

SAINT 2009

The Pervasive Internet

Program for the 9th Annual
Symposium on Applications & the Internet
Seattle, Washington USA
Hyatt Regency Bellevue
July 20-24, 2009



Information Processing
Society of Japan



SAINT 2009

The 2009 Symposium on Applications & the Internet

Bellevue, WA, USA

July 20 - 24, 2009

PROGRAM

Co-sponsored by the IEEE Computer Society (IEEE-CS) and
the Information Processing Society of Japan (IPSJ).



The 2009 Symposium on Applications & the Internet Program At-a-Glance

		Cedar Ballroom A	Cedar Ballroom B	Regency Ballroom E
July 20 Mon	19:00-21:00	Joint COMPSAC/SAINT Welcome Reception – East Lawn Garden, adjacent to Hyatt Regency Bellevue (alternate rain location: Regency Ballroom) Enter through Wintergarden Lobby (main hotel lobby)		
July 21 Tue	08:00-10:00	Opening Session: Joint Conference Welcome: Carl Chang, Chair, COMPSAC Standing Committee; Chair, SAINT Steering Committee Welcome Remarks: Darrell Long, General Chair, SAINT; Tony Hey, General Chair, COMPSAC Opening Remarks: Susan K. Land, President, IEEE Computer Society COMPSAC Program Overview: Vladimir Getov, COMPSAC Program Chair SAINT Program Overview: Morris Chang & Kenichi Yoshida, SAINT Program Chairs COMPSAC Best Paper Awards: Lin Liu, COMPSAC Program Chair SAINT Best Paper Awards: Kilnam Chon & Johnny Wong, SAINT Awards Chairs Joint Keynote: Project Greenlight: Optimizing Cyberinfrastructure for a Carbon Constrained World Larry Smarr, California Institute for Telecommunications and Information Technology, USA Chaired by Elisa Bertino, COMPSAC09 Program Chair (Regency Ballroom)		
	10:30-12:00	Symposium Session #1 Wireless	Workshop WS-1 (FIST)	Workshop WS-3 (ITeS)
	13:30-15:00	Symposium Session #2 Security	Workshop WS-1 (FIST)	Workshop WS-3 (ITeS)
	15:30-17:00	Symposium Session #3 Applications	Workshop WS-1 (FIST)	Workshop WS-5 (PASN)
	18:30-20:30	Joint COMPSAC/SAINT Presidential Reception - Hyatt Regency Bellevue (Regency Ballroom)		
	20:30-22:00	Joint COMPSAC/SAINT Planning Meeting (Juniper Room), All invited		
July 22 Wed	08:30-10:00	Joint Keynote: Programming the Cloud Tony Hey, Corporate Vice President, External Research, Microsoft Research, Microsoft Corporation, USA Chaired by Vladimir Getov (Regency Ballroom)		
	10:30-12:00	Symposium Session #4 Mining from Network	Workshop WS-1 (FIST)	Workshop WS-4 (MidArc)
	13:30-15:00	Symposium Session #5-1 Short papers I	Symposium Session #5-2 Short papers II	Workshop WS-4 (MidArc) Note: This session in Juniper Room
	15:30-17:00	SAINT student session #A	SAINT student session #B	SAINT student session #C
	18:00-21:00	Joint COMPSAC/SAINT Conference Banquet - Argosy Cruises, Seattle		
July 23 Thu	08:30-10:00	Joint Keynote: Towards Fine-Grained Secure Communications Tatsuaki Okamoto, NTT, Japan Chaired by Haruo Takemura (Regency Ballroom)		
	10:30-12:00	Symposium Session #6 Network I	Workshop WS-2 (UNECAS)	Workshop WS-6 (ConCom)
	13:30-15:00	Symposium Session #7 Network II	Workshop WS-2 (UNECAS)	
	15:30-17:00	Joint COMPSAC/SAINT Panel: Emerging Pervasive Systems—Research Challenges and Proposed Solutions (Regency Ballroom ABC)		
July 24 Fri	08:30-10:00	Joint COMPSAC/SAINT Concluding Panel: Security and Privacy in Community-based Internet Applications (Regency Ballroom)		

WS-1	FIST	The First Workshop on Trust and Security in the Future Internet
WS-2	UNECAS	The Sixth Workshop for Ubiquitous Networking and Enablers to Context-Aware Services
WS-3	IteS	The Second Workshop on ITeS (IT enabled Services)
WS-4	MidArc	The Third Workshop on Middleware Architecture in the Internet
WS-5	PASN	The Third International Workshop on Practical Applications of Sensor Networking
WS-6	ConCom	The First International Workshop on Concurrent Communication

SYMPOSIUM - Keynotes, Paper Sessions, Panels

Tuesday, 21 July

COMPSAC/SAINT Opening

08:00-08:30 – Regency Ballroom

Welcome Remarks

Carl Chang (Chair, COMPSAC Standing Committee; Chair, SAINT Steering Committee)

Opening Remarks

Susan K. Land (2009 President, IEEE Computer Society)

COMPSAC Program Overview

Elisa Bertino, Vladimir Getov, Lin Liu (COMPSAC Program Chairs)

SAINT Program Overview

Morris Chang, Kenichi Yoshida (SAINT Program Chairs)

COMPSAC Best Paper Awards

Lin Liu (COMPSAC Program Chair)

SAINT Best Paper Awards

Kilnam Chon, Johnny Wong (SAINT Awards Chairs)

Joint COMPSAC/SAINT Opening Keynote

08:30-10:00 – Regency Ballroom

Chair: Elisa Bertino (Purdue Univ., USA)

Project Green Light: Optimizing Cyber Infrastructure for a Carbon Constrained World

Larry Smarr (Calit2, USA)

Session 1 Wireless

10:30-12:00 – Cedar Ballroom A

Chair: Kenichi Yoshida (Univ. of Tsukuba)

TCP Throughput Estimation by Lightweight Variable Packet Size Probing in CDMA2000 1x EV-DO Network

Takayuki Goto, Atsushi Tagami, Teruyuki Hasegawa, and Shigehiro Ano

Cross-Layer Based Anomaly Detection in Wireless Mesh Networks

Xia Wang, Johnny S. Wong, Fred Stanley, and Samik Basu

Operation Prediction for Context-Aware User Interfaces of Mobile Phones

Daisuke Kamisaka, Shigeki Muramatsu, Hiroyuki Yokoyama, and Takeshi Iwamoto

Session 2 Security

13:30-15:00 – Cedar Ballroom A

Chair: Shigehiro Ano (KDDI Labs.)

An Enhanced Location Privacy Framework with Mobility Using Host Identity Protocol

Keiji Maekawa and Yasuo Okabe

Evaluation of Online Resources in Assisting Phishing Detection

Kaigui Bian, Jung-Min “Jerry” Park, Michael S. Hsiao, France Bélanger, and Janine Hiller

Design and Implementation of a Certified Mail Exchange System Using Simultaneous Secret Exchange

Keita Shimizu, Shuichi Miyazaki, and Yasuo Okabe

Session 3 Applications

15:30-17:00 – Cedar Ballroom A

Chair: Hiroyuki Ohsaki (Osaka Univ.)

An Instruction Method for Displaying Trajectory of an Object in Remote Collaborative MR on the Basis of Changes in Relative Coordinates

Yuta Okajima, Shun Yamamoto, Yuichi Bannai, and Kenichi Okada

Aggregate Skyline: Analysis for Online Users

Shyam Antony, Ping Wu, Divyakant Agrawal, and Amr El Abbadi

Dynamic Load Balancing for Cluster-Based Publish/Subscribe System

Hojjat Jafarpour, Sharad Mehrotra, and Nalini Venkatasubramanian

Wednesday, 22 July

Joint COMPSAC/SAINT Keynote

08:30-10:00 – Regency Ballroom

Chair: Vladimir Getov (Univ. of Westminster, UK)

Programming the Cloud

Tony Hey (Microsoft Research, USA)

Session 4 Mining from Network

10:30-12:00 – Cedar Ballroom A

Chair: Shiro Uesugi (Matsuyama Univ.)

Using Call Patterns to Detect Unwanted Communication Callers

Tetsuya Kusumoto, Eric Y. Chen, and Mitsutaka Itoh

Selling Practices in Online Fixed-Price Marketplaces

Adriano Pereira, Diego Duarte, Wagner Meira Jr., and Paulo Góes

Session 5-1 Short Papers I

13:30-15:00 – Cedar Ballroom A

Chair: Sigeru Miyake (Hitachi Ltd.)

A Table-Driven Programming Paradigm for Context-Aware Application Development

Zhang Junbin, Qi Yong, Hou Di, and Li Ming

Scent Presentation Technique of Pulse Ejection Synchronized with Breathing

Kaori Ohtsu, Junta Sato, Yuichi Bannai, and Ken-ichi Okada

Domain Ontology Learning from Websites

Yu Zhao and Jianqiang Li

Session 5-2 Short Papers II

13:30-15:00 – Cedar Ballroom B

Chair: Hiroshi Mineno (Shizuoka Univ.)

Verification of Accuracy Improvement for CoMPACT Monitor Due to Suboptimal Inter-probe Time

Kohei Watabe, Yudai Honma, and Masaki Aida

A Subscription Coverage Technique for XML Message Dissemination

Yang Cao, Chung-Horng Lung, and Shikharesh Majumdar

Dynamic Topology Reconfiguration Method for Service Overlay Networks Using Users' Community Information

Tomoyasu Ogasa, Yousuke Takahashi, Hiroyuki Ohsaki, Takeshi Yagi, Junichi Murayama, and Makoto Imase

SAINT Student Session A

Streaming and Traffic Analysis

15:30-17:00 – Cedar Ballroom A

Chair: Katsuyuki Yamazaki (Nagaoka Univ. of Tech., Japan)

Reliable Streaming Transmission Using PR-SCTP

Tomotaka Maeda, Masahiro Kozuka, and Yasuo Okabe

Analysis of UDP Traffic Usage on Internet Backbone Links

Min Zhang, Maurizio Dusi, Wolfgang John, and Changjia Chen

Streaming Media Caching on Advanced Relay Nodes

Yusuke Sugio, Hiroyuki Koga, Masayoshi Shimamura, and Takeshi Ikenaga

SAINT Student Session B

Routing and Resource Discovery

15:30-17:00 – Cedar Ballroom B

Chair: Morris Chang (Iowa State University, USA)

Multi-base Station Placement for Reprogramming Wireless Sensor Networks

Aoi Hashizume, Hiroshi Mineno, and Tadanori Mizuno

Congestion Propagation in Multihop Wireless Networks

Yoichi Yamasaki, Hiroyuki Koga, Yutaka Fukuda, Masayoshi Shimamura, and

Yuji Oie

A Proposal of P2P-Based Resource Discovery Mechanism for the Grid

Kei Kokubo, Kohei Ichikawa, Yoshimasa Ishi, and Susumu Date

Friday, 24 July

Joint COMPSAC/SAINT Concluding Panel

Security and Privacy in Community-based Internet Applications

08:30-10:00 – Regency Ballroom

Chair: Stephen S. Yau (Arizona State Univ., USA)

Panelists:

Balachander Krishnamurthy (AT&T Bell Labs., USA)

Shiro Uesugi (Univ. of Matsuyama, Japan)

Jeffrey Voas (Science Applications International Corp., USA)

Yi-Min Wang (Microsoft Research, USA)

THEME OF THE PANEL DISCUSSION

Internet technology has played an increasingly important role in how people interact with each other. People form various virtual communities based on conditions relevant to their personal activities and/or backgrounds, such as their interests, occupations, and locations. People in virtual communities can share information, perform group-oriented tasks, and communicate with each other quickly and efficiently. Community-based internet applications are very useful in many different application domains, especially in social networking. The situations become more complex as corporations began to recognize the importance and power of social computing, and permit their employees to leverage on this newly found "connectivity" as a novel "productivity" tool. Large social networking websites, such as Facebook, LinkedIn, and MySpace provide various software supports for users to interact and manage communities.

However, since users of such applications often reveal a lot of personal and corporate information and frequently exchange data with others who may not be trustworthy, security and privacy in using these community-based applications imposes major challenges for research. These challenges span across many areas, including digital identity management, social networking, privacy-preserving data sharing and integration, and software protection against malware.

This panel will address the critical and fast-emerging challenges for security and privacy in community-based internet applications, and discuss potential solutions and future research directions to tackle the identified challenges.

Workshops

Tuesday, 21 July

The First Workshop on Trust and Security in the Future Internet (FIST 2009)

Welcome note by WS Organizers

Jun Bi

Session 1: Challenges on Future Internet Infrastructure

10:30-12:00 – Cedar Ballroom B

Session Chair: Dan Massey (Colorado State University, USA)

Understanding the Challenges in Securing Internet Routing

Ricardo Oliveira, Mohit Lad, and Lixia Zhang

A Novel SeND Based Source Address Validation Mechanism (SAVM-SeND)

Pingping Lin and Jun Bi

Managing Trusted Keys in Internet-Scale Systems

Eric Osterweil, Dan Massey, and Lixia Zhang

Session 2: Security Measurements and Analysis

13:30-15:00 – Cedar Ballroom B

Session Chair: Artur Hecker (TELECOM ParisTech, France)

Invited talk: Identities in Future Communication Systems

Kim Cameron -presentation only-

Analyzing the Aftermath of the McColo Shutdown

Steve DiBenedetto, Dan Massey, Christos Papadopoulos, and Patrick J. Walsh

Anshin as Emotional Trust: A Comparison Study between U.S. and Japanese Non-computer-science Students

Yuko Murayama, Yasuhiro Fujihara, Dai Nishioka, Carl Hauser, and

Atushi Inoue

Session 3: Emerging Concepts and Technologies

15:30-17:00 – Cedar Ballroom B

Session Chair: Jun Bi (Tsinghua University, China)

Davis Social Links: Leveraging Social Networks for Future Internet Communication

Lerone Banks, Prantik Bhattacharyya, Matthew Spear, and

Shyhtsun Felix Wu

Owner-Centric Networking (OCN): Toward a Data Pollution-Free Internet

Claude Castelluccia and Mohamed Ali Kaafar

Invited talk: Evolution or Revolution: How To Add Security to the Current Internet Infrastructure

Lixia Zhang -presentation only-

The Second Workshop on IT Enabled Services (ITeS 2009)

Welcome note by WS Organizers

Hitoshi Okada

Session 1: Key Uses of ITeS in Business Practices

10:30-12:00 – Regency Ballroom E

Session Chair: Hitoshi Okada (National Institute of Informatics, Japan)

Financial Securitization with Digital Rights Management System

Hirotsugu Kinoshita, Tetsuya Morizumi, and Kazuhiro Suzuki

A System for Search, Access Restriction, and Agents in the Clouds

Tetsuya Morizumi, Kazuhiro Suzuki, and Hirotsugu Kinoshita

Enterprise Architecture Create Business Value

Takaaki Kamogawa and Hitoshi Okada

IT-Enabled Survey and Its Problems: Analyses of an Australian Internet Poll

Memiko Ootsuki, Tetsuro Kobayashi, and Noboru Sonehara

Session 2: Application in Public Policy and Political Aspects of ITeS

13:30-15:00 – Regency Ballroom E

Session Chair: Shiro Uesugi (Matsuyama University, Japan)

Information Sharing System for Maintenance of Sewage Facilities

Takashi Okamoto

Business Models for IPTV Service; Integrated or Platform?

Yousin Park, Yunju Chen, and Masashi Ueda

Evaluation of the Competition Policy to Encourage MVNO System in Japan

Yuki Shoji

A Study on How Technological Innovation Affected the 2008 U.S. Presidential Election: Young Voters' Participation and Obama's Victory

Shoko Kiyohara

The Third International Workshop on Practical Applications of Sensor Networking (PASN 2009)

Welcome note by WS Organizers

Hideki Sunaharas

Session 1: Data Analysis and Practical Applications on Large Scale Sensor Networks

15:30-17:00 – Regency Ballroom E

Session Chair: Satoshi Matsuura (NAIST, Japan)

A Fault Detection System for Large Scale Sensor Networks Considering Reliability of Sensor Data

Masato Yamanouchi, Satoshi Matsuura, and Hideki Sunahara

RainWatch Project: Location-Awared Realtime Detection and Notification of Rain on Internet-Based Sensor Network

Kaveevivitchai Sathita, Hideya Ochiai, and Hiroshi Esaki

Measurement Analysis of the Live E! Sensor Network: Spatial-Temporal Correlations and Data Aggregation

Elyes Ben Hamida, Hideya Ochiai, Hiroshi Esaki, Pierre Borgnat,

Patrice Abry, and Eric Fleury

Wednesday, 22 July

The First Workshop on Trust and Security in the Future Internet (FIST 2009)

Session 4: Lighting Talks

10:30-12:00 – Cedar Ballroom B

Session Chair: Xiaoliang Zhao (Verizon, USA)

Closing Remarks: TBD

The Third Workshop on Middleware Architecture in the Internet (MidArc 2009)

Welcome note by Workshop Organizers

Yasuo Okabe

Session 1: Single Sign-On & Federation

10:30-12:00 – Regency Ballroom E

Session Chair: Motonori Nakamura (National Institute of Informatics, Japan)

Invited Talk: Towards a global AAA framework for Internet

Sébastien Decugis

An Infocard-based proposal for unified single sign on in eduroam

Enrique de la Hoz de la Hoz, Antonio García, Iván Marsá-Maestre,

Miguel Ángel López-Carmona and Bernardo Alarcos

Proposal of Delegation Using Electronic Certificates on Single Sign-On System with SAML-Protocol

Takaaki Komura, Shoichi Hashimoto, Makiko Aoyagi, Kenji Takahashi and

Yasuhiro Nagai

Leveraging PKI in SAML2.0 Federation for Enhanced Discovery Service

Toshiyuki Kataoka, Takeshi Nishimura, Masaki Shimaoka, Kazutsuna Yamaji,

Motonori Nakamura, Noboru Sonehara and Yasuo Okabe (NII, Kyoto University)

Session 2: Security & Performance

13:30-15:00 – Juniper Room

Session Chair: Takaaki Komura (Kyoto University, Japan)

Invited Talk: Automatic issuance of open-domain server certificates for Japanese Universities by pre-registration and delegation

Masaki Shimaoka -presentation only-

Security Analysis on Privacy-Secure Image Trading Framework Using Blind Watermarking

Mitsuo Okada, Yasuo Okabe, and Tetsutaro Uehara

Analysis of a Security Incident of Open Source Middleware – Case Analysis of 2008 Debian Incident of OpenSSL –

Takeshi Nishimura and Hiroyuki Sato

On Maximizing IP-SAN Throughput over TCP Connections with Automatic Parallelism Tuning for Long-Fat Networks

Takamichi Nishijima, Fumito Inoue, Hiroyuki Ohsaki, Yoshihiro Nomoto and

Makoto Imase

Thursday, 23 July

The Sixth Workshop for Ubiquitous Networking and Enablers to Context-Aware Services (UNECAS 2009)

Welcome note by WS Organizers

Yuichi Teranishi

Session 1: Key Technologies for Context-aware Ubiquitous Network Services

10:30-12:00 – Cedar Ballroom B

Session Chair: Michiharu Takemoto (NTT/NICT, Japan)

Proposal of Initial Route Establishment Method in Wireless Mesh Network

Kazunori Ueda and Ken-ichi Baba

A Bloom Filter-Based User Search Method Based on Movement Records for P2P Network

Toru Shiraki, Yuichi Teranishi, Susumu Takeuchi, Kaneme Harumoto, and

Shojiro Nishio

Method for Inferring High-order and Dynamic User-context

Yuichi Nakatani

Session 2: Ubiquitous Network Services based on New Concepts

13:30-15:00 – Cedar Ballroom B

Session Chair: Yuuichi Teranishi (Osaka University/NICT, Japan)

CCDM: Central Controller-based Device Management Architecture and Method to Split Management Scripts

Akihiro Sugiyama, Hideya Ochiai, and Hiroshi Esaki

A Network Architecture to Easily Control Devices

Takahiro Hata, Michiharu Takemoto, Takashi Kambayashi, Kentaro Uchiyama, and Mitsuo Teramoto

Support System for Service-Scenario Development Based on Connected Component History

Yasutoshi Miyagi, Yoji Yamato, Yusuke Nakano, and Miki Hirano

The First International Workshop on Concurrent Communication (ConCom 2009)

Welcome Note by Workshop Organizers

Javed I. Khan

Session 1: Communication Architectures and Security

10:30-12:00 – Regency Ballroom E

Session Chair: Javed I. Khan (Kent State University, USA)

DCN@MPLS: A Network Architectural Model for Dynamic Circuit Networking at Multiple Protocol Label Switching

Javed I. Khan and Omar Y. Tahboub

Study on Multi-path Transmission Model Based on P2P Overlay Networks for Streaming Data

Guochao Jing, Takeshi Tsuchiya, Hiroaki Sawano, Takeshi Kugimoto,

Katsuhiro Sebayashi, Osamu Akashi, Mitsuru Maruyama, and Keiichi Koyanagi

PCSP: A Probable Concurrent Secure and Portable Peer-to-Peer Protocol

Graciela Perera and Robert Gilliland

SAINT 2010

10th Annual International Symposium on Applications and the Internet



CALL FOR CONTRIBUTIONS

19-23 JULY 2010

SAINT is a major joint international conference co-sponsored by the Information Processing Society of Japan (IP SJ) and the IEEE Computer Society. The symposium provides a forum for researchers and practitioners from the academic, industrial, public and governmental sectors to share their latest innovations on Internet technologies and applications, and their counter-strategies and techniques to attack many problems affecting the quality of life for humanity in the 21st century.

The Internet has revolutionized and changed the way we communicate, socialize, entertain, access information and conduct business. It has evolved into a pervasive ecosystem of connected computers, mobile devices, sensors, home appliances, and a variety of other gadgets. This evolution has led to a deep intertwining of the physical, social and digital worlds, raising new research agendas and challenging our understanding of the requirements for a vastly interconnected world.

The theme for SAINT 2010 is the *Inclusive Internet*. The advent of Web 2.0, social networks, open API's, mash-ups and cloud computing are empowering Internet users into becoming Internet "makers." Anyone and everyone is included, free to contribute content and even services. The frontier of the Internet no longer stops at the shores of large corporations, small businesses, and online stores. It has expanded to include the presence and contributions of virtually all mankind.

Areas of particular interest to SAINT include, but are not limited to: (A) Internet Application Areas: E-Entertainment, E-Health, E-Business, E-Science, Internet Warfare, Web-based Collaboration, Internet Communities, Twittering, etc.; and (B) Enabling technologies for the Internet: Content Management & Delivery, Web services, Service Oriented Architectures, Standards, Internet Security, Privacy, Network and Protocol Architectures, Mobile Digital Appliances. Check <http://www.saintconference.org> for detailed submission information.

Accepted papers will be published in the electronic conference proceedings by the IEEE Computer Society, indexed through INSPEC and EI Index, and automatically included in the IEEE digital library. Plans had been made to forward select papers to archival journals for publications. No simultaneous submission to multiple publication venues are allowed, and only original results are acceptable.

Main Conference Deadlines

January 31, 2010: Symposium paper submissions
March 31, 2010: Symposium author notifications

Workshop Deadlines:

November 15, 2009: Workshop proposals due
December 15, 2009: Workshop call for papers
February 28, 2010: Workshop paper submission due
March 31, 2010: Workshop author notification

April 30, 2010: All final, camera-ready manuscripts and author pre-registration due

Sponsored by:



General Inquiries and Contact Information

For more detailed information and submission info, please visit the conference website at:

<http://www.saintconference.org/>

Co-located with COMPSAC 2010 (compsac.org)

Questions? Send an email to: saint2010-info@nii.ac.jp