COMPSAC 2012
Trustworthy Software Systems
for the Digital Society
Izmir, Turkey
16-20 July
www.compsac.org

General Chairs: Fevzi Belli and Elisa Bertino
Program Chairs: Xiaoying Bai, Atilla Elçi, Mohammad Zulkernine
Workshop Chair: Cristina Seceleanu
Local Organizing Chair: Tugkan Tuglular
Wednesday July 18
21:30: Board bus for return trip to Swissotel, Izmir
20:00-21:30: Time for exploring, dinner
19:30: Board bus for Kusadasi
17:00-19:30: Tour at Ephesus and House of Virgin Mary
17:00: Arrival at Ephesus
Buses will depart from Swissotel at 16:00

Tourist buses will take off from the Swissotel Kultur Park, Izmir to Kusadasi, a nearby town on the Aegean coast.

The COMPSAC/SAINT banquet will be an outdoor gala at the archaeological ruins of Old Smyrna called Agora.
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Bus Trip to Ephesus
We also thank all the keynote speakers, panelists, and authors for their contribution to the exciting technical program in COMPSAC 2012.
We also thank all the keynote speakers, panelists, and authors for their contribution to the exciting technical program in COMPSAC 2012.

We take this opportunity to thank the Track Chairs, Organization Chairs, and members of the Program Committee (PC) who have worked tirelessly soliciting and reviewing papers, and have participated in the PC program discussions and selected papers for the final technical program. We appreciate the contributions of the Program Chairs Xiaoying Bai, Atilla Elci, and Mohammad Zulkernine in creating and setting the program. Special thanks are extended to Professor Carl Chang for his enthusiastic contribution to the entire technical program development process and to his serving as the Standing Committee Chair and to the faculty, staff, and students at Iowa State University for running conference websites and paper submission system and to the IEEE CS staff.

We trust that COMPSAC 2012 will provide you with a valuable opportunity to interact with other researchers and practitioners from institutions around the world.
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Bus will depart from Swissotel at 16:00

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Be sure to register for a 45 minute tour of the area and transportation.

Bus will depart from Swissotel at 16:00 for a short tour of the area, landing at Zeytinburnu, after which the buses will return to the Swissotel.

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COMPSAC/SAINT Joint Panel on Social Computing

Grand Efes Ballroom:

13:30 - 15:00

Location: Didim

Joint COMPSAC & SAINT Planning Meeting

Lunch: Smyrna Auditorium,

13:30 - 14:00

10:15 - 10:30

Engineering:

10:30 - 11:30

- Formal Method
- Requirements

11:30 - 12:30

- Design
- Software Architecture

12:30 - 13:30

Morning Break:

Chair: Elisa Bertino

CLJďer ^ecuritLJ: TŚreat Zeaů and /ŵaŐined

10:00 - 10:15

10:15 - 10:30

Poster session: Thursday 1:30-3:30, Smyrna Auditorium (during the break)

10:30 - 12:30

Best Paper Awards

Chair: Carl Chang

11:00 - 12:00

11:15 - 11:30

12:00 - 12:30

STPSA 2

Bergama 2

Smyrna 2

11:30 - 12:00

12:30 - 13:00

STPSA 3

Bergama 3

Smyrna 3

12:00 - 12:30

12:30 - 13:00

STPSA 1

Bergama 1

Smyrna 1

12:30 - 13:00

STPSA 1

Bergama 1

Smyrna 1

12:30 - 13:00

13:00 - 13:30

13:30 - 15:00

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12:30 - 13:00

STPSA 3

Bergama 3

Smyrna 3

12:00 - 12:30

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STPSA 1

Bergama 1

Smyrna 1

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STPSA 3

Bergama 3

Smyrna 3

12:00 - 12:30

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STPSA 1

Bergama 1

Smyrna 1

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STPSA 2

Bergama 2

Smyrna 2

11:30 - 12:00

12:30 - 13:00

STPSA 3

Bergama 3

Smyrna 3

12:00 - 12:30

12:30 - 13:00

STPSA 1

Bergama 1

Smyrna 1

12:30 - 13:00

13:00 - 13:30
Keynotes, Plenary Events, Registration Area and Conference Desk

Lunch, Conference Breaks, Poster Displays

3rd floor: Breakout Sessions
IWSC 2012: The 9th IEEE International Workshop on Software Cybernetics

MODELING OF A-POSTERIORI ACCESS CONTROL IN BUSINESS PROCESSES

Chair: Xianping Tao

Petri-net-Based Modeling and Resolving of Black Hole Attack in WMN

Chair: Nikolay Tcholtechev

METHOD 2012: The 1st IEEE International Workshop on Methods for Establishing Trust with Open Data

A GOAL-ORIENTED PERSPECTIVE ON APPROACHES TO WEB SERVICE DISCOVERY

Chair: Eric Yu

A NEW COHESION METRIC AND RESTRUCTURING TECHNIQUE FOR OBJECT ORIENTED PARADIGM

Chair: Xiaodong Liu

Towards Reuse-based Development for the On-Chip Distributed SoC Architecture

Chair: Selma Tekir

A BPEL4WS EXTENSION TO DEVELOP AND EXECUTE GRID SERVICE WORKFLOW APPLICATION

Chair: Ralyte Jolita

Integrated QoS Utility-Based Model for Cloud Computing Service Provider Selection

Chair: Hwai-Jung W. Kaya,

A Prototype of Network Failure Avoidance Functionality for SAGE Using OpenFlow

Chair: Hideaki Goto,

A Distributed and Coordinated Massive DDOS Attack Detection and Response Approach

Chair: Mehmet Dilek

Cloud Log Forensics Metadata Analysis

Chair: Tiberiu Niazi,

Cloud Log Forensics Metadata Analysis

Chair: Tiberiu Niazi,

A GRAPHICAL LANGUAGE TO INTEGRATE PROCESS ALGEBRA AND STATE MACHINE VIEWS FOR ASYNCHRONOUS SOFTWARE TESTING

Chair: Robert Hierons

Strategies for Agile Software Testing Automation: An Industrial Experience

Chair: Mariusz Stochel,

Asynchronous Software Testing

Chair: Robert Hierons

IÆS 2012: THE 5th IEEE INTERNATIONAL WORKSHOP ON REQUIREMENTS ENGINEERING FOR SERVICES

Session 2: RE for Services Adaptation and Evolution

Location: Bergama 3 (3rd floor)

Towards Service-oriented Architecture: The Role of Smart Devices and Cloud Computing

Chair: Evren Kuruz,

A Material Hub: A Semantic Search Engine with Rule Reasoning

Chair: Evren Kuruz,

A Prototype of Network Failure Avoidance Functionality for SAGE Using OpenFlow

Chair: Hideaki Goto,

A Distributed and Coordinated Massive DDOS Attack Detection and Response Approach

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Cloud Log Forensics Metadata Analysis

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Cloud Log Forensics Metadata Analysis

Chair: Tiberiu Niazi,
11:00-11:30
Chair: Edzard Höfig

11:30-11:50
Mutual Refinement of Security Requirements and Architecture using Twin Peaks Model

11:50-12:20
Adaptive Pervasive Services

12:20-12:40
Improving Quality Software Requirements Specifications using Spectrum Analysis

12:40-13:00
Parallel Software Reuse Driven CPN Model Reduction and Analysis Approach

13:00-13:30
General Talk: Towards Cross-Domain Situation-Based Context Management and Highly

13:30-14:00
Processes

14:00-14:30
Program Behavior Analysis and Control for Online IDE

14:30-15:00
An Efficient IPTV Distribution Technique under NAT Environment

15:00-15:30
UML AD Refinement Patterns for Modeling Workflow Applications

15:30-16:00
General Talk: Agent-Based Simulation and Its Applications to Service Management

16:00-16:30
Distribution-aware Mutation Analysis

16:30-17:00
Distribution-aware Mutation Analysis

17:00-17:30
Improving Security Software Requirements for Web Services-based Security-Aware Systems

17:30-18:00
Improving Security Software Requirements for Web Services-based Security-Aware Systems

18:00-18:30
Improving Security Software Requirements for Web Services-based Security-Aware Systems

18:30-19:00
Improving Security Software Requirements for Web Services-based Security-Aware Systems
IEESD 2012: The 4th IEEE International Workshop on Industrial Experience in Embedded Systems Design

TIP 2012: The 1st IEEE International Workshop on Tools in Embedded Systems Design Process
Chair: Tiberiu Seceleanu
Location: Konak 1 (3rd floor)

13:30-14:00  GcLite: An Expert Tool for Analyzing Garbage Collection Behavior
Vasileios Angelopoulos, Trevor Parsons, John Murphy, Patrick O’Sullivan

14:00-14:30  Integration and Analysis of Design Artefacts in Embedded Software Development
Daniel Merschen, Julian Pott, Stefan Kowalewski

14:30-15:00  Product Line Variability Model Construction based on Model Difference
Kuming Nie

CORCS 2012: The 4th IEEE International Workshop on Component-Based Design of Resource-Constrained Systems
Chair: Tiziana Margaria
Location: Konak 2 (3rd floor)

13:30-14:00  Extending EAST-ADL for Modeling and Analysis of System’s Resource-Usage
Raluca Marinescu, Eduard Paul Enoiu

14:00-14:30  Modelling the design for an SOA System to Control a Small Scale Energy Zone
Maria Anjum, David Budgen

14:30-15:00  Rule Based Axiomatic Design Theory Guidance for Software Development
Cengiz Togay, Emre Selman Caniaz, Ali Hikmet Dogru

STPSA 2012: The 7th IEEE International Workshop on Security, Trust, and Privacy for Software Applications
Chair: Chunfu Jia
Location: Bergama 1 (3rd floor)

13:30-14:00  Internet-Based Evaluation and Prediction of Web Services Trustworthiness
Meng Li, Zhebang Hua, Junfeng Zhao, Bing Xie

14:00-14:30  On Security Analysis of PHP Web Applications
David Hauzer, Jan Kotroh

14:30-15:00  Measuring the Adequacy of Software Security Requirements Engineering
Nancy Mead

ESAS 2012: The 7th IEEE International Workshop on Engineering Semantic Agent Systems
Chair: Behnam Rahmana
Location: Bergama 2 (3rd floor)

15:00-15:30  Afternoon Break

15:30-16:00  Integrating Linked Data Space with Agents Using the Environment Abstraction
Riza Cenk Erdur, Özgû Dikenelli, Oylum Alatli, Erdem Eser Ekinici, Ziya Akar

16:00-16:30  An Image Processing Approach to Solve Labyrinth Discovery Robotics Problem
Behnam Rahnama, Attila Elçi, Shadi Metani

16:30-17:00  Development of Semantic Model and Information Exploration System for TV Media
Duygu Celik, Attila Elçi, Esra Calik, Ayman Ahmad Khalil

STPSA 2012: The 7th IEEE International Workshop on Security, Trust, and Privacy for Software Applications
Chair: Kaiping Liu
Location: Bergama 1 (3rd floor)

13:30-14:00  Attack Model Based Penetration Test for SQL Injection Vulnerability
Wei Tian, Ju-Feng Yang, Jing Xu, Guan-Nan Si

14:00-14:30  An Efficient Graph Codec System for Software Watermarking
Maria Chroni, Stavros Nikolopoulos

14:30-15:00  A Certificate Based Context Aware Access Control Model for Smart Mobile Devices in Ubiquitous Computing Environments
Davut Cavdar, Ahmet Yortanlı, Pekin Erhan Eren, Altan Kocyigit

COMPSAC 2012 Organizing Committee

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Elisa Bertino, Purdue University, USA

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Atilla Elçi, Süleyman Demirel University, Turkey
Mohammad Zulkernine, Queen’s University, Canada

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Husnu Yenigun, Sabanci University, Turkey

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Ali Dogru, Middle East Technical University, Turkey

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Alberto Trombetta, University of Insubria, Italy

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Ali İnan, Eski University, Turkey
Peter Liggesmeyer, Fraunhofer IESE, Germany

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The Izmir Chamber of Commerce delivers services that meet the needs and expectations of its members and to contribute to the development of commercial and economic life of Turkey. With its Pre-Republic history and more than 70,000 members and about 200 personnel, Izmir Chamber of Commerce is the second biggest and most institutionalized chamber in Turkey.

[www.izto.org.tr/IZTO/IN](http://www.izto.org.tr/IZTO/IN)

**SUPPORTER**

The Scientific and Technological Research Council of Turkey (TÜBİTAK) is the leading agency for management, funding and conduct of research in Turkey. It was established in 1963 with a mission to advance science and technology and support Turkish researchers. The Council is an autonomous institution and is governed by a Scientific Board whose members are selected from prominent scholars from universities, industry and research institutions.

[www.tubitak.gov.tr](http://www.tubitak.gov.tr)

**SUPPORTER**

Netsis was founded in 1991 in Izmir to develop technological solutions for companies to increase their competitiveness. Netsis provides advanced R&D in Turkey as well as Azerbaijan, Belarus, Iran, Ukraine, Egypt, Uzbekistan, Russia, and the Sudan.


**SUPPORTER**

CMA Consulting, since 2006: Enterprise Resource Planning, Application Development, System Integration and Business Intelligence with SAP products in a consulting firm providing consulting and software services.


**SUPPORTER**

iDivino was established in 2011 in Izmir, to advance R&D know-how and experience in the private sector, keeping in the forefront of R&D activities aimed to produce innovative and accurate scale projects. Driven by market needs and technological innovations, iDivino aims to provide services to meet the needs for innovation-based solutions for small/medium enterprises for Information Technology.

[www.facebook.com/idivy](http://www.facebook.com/idivy)

**BRONZE SUPPORTER**

CARDTEK has a number of companies in its group that cater to the intense R&D and innovation needs of the Turkish banking payment systems. Companies include SmartSoft, CordisNetwork, CredoWork, and Phaymobile.

[www.cardtek.com](http://www.cardtek.com)

**BRONZE SUPPORTER**

IBM began operating in Turkey in the 1930s and has several locations in the country, including in the capital, Ankara, and the largest city, Istanbul, which is the third largest metropolitan city proper in Europe and the only metropolis in the world that is situated on two continents -- Asia and Europe.

[www.ibm.com/planetwide/tr](http://www.ibm.com/planetwide/tr)

**BRONZE SUPPORTER**

STM is a Defense, Energy, Education, Health, Transportation and Homeland Security consultancy services, technical support and a service company that produces technology-focused solutions.


**SUPPORTER**

Softin is engaged in information technology and offers comprehensive, proprietary IT solutions for health and education sectors.


**ORGANIZER**

İzmir Institute of Technology is one of the state universities in Turkey and one that was established in 1992 with a view to offering a high level of education and carrying out research in various fields of engineering and natural sciences. The medium of education is English. It is one of the two Turkish institutes of technology, which are the most advanced models of technical universities in today's world.

[www.iyte.edu.tr](http://www.iyte.edu.tr)

**ORGANIZER**

Iowa State is an international, prestigious university with a friendly welcoming personality. More than 28,000 students choose from 100 majors, study with world-class scholars and hone their leadership skills in more than 800 student organizations. Iowa State offers a great environment where students can enjoy reaching their potential and discovering their passions. It's a culturally diverse student body with students from all 50 states and more than 110 countries.

[www.iastate.edu](http://www.iastate.edu)

Metropolitan Municipality and affiliated institutions and companies implement master plans approved and decisions taken by Metropolitan Municipality Council. One of those is to support major conferences that will help to transform Izmir into a Brand City. As sponsoring COMPSAC, Izmir Metropolitan Municipality will host the European Healthy Cities Conference in 2013 in Izmir.