



CollaborateCom 2011



GENERAL

- [Home](#)
- [Call for Papers](#)
- [Important Dates](#)
- [Submission Guidelines](#)
- [Steering Committee](#)
- [Conference Officers](#)
- [Program Committee](#)

PROGRAMS

- [Program at a Glance](#)
- [Complete Program](#)
- [Keynotes](#)
- [Panels](#)
- [Posters](#)
- [Gen. Chairs' Message](#)
- [PC Chairs' Message](#)

CONFERENCE

- [Registration](#)
- [Venue/Accommodation](#)
- [Camera-Ready Sub.](#)
- [Travel Information](#)

WORKSHOPS

- [CyPhyCard 2011](#)
- [CCSocialComp 2011](#)
- [TrustCol 2011](#)

HISTORY

- [CollaborateCom 2010](#)
- [CollaborateCom 2009](#)
- [CollaborateCom 2008](#)
- [CollaborateCom 2007](#)
- [CollaborateCom 2006](#)
- [CollaborateCom 2005](#)

Conference Program (preliminary)

[\[Day 1: Saturday 15th\]](#) [\[Day 2: Sunday 16th\]](#) [\[Day 3: Monday 17th\]](#) [\[Day 4: Tuesday 18th\]](#) [\[Program at a Glance\]](#)

Morning Coffee Break: 10:00AM - 10:30AM

Lunch Time: 12:30PM to 1:30PM

Afternoon Coffee Break: 3:00PM - 3:30PM

Saturday 15th - 08.45am - 5.00pm

Workshops: TrustCol and CyPhyCARD have been combined. Please see TrustCol program schedule

[Collaborative, Autonomic, and Resilient Defenses for Cyber Physical Systems \(CyPhyCARD 2011\) -- \(program\)](#)

[Collaborative Communities for Social Computing \(CCSocialComp 2011\) -- \(program\)](#)

[Trusted Collaboration \(TrustCol 2011\) -- \(program\)](#)

Sunday 16th - 08.45am - 09.00am

Opening Ceremony

Sunday 16th - 09:00am- 10:00am

Keynote 1

Location: Legacy North 2

[A World of Opportunities: CPS, IOT, and Beyond](#)

Calton Pu, Jr. Chair in Software, Co-Director in the Center for Experimental Research in Computer Systems, College of Computing, Georgia Tech

Sunday 16th - 10:30am - 12:30pm

Session 1 - Collaborative Architectures and Systems

Location: Legacy North 1

Session Chair: James Caverlee, Texas A&M University, USA

Overhearing Conversations in Global Software Engineering - Requirements and an Implementation

Kevin Dullemond, Ben Van Gameren and Rini Van Solingen
(Full Paper)

REUSES: Questionnaire-driven Design for the Automatic Generation of Web-based Collaborative Applications

Ruth Cobos, Rafael Martin, Jaime Moreno-Llorena, Esther Guerra and Juan De Lara
(Full Paper)

Bootstrapping Operation-level Web Service Ontology: A Bottom-up Approach

Xumin Liu and Hua Liu
(Industrial /Application Paper)

Analyzing Distributed Whiteboard Interactions

Lutz Gericke, Raja Gumienny and Christoph Meinel
(Full Paper)

Sunday 16th - 10:30am - 12:30pm

Session 2 - Data-Driven Services

Location: Legacy North 2

Session Chair: Thomas Repantis, Akamai Technologies, USA

OTPM: Failure Handling in Data-intensive Analytical Processing

Binh Han, Edward Omiecinski, Leo Mark and Ling Liu
(Full Paper)

A Scalable Cooperative Semantic Caching (CoopSC) Approach to Improve Range Queries

Andrei Vancea, Laurent D'Orazio and Burkhard Stiller
(Full Paper)

Vulnerabilities and Countermeasures in Social Network Publication

Chiemi Watanabe, Toshiyuki Amagasa and Ling Liu
(Invited Full Paper)

Spectrum Perturbation-based Subspace Classification

Chao Chen, Mei-Ling Shyu and Shu-Ching Chen
(Invited Full Paper)

Sunday 16th - 01:30pm - 03:00pm**Session 3 - Online Social Networks****Location:** Legacy North 1**Session Chair:** Anna Squicciarini, Pennsylvania State University, USA**Efficient Shortest Paths on Massive Social Graphs**Xiaohan Zhao, Alessandra Sala, Haitao Zheng and Ben Y. Zhao
(Invited Full Paper)**Your Best might not be Good Enough: Ranking in Collaborative Social Search Engines**Prantik Bhattacharyya, Jeff Rowe, Shyhtsun Felix Wu, Karen Haigh, Niklas Lavesson and Henric Johnson
(Invited Full Paper)**An Ensemble-based Approach to Fast Classification of Multi-label Data Streams**Xiangnan Kong and Philip S. Yu
(Invited Full Paper)

Sunday 16th - 01:30pm - 03:00pm**Session 4 - Distributed Networking and Systems (I)****Location:** Legacy North 2**Session Chair:** Suraj Pandey, ICT Center, Australia**Consistent Replication in Distributed Multi-tier Architectures**Thomas Repantis, Arun Iyengar, Vana Kalogeraki and Isabelle Rouvellou
(Invited Full Paper)**A Cooperative Game Theoretic Approach for Data Replication in Mobile Ad-Hoc Networks**Daniel Hirsch and Sanjay Madria
(Full Paper)**Content-Based Retrieval in Peer-to-Peer Networks Using Cooperative Caching**Bo Yang
(Full Paper)

Sunday 16th - 03:30pm - 05:00pm**Panel 1: Collaboration and Social Networks****Location:** Legacy North 2**Mediator:** James Joshi, University of Pittsburgh, USA**Panel Statement:**

The term "collaboration" was introduced into computer science by the collaborative work community (e.g., CSCW - computer supported coop). Traditionally, collaborative work meant using computers as an explicit medium to facilitate collaborative activity, e.g., writing a document. Collaborative work has been broadened to include discussions, chat rooms, wikis, but the term "collaboration" maintained its connotation of a closed group of working over some concrete computer representation of documents or results.

In contrast, social networks were introduced to use computers as an implicit medium for facilitating communications and collaborative activity necessarily over a concrete document. Resources and information can be easily shared and distributed by social networks, enabling phenomena such as mob and crowd sourcing. These techniques have been demonstrated in the DARPA Network Challenge (the Red Balloon competition). In contrast to cooperative work on data (e.g., documents), collaboration over social networks typically focus on metadata (e.g., collaborative recommendation) in an open environment (e.g., "like" in Facebook).

Panelists will discuss the impact of social networks on the broadening of the term "collaboration". First, they will comment on some of the differences, comparing the traditional meaning of collaboration with the new meaning of collaboration. Second, they will discuss the new system requirements supporting the new kind of collaboration. For example, security and privacy are more easily controlled in a traditional closed environment, but challenging in an open social network. Third, they will discuss the new research challenges that arise when social networks are used for collaboration.

Panelists:

- James Caverlee (Texas A&M University - USA)
- Panos Chrysanthis (University of Pittsburgh - USA)
- Mohamed Eltoweissy (Pacific Northwest National Laboratory - USA)
- Philip S. Yu (University of Illinois at Chicago - USA)

Panelists will give a short (10-15min) interactive introduction, followed by discussions.

Sunday 16th - 05:30pm - 06:30pm**Poster Presentation and Light Reception****Location:** Forum East 4[Poster List](#)

Monday 17th - 08:45am - 09:00am**Conference Announcement**

Monday 17th - 09:00am - 10:00am

Keynote 2

Location: Legacy North 2

Collaborating with Executable Content Across Space and Time

Mahadev Satyanarayanan, School of Computer Science, Carnegie Mellon University

Monday 17th - 10:30am - 12:30pm**Session 5 - Distributed Networking and Systems (II)**

Location: Legacy North 1

Session Chair: Damian Dechev, University of Central Florida, USA

Memory-enabled Autonomic Resilient Networking

Bassem Mokhtar and Mohamed Eltoweissy
(Full Paper)

A Content-aware Collaborative Accessing Model in Ad Hoc Networks

Bo Yang
(Industrial /Application Paper)

Decentralized Work-in-process Optimization in Cooperative Resource Allocation

Doraid Dalalah
(Industrial /Application Paper)

The ABA Problem in Multicore Data Structures with Collaborating Operations

Damian Dechev
(Industrial /Application Paper)

Monday 17th - 10:30am - 12:30pm**Session 6 - Privacy and Collaboration**

Location: Legacy North 2

Session Chair: Barbara Carminati, University of Insubria, Italy

m-Privacy for Collaborative Data Publishing

Slawomir Goryczka, Li Xiong and Benjamin C. M. Fung
(Full Paper)

Towards Privacy Preserving Access Control in the Cloud

Nabeel Mohamed, Elisa Bertino, Murat Kantarcioglu, Bhavani Thuraisingham
(Invited Full Paper)

CONFLuEnCE: Implementation and Application Design

Panayiotis Neophytou, Panos K. Chrysanthis and Alexandros Labrinidis
(Invited Full Paper)

Monday 17th - 01:30pm - 03:00pm**Session 7 - Cloud and Middleware**

Location: Legacy North 1

Session Chair: Li Xiong, Emory University, USA

Collaborative Integrity Verification in Hybrid Clouds

Yan Zhu, Hongxin Hu, Gail-Joon Ahn, Yujing Han and Shimin Chen
(Full Paper)

Mobile XMPP and Cloud Service Collaboration: An Alliance for Flexible Disaster Management

Ronny Klauck, Michael Kirsche, Jan Gaebler and Sebastian Schoepke
(Full Paper)

A Contract-extended Push-Pull-Clone Model

Hien Thi Thu Truong, Claudia-Lavinia Ignat, Mohamed-Rafik Bouguelia and Pascal Molli
(Full Paper)

Monday 17th - 01:30pm - 03:00pm**Session 8 - Security in Collaborative Systems (I)**

Location: Legacy North 2

Session Chair: Mohamed Eltoweissy, Pacific Northwest National Laboratory and Virginia Tech, USA

On Data Provenance in Group-centric Secure Collaboration

Jae Park, Dang Nguyen and Ravi Sandhu
(Invited Full Paper)

Collaborative Access Control in OSNs

Barbara Carminati and Elena Ferrari
(Invited Full Paper)

ChameleonSoft: A Moving Target Defense System

Mohamed Azab, Riham Hassan and Mohamed Eltoweissy
(Full Paper)

Monday 17th - 03:30pm - 05:00pm

Panel 2: Security and Privacy Fostering Collaboration**Location:** Legacy North 2**Mediator:** Barbara Carminati, University of Insubria, Italy**Panel Statement:**

Collective intelligence, social relationships and collaboration among users create valuable knowledge that can be leveraged to foster decision-making and resource management processes. We are all witnesses of the successful usage of this knowledge in several different areas (collaborative filtering and recommendation systems are just two notable examples).

This paradigm-shifting approach raises new interesting research issues and opportunities in the security field. The panel will explore and discuss these issues with an aim of investigating on the one hand how collaborative intelligence can be of support to security mechanisms, and on the other hand, how security mechanisms can ensure the knowledge/information management in the collaborative environment.

Panelists:

- Konstantinos Pelechrinis (University of Pittsburgh - USA)
- Anna Squicciarini (Pennsylvania State University - USA)
- John Zic (CSIRO ICT Centre - Australia)

Panelists will give a short (10-15min) interactive introduction, followed by discussions.

Tuesday 18th - 08.45am - 09.00am

Conference Announcement

Tuesday 18th - 09:00am- 10:00am

Keynote 3**Location:** Legacy North 2**Transforming Healthcare with Truly Connected Medicine**

Rasu Shrestha - VP of Medical IT, UPMC

Tuesday 18th - 10:30am - 12:00pm

Session 9 - Collaborative Systems (I)**Location:** Legacy North 1**Session Chair:** Ying Liu, Korea Advanced Institute of Science & Technology, Korea**Collaborative Map Matching in Nav2Nav**Monsak Socharoentum and Hassan A. Karimi
(Invited Full Paper)**Constant-time Operation Transformation and Integration for Collaborative Editing**Weihai Yu
(Full Paper)**Supporting Mood Awareness in Collaborative Settings**Simone Mora, Veronica Rivera-Pelayo and Lars Muller
(Full Paper)

Tuesday 18th - 10:30am - 12:00pm

Session 10 - Modeling and Application**Location:** Legacy North 2**Session Chair:** John Zic, CSIRO, Australia**A Distributed Web Browser as a Platform for Running Collaborative Applications**Yasushi Shinjo, Fei Guo, Naoya Kaneko, Takejiro Matsuyama and Akira Sato
(Invited Full Paper)**Static Analysis Based Invariant Detection for Commodity Operating Systems**Jinpeng Wei, Feng Zhu and Yasushi Shinjo
(Invited Full Paper)**On the Relationship between Response Probability and Redundancy in Teams of Collaborating Agents**Ramya Pradhan and Annie Wu
(Industrial /Application Paper)

Tuesday 18th - 01:00pm - 02:00pm

Session 11 - Collaborative Systems (II)

Location: Legacy North 1
Session Chair: Jae Park, University of Texas at San Antonio, USA

An Exploratory Study on Open Conversation Spaces in Global Software Engineering

Kevin Dullemond, Ben Van Gasteren and Rini Van Solingen
(Industrial /Application Paper)

The BCP: an Integrated Communication and Collaboration Platform for Biosecurity Research and Incident Response Workgroups

Christian Muller-Tomfelde, Jane Li, John Zic and Alex Hyatt
(Invited Full Paper)

Tuesday 18th - 01:00pm
- 02:00pm

Session 12 - Security in Collaborative Systems (II)

Location: Legacy North 2
Session Chair: Jinpeng Wei, Florida International University, USA

Protocol for Mitigating the Risk of Hijacking Social Networking Sites

Jeffrey Cashion and Mostafa Bassiouni
(Full Paper)

DCDIDP: A Distributed, Collaborative, and Data-driven Intrusion Detection and Prevention Framework for Cloud Computing Environments

Saman Taghavi Zargar, Hassan Takabi and James B.D. Joshi
(Industrial /Application Paper)

Tuesday 18th - 02:30pm
- 04:00pm

Session 13 - Trust and Information Quality

Location: Legacy North 1
Session Chair: John Zic, CSIRO, Australia

Provenance for Collaboration: Detecting Suspicious Behaviors and Assessing Trust in Information

M. David Allen, Adriane Chapman, Len Seligman and Barbara T. Blaustein
(Invited Full Paper)

Collaborative Assessment of Information Provider's Reliability and Expertise Using Subjective Logic

Konstantinos Pelechris, Vladimir Zadorozhny and Vladimir Oleshchuk
(Full Paper)

MovieCommenter: Aspect-based Collaborative Filtering by Utilizing User Comments

Minsam Ko, Hyungwoo Kim, Mun Y. Yi, Junehwa Song and Ying Liu
(Full Paper)

Tuesday 18th - 02:30pm
- 04:00pm

**Session 14 -
Workflows**

Location: Legacy North 2
Session Chair: Kun Bai,
IBM T.J. Watson Research
Center, USA

**Featuring
Automatic
Adaptivity through
Workflow
Enactment and
Planning**

Andrea Marrella,
Massimo Mecella and
Alessandro Russo
(Full Paper)

**A Test-bed for
Evaluation of
Business Process
Prediction
Techniques**

Suraj Pandey, Surya
Nepal and Shiping
Chen
(Invited Full Paper)