ad-Hoc Network
Bata Krishna Tripathy, Ashray Sudhir, Padmalochan Bera, Mohammad Ashiqur Rahman

SEPT: Security, Privacy and Trust
Session 3: Connected Car and CPS
Location: Corte Interrata Room 6
Session Chair: Mohammed Zulkernine, Queen's University, Canada

Keynote: *From Connected Clouds, Cars, to Light Bulbs - Are You Self-Protected?*
Clifford Liem, Irdeto Canada

J1C2 Paper: *Physical Attestation in the Smart Grid for Distributed State Verification*
Thomas Roth, Bruce M. McMillin

Fog Computing and Networking – Business Drivers and Impacts
Location: Corte Interrata Room 7
Panel Chair: Douglas N. Zuckerman, IEEE Fellow, former IEEE Division III Director, IEEE Future Directions Committee
Panelists: Tao Zhang, IEEE Fellow, Distinguished Engineer/Senior Director, Corporate Strategy Group, CISCO Systems
Robert Saracco, President of IET ICT Labs, Italy; Italy Node Director of EIT Digital (European Institute of Innovation and Technology)
Matt Vasey, Director of IoT Business Development, Microsoft
Joe Weinman, Author of *Cloudonomics and Digital Disciplines*, Cloud Economics editor for IEEE *Cloud Computing*

ITIP: IT in Practice
Session 3
Location: Corte Interrata 8
Session Chair: Carl K. Chang, Iowa State University

Agent Marketplaces and Deep Learning in Enterprises: The COMPOSITION Project
Dario Bonino, Paolo Vergori

DIIG Distributed Industrial IoT Gateway
Masoud Hemmatpour, Mohammad Ghazivakili, Bartolomeo Montrucchio, Maurizio Rebaudengo

Towards Verifiable Safe and Correct Medical Best Practice Guideline Systems
Chunhui Guo, Zhicheng Fu, Shangping Ren, Yu Jiang, Lui Sha

10:00 – 10:30	**Coffee Break**
10:30 – 12:00	**Keynote: Alberto Sangiovanni Vincentelli, University of California, Berkeley, USA** ***Connected Autonomous Driving Vehicles: Dream of Nightmare?***

Location: Aula Magna

12:00 – 1:00   **Lunch - Corte Interrata**

1:00 – 2:30   **SETA: Software Engineering Technology and Applications**
Session 7
Location: Corte Interrata Room 1
Session Chair:

A Hierarchical Categorization Approach for Configuration Management Modules
Wei Chen, Peixing Xu, Wensheng Dou, Guoquan Wu, Chushu Gao, Jun Wei

Supporting the Development of Agent-based Simulations; a DSL for Environment Modeling
Ingrid Nunes, Ana L.C. Bazzan, Fernando Santos

Tool-supported Collaborative Requirements Prioritisation
Paolo Busetta, Fitsum Meshesha Kifetew, Denisse Munante, Anna Perini, Alberto Siena, Angelo Susi

SETA: Software Engineering Technology & Applications
Session 8
Location: Corte Interrata Room 2
Session Chair:

Finding Extract Method Refactoring Opportunities by Analyzing Development History
Ayaka Imazato, Yoshiki Higo, Keisuke Hotta, Shinji Kusumoto

Infer Precise Program Invariant Using Abstract Interpretation with Recurrence Solving
Zhenpeng Fang, Xibin Zhao, Min Zhou

XMLValue: XML Configuration Attribute Value Recommendation
Yiqi Lu, Jiaqing Liang, Yanghua Xiao, Sheng Huang, Deqing Yang, Wei Wang, Haibo Lin

CELT: Computer Education and Learning Technologies
Session 4
Location: Corte Interrata Room 3
Session Chair:

Cloud Adapted Workflow e-Assessment System: Cloud-AWAS
Fahima hajjej, Yousra Bendaly Hlaoui, Leila Jemni Ben Ayed

Evaluating the Use of Virtual Reality on Professional Robotics Education
Mauro César Charão Dos Santos, Vicenzo Abichequer Sangalli, Marcio Sarroglia Pinho

J1C2 Paper: *Combinations of Personal Characteristic Types and Learning Effectiveness of Teams*
Hironori Washizaki, Yusuke Sunaga, Masashi Shuto, Katsuhiko Kakehi, Yoshiaki Fukazawa, Shoso Yamato, Masashi Okubo, Bastian Tenbergen

NCIW: Networks, communications, Internet and Web Technologies
Session 4
Location: Corte Interrata Room 5
Session Chair: Yuuichi Teranishi, NICT, Japan

Supporting Interoperability among Web Services Through Efficient Matching
Xiaocao Hu, Zhiyong Feng, Keman Huang, Shizhan Chen

Practical Enhancement and Evaluation of a Low-latency Network Model using Mobile Edge Computing
Krittin Intharawijitr, Katsuyoshi Iida, Hiroyuki Koga, Katsunori Yamaoka

CoAP-CTX: A Context-Aware CoAP Extension for Smart Objects Discovery in Internet of Things
Felipe M. Barreto, Paulo A. De S. Duarte, Marcio E. F. Maia, Rossana M. De C. Andrade, Windson Viana

SEPT: Security, Privacy and Trust
Session 4: System Security and Authentication
Location: Corte Interrata Room 6
Session Chair: Dian-Xiang Xu, Boise State University, USA

An In-Depth Concealed File System with GPS Authentication Adaptable for Multiple Locations
Yong Jin, Masahiko Tomoishi, Satoshi Matsuura

Challenge to Impede Deep Learning against CAPTCHA with Ergonomic Design
Tomoka Azakami, Chihiro Shibata, Ryuya Uda

DomainChroma: Providing Optimal Countermeasures against Malicious Domain Names
Daiki Chiba, Mitsuaki Akiyama, Takeshi Yagi, Takeshi Yada, Tatsuya Mori, Shigeki Goto

Claimsware: A Claims-based Middleware for Securing IoT Services
Vathalloor Merlin George, Qusay H. Hahmoud

DSAT: Data Sciences, Analytics & Technologies
Session 1
Location: Corte Interrata Room 8
Session Chair: Kathy Grise, IEEE Future Directions

Data Analytics Competition

2:30 – 3:00	**Coffee Break**
3:00 – 4:30	**SETA: Software Engineering Technology and Applications** **Session 9** **Location: Corte Interrata Room 1** **Session Chair:**

Xdroid: Testing Android Apps with Dependency Injection
Chun Cao, Chenglin Meng, Hongjun Ge, Ping Yu, Xiaoxing Ma

Towards Variability Management in Bidirectional Model Transformation
Xiao He, Zhenjiang Hu, Yi Liu

Models of Connected Things: On Priced Probabilistic Timed Reo
Kangli He, Holger Hermanns, Yixiang Chen

SETA: Software Engineering Technology & Applications
Session 10
Location: Corte Interrata Room 2

Session Chair:

An Empirical Analysis on Effective Fault Prediction Model Developed using Ensemble Methods
Lov Kumar, Santanu Rath, Ashish Sureka

Pain Points for Novice Programmers of Ambient Intelligence Systems: An Exploratory Study
Fulvio Corno, Luigi De Russis, Juan Pablo Sáenz

Fault Classification Oriented Spectrum Based Fault Localization
Xiujing Liu, Yong Liu, Zheng Li, Ruilian Zhao

ISO-IEC 25010 Based Evaluation of Free Mobile Personal Health Records for Pregnancy Monitoring
Ali Idri, Mariam Bachiri, José Luis Fernández-Aleman, Ambrosio Toval

HCSC: Human Computing & Social Computing
Session 1
Location: Corte Interrata Room 3
Session Chair:

Opportunities and Challenges in Designing Participant-Centric Smoking Cessation System
Moushumi Sharmin, Theodore Weber, Hillol Sarker, Nazir Saleheen, Santosh Kumar, Shameem Ahmed, Mustafa Al' Absi

Tactile Interface Design for Helping Mobility of People with Visual Disabilities
Christian Lykawka, Bruno Konzen Stahl, Marcia De Borba Campos, Jaime Sanchez, Márcio Sarroglia Pinho

EATA: Emerging Advances in Technology & Applications
Session 1
Location: Corte Interrata Room 4
Session Chair: Hiroyuki Sato, The University of Tokyo, Japan

Ontology-based Social Media Analysis for Urban Planning
Xinxin Gao, Wencheng Yu, Yilong Rong, Songmao Zhang

Improving Mobility in Smart Cities with Intelligent Tourist Trip Planning
Petar Mrazovic, Josep L. Larriba-Pey, Mihhail Matskin

SEPT: Security, Privacy and Trust
Session 5: System Security and Trust
Location: Corte Interrata Room 6
Session Chair: Hossain Shahriar, Kennesaw State University, USA

SecretSafe: A Lightweight Approach Against Heap Buffer Over-read Attack
Xiaoguang Wang, Yong Qi, Chi Zhang

Automated Crash Filtering Using Interprocedural Static Analysis for Binary Codes
Hyeon-gu Jeon, Seong-Kyun Mok, Eun-Sun Cho, Jaecheol Ryou

J1C2 Paper: *Seer: A Lightweight Online Failure Prediction Approach*
Burcu Ozcelik, Cemal Yilmaz

Panel: IEEE-HKN Special Panel: *Computing Education: the IEEE-HKN Perspective*
Location: Corte Interrata Room 7
Panel Chair: Sorel Reisman, California State University, USA
Panelists: Claudio Giovanni Demartini, Politecnico di Torino, Italy
Vincenzo Piuri, University of Milan, Italy
Jean-Luc Gaudiot, University of California Irvine, USA
Nancy Ostin, Director IEEE-HKN

DSAT: Data Sciences, Analytics & Technologies
Session 2
Location: Corte Interrata Room 8
Session Chair: Kathy Grise, IEEE Future Directions

Keynote

Inference of Extreme Synchrony with an Entropy Measure on a Bipartite Network
Aki-Hiro Sato

Predicting Misconfiguration-induced Unsuccessful Executions of Jobs in Big Data System
Tang Hongyan, Li Ying, Wang Long, Gu Jing, Wu Zhonghai

4:30 – 5:30	**Young Professionals Session** **Invited Speaker: Gianluca Setti, University of Ferrara, Italy** *Publication Etiquette and Ethics: Things You Should Know Before Submitting Your Next Paper*
5:30 – 6:00	**Young Professionals Training**
6:30 – 7:00	**Transportation to Car Museum for Banquet**
7:00 – 9:00	**Banquet**

Friday July 7 – Main Conference

8:30 – 10:00

**SETA: Software Engineering Technology and Applications
Session 11
Location: Corte Interrata Room 1
Session Chair:**

Using MDA to Automate the Integration of Virtual Platforms for System-Level Simulation
David Perillo, Marco Di Natale

An ICE Compliant Component Model for Medical Systems Development
Imad Eddine Touahria, Marisol García-Valls, Abdellah Khababa

Tool Support for Managing Clone Refactorings to Facilitate Code Review in Evolving Software
Zhiyuan Chen, Maneesh Mohanavilasam, Young-Woo Kwon, Myoungkyu Song

**SETA: Software Engineering Technology & Applications
Session 12
Location: Corte Interrata Room 2
Session Chair:**

Engineering of a Multi-Platform DSL: What Can Be Reused?

A High-Level DSL for Geospatial Visualizations with Multi-core Parallelism Support
Cleverson Ledur, Dalvan Griebler, Isabel Manssour, Luiz Gustavo Fernandes

The Need for Traceability in Heterogeneous Systems: A Systematic Literature Review
Nasser Mustafa, Yvan Labiche

An Incremental Annotate-Generalize-Search Framework for Interactive Source Code Comprehension
Ken Nakayama, Shun'Ichi Tano, Tomonori Hashiyama, Eko Sakai

**HCSC: Human Computing & Social Computing
Session 2
Location: Corte Interrata Room 3
Session Chair:**

Understanding the Feasibility of a Location-Aware Mobile-Based 911-Like Emergency Service in Bangladesh
Md Monsur Hossain, Moushumi Sharmin, Shameem Ahmed

Your Mouse Reveals Your Next Activity: Towards Predicting User Intention from Mouse Interaction
Grace Ngai, Stephen Chan, Eugene Yujun Fu, Tiffany C.K. Kwok, Hong Va Leong, Erin Wu

SoftSense: Sensing at Software Layer to Prevent Abuse of Photograph
Nova Ahmed, Arshad Chowdhury, Minhaz Ahmed Syrus

**MOWU: Mobile, Wearable & Ubiquitous Computing
Session 1
Location: Corte Interrata Room 4
Session Chair: Hong Va Leong, The Hong Kong Polytechnic University, Hong Kong**

Polynomial Classification Model for Real-time Fall Prediction System
Masoud Hemmatpour, Milad Karimshoushtari, Renato Ferrero, Bartolomeo Montrucchio, Maurizio Rebaudengo, Carlo Novara

A Novel Framework to Recognize Complex Human Activity
Md Osman Gani, Amit Kumar Saha, Golam Mushih Tanimul Ahsan, Sheikh Iqbal Ahamed, Roger O. Smith

A Novel Real-time Non-invasive Hemoglobin Level Detection Using Video Images from Smartphone Camera
Golam M. T. Ahsan, Md. O. Gani, Md. K. Hasan, Sheikh I. Ahamed, William Chu, Mohammad Adibuzzaman, Joshua Field

EATA: Emerging Advances in Technology & Applications
Session 2
Location: Corte Interrata Room 5
Session Chair: Ali Hurson, Missouri University of Science & Technology, USA

SNS Agency Robot for Elderly People Using External Cloud-based Services
Toru Kobayashi, Kazushige Katsuragi, Taishi Miyazaki, Kenichi Arai

Building Energy Modelling and Monitoring by Integration of IoT Devices and Building Information Models
Lorenzo Bottaccioli, Alessandro Aliberti, Francesca Ugliotti, Edoardo Patti, Anna Osello, Enrico Macii, Andrea Acquaviva

Panel: EHealth
Location: Corte Interrata Room 7
Chair: Sheikh Iqbal Ahamed, Marqette University, USA
Panelists: William Chu, Taichung University, Taiwan
Ji-Jiang Yang, Tsinghua University, China
Hua Ming, Oakland University, USA

DSAT: Data Sciences, Analytics & Technologies
Session 3
Location: Corte Interrata Room 5
Session Chair: Kathy Grise, IEEE Future Directions

R-Extractor: An Extended Method for Data Extraction from Template-based Entity Pages
Edimar Manica, Carina F. Dorneles, Renata Galante

Container Rebalancing: Towards Proactive Linux Containers Placement Optimization in a Data Center
Pongsakorn U-Chupala, Yasuhiro Watashiba, Kohei Ichikawa, Susumu Date, Hajimu Iida

HybridFS – A High Performance and Balanced File System Framework with Multiple Distributed File Systems
Lidong Zhang, Yongwei Ru, Ruini Xue, Tse-Chuan Hsu, Hongji Yang, Yeh-Ching Chung

10:00 – 10:30	**Coffee Break**

10:30 – 12:00	**Keynote: Flavio Bonomi, co-founder and CEO of Nebbiolo Technologies** ***Fog Computing and its Role in the Evolution of the Industrial* Internet and of Industry 4.0**

Location: Aula Magna

12:00 – 1:00   **Lunch - Corte Interrata**

1:00 – 2:30   **SETA: Software Engineering Technology and Applications**
Session 13
Location: Corte Interrata Room 1
Session Chair:

Detecting Java Code Clones with Multi-Granularities Based on Bytecode
Dongjin Yu, Jie Wang, Qing Wu, Jiazha Yang, Jiaojiao Wang, Wei Yang, Wei Yan

Supporting the Specification and Serialization of Planned Architectures in Architecture-Driven Modernization Context
André De S. Landi, Fernando Chagas, Bruno M. Santos, Renato S. Costa, Rafael Durelli, Ricardo Terra, Valter V. De Camargo

GenLog: Accurate Log Template Discovery for Stripped X86 Binaries
Maosheng Zhang, Ying Zhao, Zengmingyu He

SETA: Software Engineering Technology & Applications
Session 14
Location: Corte Interrata Room 2
Session Chair:

A Situation-Centric Approach to Identifying New User Intentions Using the MTL Method
Jingwei Yang, Carl K. Chang, Hua Ming

State-based Test Suites Automatic Generation Tool (STAGE-1)
Hoda Khalil, Yvan Labiche

Mediating Turf Battles! Prioritizing Shared Modules in Locating Multiple Features
Maaki Nakano, Kunihiro Noda, Shinpei Hayashi, Takashi Kobayashi

J1C2 Paper: *On the Composability of Design Patterns*
Hong Zhu, Ian Bayley

HCSC: Human Computing & Social Computing
Session 3
Location: Corte Interrata Room 3
Session Chair:

Spreadsheet Element Sharing through Synchronization
Massimo Maresca

Methodology for the Development of Accessible User Interfaces Based on Meta-model Transformation: The Case of Blind Users
Leila Jemni Ben Ayed, Lamia Zouhaier, Yousra Bendaly Hlaoui

MOWU: Mobile, Wearable & Ubiquitous Computing
Session 2
Location: Corte Interrata Room 4
Session Chair: Hong Va Leong, The Hong Kong Polytechnic University, Hong Kong
CAOS: A Context Acquisition and Offloading System
Francisco A. A. Gomes, Paulo A. L. Rego, Lincoln Rocha, José N. De Souza, Fernando Trinta

Enabling Flexible and Efficient Remote Execution in Opportunistic Networks through Message-oriented Middleware
Minh Le, Myoungkyu Song, Young-Woo Kwon

EATA: Emerging Advances in Technology & Applications
Session 3
Location: Corte Interrata Room 5
Session Chair: Sahra Sedigh Sarvestani, Missouri University of Science & Technology, USA

Profile-based Worker Selection for Quality Control in Crowdsourcing
Konstantin Ziegler, Tarek Awwad, Veronika Rehn-Sonigo, Nadia Bennani, Harald Kosch, Lionel Brunie

Collaborative Computation Offloading in Heterogeneous Asynchronous Cloud Environment
Lei Ma, Bing Yu, Hiroyuki Sato, Yadong Wang

Dynamic Data Flow Processing in Edge Computing Environments
Yuuichi Teranishi, Takashi Kimata, Hiroaki Yamanaka, Eiji Kawai, Hiroaki Harai

Panel on Security
Location: Corte Interrata Room 7
Panel Chair:
Panelists:

DSAT: Data Sciences, Analytics & Technologies
Session 4
Location: Corte Interrata Room 5
Session Chair: Kathy Grise, IEEE Future Directions

A Parallel Self-Organizing Community Detection Algorithm Based on Swarm Intelligence for Large Scale Complex Networks
Hanlin Sun, Wei Jie, Christian Sauer, Sugang Ma, Gang Han, Zhongmin Wang, Kui Xing

Using Semantic and Spatiotemporal Characteristics of Social Media Data for Knowledge Discovery in Smart Cities

An Adaptive Diversity-based Ensemble Method for Binary Classification
Xing Fan, Chung-Horng Lung, Samuel A. Ajila

Combining Word and Character N-grams for Detecting Deceptive Opinions
Al Hafiz Akbar Maulana Siagian, Masayoshi Aritsugi

2:30 – 3:00   **Coffee Break**

3:00 – 4:15   **Plenary Panel:** *Internet, Industry and Society*
Organized by the Nexa Center for Internet and Society at the Politecnico di Torino and the CINI National Laboratory for Computer Science and Society
Panel Chair: Juan Carlos De Martin, Politecnico di Torino, Italy
Location: Aula Magna
Panelists: Maurizio Griva, Reply
Yochai Benkler, Harvard University
Luca De Biase, Il Sole 24 Ore

4:15 – 5:30	**Plenary Panel:** *Future of Computing*
	Panel Chair: Stephen S. Yau, Arizona State University, USA
	Location: Aula Magna
	Panelists: Carl K. Chang, Iowa State University, USA
	Sumi Helal, Lancaster University, UK
	Hironori Kasahara, Waseda University, Japan
	Laurence T. Yang, St. Francis Xavier University, Canada
	Francesco Lilli, Head of Advanced E/E & Connectivity, FIAT Research Center, Italy

| 5:30 – 6:30 | **COMPSAC Planning Meeting** |
| | **Location:** |

Saturday July 8 – Workshops

8:30 – 10:00

QUORS: The 11th IEEE International Workshop on Quality Oriented Reuse of Software
Session 1: Efficiency and Quality in Clouds
Location: Corte Interrata Room 1
Session Chair: Hongji Yang, Bath Spa University, UK

The Impact of Database Layer on Auto-scaling Decisions in a 3-Tier Web Services Cloud Resource Provisioning
Ali Yadavar Nikravesh, Samuel A. Ajila, Chung-Horng Lung

ESBSC: Energy-aware Service Brokering Strategy in Clouds
Feng Ma, Xiaodong Liu, Ying Yang, Wei Yao, Jinjin Cai, Fang Wang

Automated Constraint-based Multi-tennat SaaS Configuration Support Using XML Filtering Techniques
Azadeh Etedali, Chung-Horng Lung, Samule Ajila, Igor Veselinovic

BIOT: The 4th IEEE International Workshop on Big Data Management for the Internet of Things
Session 1: IoT Architecture and Algorithms
Location: Corte Interrata Room 8
Session Chair: Hideya Ochiai, University of Tokyo, Japan

An IoT Architecture for Personalized Recommendations Over Big Data Oriented Applications
Georgios Palaiokrassas, Ilias Karlis, Antonios Litke, Vassilios Charlaftis, Theodora Varvarigou

Improving the Prediction Accuracy of Decision Tree Mining with Data Preprocessing
Kai Qian

STPSA: The 12th IEEE International Workshop on Security, Trust and Privacy for Software Applications
Session 1
Location: Corte Interrata Room 3
Session Chair: Hossain Shahriar, Kennesaw State University, USA

Data-oriented Instrumentation Against Information Leakages of Android Applications
Cong Sun, Pengbin Feng, Teng Li, Jianfeng Ma

A Lightweight Multi-receiver Encryption Scheme with Mutual Authentication
Ei Khaing Win, Tomoki Yoshihisa, Yoshimasa Ishi, Tomoya Kawakami, Yuuichi Teranishi, Shinji Shimojo

Access Control Model for the Inference Attacks with Access Histories
Hirotsugu Kinoshita, Tetsuya Morizumi

An Iris Authentication Framework to Prevent Presentation Attacks for Online Learning Services
Mahbubul Islam, Hossain Shahriar, Hisham Haddad

UCDAS: The 4th IEEE International Workshop on User Centered Design and Adaptive Systems
Session 1
Location: Corte Interrata Room 4

Session Chair: Reyes Juárez-Ramírez, Autonomous University of Baja California, Mexico

Integrating Goal Models and Problem Frames for Requirements Analysis of Self-adaptive CPS
Deshuai Han, Jianchun Xing, Qiliang Yang, Luelong Li

A Similarity-based Approach to Recognizing Voice-based Task Goals in Self-adaptive Systems
Xiaobing Zhang, Qiliang Yang, Jianchun Xing, Deshuai Han

Talis – A Design Study for a Wearable Device to Assist People with Depression
Dirk Siegmund, Laura Chiesa, Oliver Hoerr, Andreas Braun, Frank Gabler, Arjan Kuijper

NETSAP: The 7ᵗʰ IEEE International Workshop on Network Technologies for Security, Administration and Protection
Session 1
Location: Corte Interrata Room 5
Session Chair: Yoshiaki Hori, Saga University, Japan

Making DNS Servers Resistant to Cyber Attacks: An Empirical Study on Formal Methods and Performance
Barry Fagin, Martin Carlisle, Bradley Klanderman

Secure Double-layered Defense against HTTP-DDoS Attacks
Mohamad Samir A. Eid, Hitoshi Aida

Application of Hidden Markov Model in SQL Injection Detection
Peng Li, Lei Liu, Jing Xu, Hongji Yang, Liying Yuan, Xiujuan Ji

CORCS/IEESD: The 6ᵗʰ IEEE International Workshop on Component-based Design of Resource Constrained Systems
and
IEESD: The X IEEE International Workshop on Industrial Experience in Embedded System Design
Session 1: Embedded and Distributed Systems Development
Location: Corte Interrata Room 6
Session Chair: Cristina Seceleanu, Malardalen University, Sweden

System Level Partitioning for Embedded Systems
Gaetana Sapienza, Nunzio Meli, Jonas Eriksson, Roger Jansson, Tiberiu Seceleanu, Ivica Crnkovic

Adaptive Resource Allocation of Multiple Servers for Service-based Systems in Cloud Computing
Siqian Gong, Beibei Yin, Wenlong Zhu, Kai-Yuan Cai

Simulation Driven Development of Distributed Systems – Improving the System Development Process using the Example of the German Automatic Toll System
Tommy Baumann

DSCAC: The 1ˢᵗ IEEE International Workshop on Data Science Challenges in Algorithm and Complexity
Session 2: Data Science Challenges in Agriculture, Climate, Food
Location: Corte Interrata Room 7
Session Chair: Anna Carbone

IoT Solutions for Precision Farming and Food Manufacturing
Rob Dolci

Representation Learning with Trainable COSFIRE Filters
Nicolai Petkov

Heterogeneity of the Long-term Dynamics of the Global Temperature Data
Suzana Blesic, Davide Zanchettin, Jorgee Stratimirovic, Angelo Rubino

**SSERV: The 4th IEEE International Workshop on Social Services through Human and
Artificial Agent Models**
Session 1: Application
Location: Corte Interrata Room 8
Session Chair: S. Kurahashi, University of Tsukuba, Japan

*Searching Promising Researchers through Network Centrality Measures of Co-Author Networks
of Technical Papers*
Masanori Fujita, Hiroto Inoue, Takao Terano

*Feature Representation Extraction Method of Hotel Reviews using Co-Occurrence Restriction
and Dependency Graph*
Koji Tanaka, Koichi Tsujii, Takashi Ikoma, Akiyuki Sekiguchi, Kazuhiko Tsuda

*Promoting Environmental Education Using a Multilingual Environment: Manufacturing Soap
from Waste Oil*
Bo Wang, Hiroshi Suzuki, Yuqi Liao, Yuya Ieiri, Reiko Hishiyama

10:00 – 10:30   **Coffee Break**

10:30 – 12:00   **QUORS: The 11th IEEE International Workshop on Quality Oriented Reuse of Software**
Session 2: Emerging Reuse
Location: Corte Interrata Room 1
Session Chair: Feng-Jian Wang, National Chiao Tung University, Taiwan

*Developing Creative Travel Plans Generation System Based on Software Reuse and Abstraction
Technology*
Sicong Ma, Hongji Yang

*A Creative Approach to Reusing Data in Enterprise System by Introducing a Sense-Experience-
Knowledge Framework*
Lin Zou, Qinyun Liu, Hongming Che, Hongji Yang

Towards Requirements Reuse by Implementing Traceability in Agile Development
Randa Elamin, Rasha Osman

eIoT: The 1st IEEE International Workshop on Embedded Internet of Things
Session 1: IoT Application, Architecture and Protocols
Location: Corte Interrata Room 2
Session Chair: Jahangir Alam Majumder, Miami University, USA

*SocICoAP: Social Interaction with Supplementary Sensors and Actuators through CoAP in
Smartphones*
Cristian Martin, Jame Chen, Manuel Diaz, Ana Reyna, Bartolome Rubio

Optimizing RPL Objective Function for Mobile Low-Power Wireless Networks
Ifeoma Helen Urama, Hossein Fotouhi, Mohammad Mahmoud Abdellatif

IoT Agent Platform Mechanism with Transparent Cloud Computing Framework for Improving IoT Security
Ikuo Nakagawa, Shinji Shimojo

A Wireless Early Prediction System of Cardiac Arrest Through IoT
Yosuf El Saadany, AKM Jahangir A Majumder, Donald R Ucci

STPSA: The 12th IEEE International Workshop on Security, Trust and Privacy for Software Applications
Session 2
Location: Corte Interrata Room 3
Session Chair: Mohammad Rahman, Tennessee Tech University, USA

Addressing Security Issues in the e-Health Domain Relying on SIEM Solutions
Luigi Coppolino, Salvatore, D'Antonio, Bruno Ragucci, Luigi Romano, Mariacarla Staffa

Blockchain as an Audit-able Communication Channel
Shigeya Suzuki, Jun Murai

Trust as Soft Security for Self-Adaptive Systems: A Literature Survey
Hyo-Cheol Lee, Seok-Won Lee

UCDAS: The 4th IEEE International Workshop on User Centered Design and Adaptive Systems
Session 2
Location: Corte Interrata Room 4
Session Chair: Reyes Juárez-Ramírez, Autonomous University of Baja California, Mexico

Method for Text Entry in Smartwatches Using Continuous Gesture Recognition
Thamer Horbylon Nascimento, Fabrizzio Alphonsus A.M.N. Soares, Pourang Polad Irani, Leandro Luíz Galdino de Oliveira, Anderson da Silva Soares

Tele-operation of Robot Teams: A Compsarison of Gamepad, Mobile Device and Hand Tracking Based User Interfaces
Stefano Bonaiuto, Alberto Cannavò, Giovanni Piumatti, Gianluca Paravati, Fabrizio Lamberti

The Problem of Cognitive Load in Fuls: Towards Establishing the Relationship between Cognitive Load and our Executive Functions
Andres Figueroa, Reyes Juárez Ramírez

NETSAP: The 7th IEEE International Workshop on Network Technologies for Security, Administration and Protection
Session 2
Location: Corte Interrata Room 5
Session Chair: Yoshiaki Hori, Saga University, Japan

TRUST-CAP: A Trust Model for Cloud-based Applications
Eslam AbdAllah, Mohammad Zulkernine, Yuan Xiang G uGu, Clifford Liem

Detecting and Classifying Android PUAs by Similarity of DNS Inquiries
Mitsuhiro Hatada, Tatsuya Mori

OER: The 2nd IEEE International Workshop on Open Educational Resources for Computer Science & Information Technology
Location: Corte Interrata Room 6
Session 1: Communities Based on OERs
Session Chair: Dave Towey, The University of Nottingham at Ningbo, China

MERLOT – A Reliable Framework for OER
Eli Shmueli

Promoting MERLOT Communities based on OER in Computer Science & Information Technology
Edmundo Tovar, Henry Chan, Sorel Reisman

Developing an Open Educational Resource: Reflections on a Student-staff Collaboration
Dave Towey, David Foster, Filippo Gilardi, Andrew Paul Martin, Yiru Jiang White, Yichen Pan, Yu Qu

DSCAC: The 1st IEEE International Workshop on Data Science Challenges in Algorithm and Complexity
Session 3: Data Science Challenges in Finance and Economics
Location: Corte Interrata Room 7
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Central Bank Communications: Information Extraction and Semantic Analysis
Giuseppe Bruno

Detection of Irregularities and Rips by Finding Critical Points of Morse Theory – Preliminary Results on Analysis on Sales Data
Hiroyuki Sato, Yasuhiro Seino, Takanori Ogata

Application of Complex Hilbert Principal Component Analysis to Financial Data
Wataru Soma, Hiroshi Iyetomi, Hiroshi Yoshikawa

Detrending Moving Average Algorithm: Quantifying Heterogeneity in Financial Data
Linda Ponta, Anna Carbone, Silvano Cincotti

SSERV: The 4th IEEE International Workshop on Social Services through Human and Artificial Agent Models
Session 2
Location: Corte Interrata Room 8
Session Chair: T. Terano, Tokyo Institute of Technology, Japan

Corroboration Effect of Current Net Earnings and Management's Net Earnings Forecasts in Japan's Corporate Bond Market
Hiroaki Jotaki, Yasuo Yamashita, Hiroshi Takahashi, Takao Terano

A Walk Rally Application to Motivate Users to Visit Potential Sightseeing Resources
Yuya Ieiri, Yuu Nakajima, Ryota Ayaki, Reiko Hishiyama

A Comparative Study Using Discriminate Analysis on a Questionnaire Survey Regarding Project Managers' Cognition and Team Condition
Ayako Masuda, Tohru Matsuodani, Kazuhiko Tsuda

Online Shopping Frauds Detecting System and its Evaluation
Kenichi Yoshida, Kazuhiko Tsuda, Setsuya Kurahashi, Hiroki Azuma

12:00 – 1:30　　　　**Lunch - Corte Interrata**

1:30 – 3:00　　　　**QUORS: The 11ᵗʰ IEEE International Workshop on Quality Oriented Reuse of Software**
Session 3: Software and System Evolution 1
Location: Corte Interrata Room 1
Session Chair: Andrea Fornaia, Universit'a di Catania

Improving Workflow Anomaly Detection with a Tree
Feng-Jian Wang, Alex Chang, Tenny Lu

An Approach towards Quality Software Development via Requirement Engineering
Bilal Ejaz Aziz, Nil,

An Approach Based on Structural Differences to Expedite Applying OSS Updates to Products
Masahiro Fukuyori, Ryuichi Umekawa, Hiroshi Fujino, Junya Yamaguchi, Kota Ariyama

Executable Domain-Specific Modeling based on Domain Spaces
Qing Duan, Junhui Liu, Hongji Yang

UCDAS: The 4ᵗʰ IEEE International Workshop on User Centered Design and Adaptive Systems
Session 3
Location: Corte Interrata Room 4
Session Chair: Reyes Juárez-Ramírez, Autonomous University of Baja California, Mexico

SIMICE: The 3ʳᵈ IEEE International Workshop on Secure Identity Management in the Cloud Environment
Session 1
Location: Corte Interrata Room 5
Session Chair: Hideaki Goto, Tohoku University, Japan

Verifiable Delegated Authorization for User-centric Architectures and an OAuth2 Implementation
Luca Ferretti, Mirco Marchetti, Michele Colajanni

A Novel Binarization Scheme for Biometric Cryptosystems
Jialiang Peng, Bian Yang

A Threshold-based Authentication System Which Provides Attributes Using Secret Sharing
Tomohiro Ito, Daisuke Kotani, Yasuo Okabe

OER: The 2ⁿᵈ IEEE International Workshop on Open Educational Resources for Computer Science & Information Technology
Location: Corte Interrata Room 6
Session 2: Infrastructure to Adopt OERs
Session Chair: Henry Chan, The Hong Kong Polytechnic University

A Knowledge-Driven Web Tutoring System Framework for Adaptive and Assessment-Driven Open Source Learning
Lixin Tao, Maria Sette, Ning Jiang

Panel: OERs in Teaching and Learning
Panelists: Dave Towey, The University of Nottingham Ningbo, China
Eli Shmueli, MEITAL – Israeli-nter-University Center for e-Learning
Tiziana Margaria, The University of Limerick and Lero, Ireland

SSMC: The 1ˢᵗ IEEE International Workshop on Smart and Sustainable Mobility in Smart Cities
Session 1: Optimization in Smart Mobility
Location: Corte Interrata Room 7
Session Chair: Andrea Vesco

Ant Colony Optimisation and Geolocation Technologies for Transportation Assignment Problem
Fabio Pompei

Modelling Urban Transport Sector: A Methodology Based on OSeMOSYS Model Generator
Daniele Grosso, Rafaella Gerboni, Dario Cotugno

Multi Period Assignment Problem for Social Engagement and Opportunistic IoT
Edoardo Fadda, Dario Mana, Guido Perboli, Roberto Tadei

The Impact of Combining Inbound and Outbound Demand in City Logistics Systems
Pirmin Fontaine, Teodor Gabriel Crainic Ola Jabali, Walter Rei

SSERV: The 4ᵗʰ IEEE International Workshop on Social Services through Human and Artificial Agent Models
Session 3: Method
Location: Corte Interrata Room 8
Session Chair: K. Yoshida, University of Tsukuba, Japan

SN Early Signals of Trending Rumor Event in Streaming Social Media
Shihan Wang, Izabela Moise, Dirk Helbing, Takao Terano

Agent-based Urban Dynamics Simulation to Analyse Effects of Street Attractiveness and Tramway for an Urban Sprawl
Hideyuki Nagai, Setsuya Kurahashi

An Analysis of Multi-language Simultaneous Display in the Translation System
Mizuki Sato, Reiko Hishiyama

3:00 – 3:30	**Coffee Break**
3:30 – 5:00	**QUORS: The 11ᵗʰ IEEE International Workshop on Quality Oriented Reuse of Software**

Session 4: Softare and System Evolution 2
Location: Corte Interrata Room 1
Session Chair: Xiaodong Liu, Edinburgh Napier University, UK

Combining Neutron and OpenDaylight for Improvement of Networking Management
Lu Wang, HongWei Ruan, Hua Li, Qi Liu

DeDuCT: A Data Dependence Based Concern Tagger for Modularity Analysis
Andrea Fornaia, Emiliano Tramontana

Towards Service-oriented Design of Hybrid Systems Modeled in Simulink
Timm Liebrenz, Paula Herber, Thomas Göthel, Sabine Glesner

UCDAS: The 4ᵗʰ IEEE International Workshop on User Centered Design and Adaptive Systems
Session 1
Location: Corte Interrata Room 4
Session Chair: Reyes Juárez-Ramírez, Autonomous University of Baja California, Mexico

SIMICE: The 3ʳᵈ IEEE International Workshop on Secure Identity Management in the Cloud Environment
Session 2
Location: Corte Interrata Room 5
Session Chair: Julien Bringer, Safran Identity & Security, France

Flexible Key Revocation and Access Control for a Privacy-protecting Cloud CBIR System
Hao Liu, Hideaki Goto

Enhancing Breeder Document Long-Term Security using Blockchain Technology
Nicholas Buchmann, Christian Rathgeb, Harald Baier, Christoph Busch, Marian Margraf

SSMC: The 1ˢᵗ IEEE International Workshop on Smart and Sustainable Mobility in Smart Cities
Session 2: Smart Mobility: Business Models and Users Behaviors
Location: Corte Interrata Room 7
Session Chair: Guido Perboli

Car Sharing: Current and Potential Members Behavior Analysis after the Introduction of the Service
Stefano Musso

Once-way Free Floating Car Sharing: Applying Vehicle-generated Data to Assess the Market Demand Potential of Urban Zones
Yuri Maria Chianese

Business Modeling of a City Logistics ICT Platform
Alberto De Marco, Giulio Mangano, Giovanni Zenezini, Anna Corinna Cagliano, Guido Perboli, Mariangela Rosano, Stefano Musso

Assessing the Impacts of Electric Vehicles Uptake: A System Dynamics Approach
Brunella Caroleo. Elisa Pautasso, Michele Osella, Enrico Palumbo, Enrico Ferro

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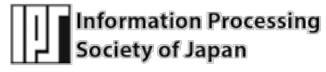IEEE Computer Society
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Computer technologies are producing profound changes in society. Emerging developments in areas such as Deep Learning, supported by increasingly powerful and increasingly miniaturized hardware, are beginning to be deployed in architectures, systems, and applications that are redefining the relationships between humans and technology. As this happens, humans are relinquishing their roles as masters of technology to partnerships wherein autonomous, computer-driven devices become our assistants. What are the technologies enabling these changes? How far can these partnerships go? What will be our future as we deploy more and more "'things" on the Internet of Things – to create smart cities, smart vehicles, smart hospitals, smart homes, smart clothes, etc.? Will humans simply become IoT devices in these scenarios and if so, what will be the social, cultural, and economic challenges arising from these developments? What are the technical challenges to making this all happen – for example, in terms of technologies such as Big Data, Cloud, Fog, Edge Computing, mobile computing, and pervasive computing in general? What will be the role of the 'user' as the 21st Century moves along?

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Important Dates

Workshop proposals
Due date: 15 October 2017
Notification: 15 November 2017

Main Conference papers
Due date: 15 January 2018
Notification: 31 March 2018

Workshop papers
Due date: 10 April 2018
Notification: 1 May 2018

Camera Ready and Registration
Due date: May 15, 2018