2013 9th International Conference on Collaborative Computing: Networking, Applications and Worksharing

(Collaboratecom 2013)

Austin, Texas, USA
20-23 October 2013

IEEE

IEEE Catalog Number: CFP13CNA-POD
ISBN: 978-1-4799-2754-8

Contents

Preface viii

Conference Organization xi

Security

A Study on Evolution of Email Spam Over Fifteen Years 1
De Wang, Danesh Irani, Calton Pu

Towards Comprehensive and Collaborative Forensics on Email Evidence 11
Justin Paglierani, Mike Mabey, Gail-Joon Ahn

Non-intrusive process-based monitoring system to mitigate and prevent VM vulnerability explorations 21
Chun-Jen Chung, Jingsong Cui, Pankaj Khatkar, Dijiang Huang

Towards Multi-policy Support for IaaS Clouds to Secure Data Sharing 31
Ying Fairweather, Dongwan Shin

Collaborative Work

Autonomic Swarms for Regenerative and Collaborative Networking 40
Rui-ping Lua, Wee Keong Ng

Supporting Adaptable Granularity of Changes for Massive-scale Collaborative Editing 50
Luc Andre, Stephane Martin, Gerald Oster, Claudia-Lavinia Ignat

Supporting Collaborative Work by Learning Process Models and Patterns from Cases 60
Stefan Schönig, Michael Zeising, Stefan Jablonski

A Context-Aware Architecture for Improving Collaboration of Users in Groupware Systems 70
Luis Montané-Jiménez, Edgard Benítez-Guerrero, Carmen Mezura-Godoy

Big Data

Efficient Opportunistic Sensing using Mobile Collaborative Platform MOSDEN 77
Prem Jayaraman, Charith Perera, Dimitrios Georgakopoulos, Arkady Zaslavsky

Influence Maximization for Big Data Through Entropy Ranking and Min-Cut 87
Agustin Sancen-Plaza, Andres Mendez-Vazquez

Real-Time Collaborative Planning with Big Data: Technical Challenges and In-Place Computing 96
Wenwey Hseush, Yi-Cheng Huang, Shih-Chang Hsu, Calton Pu

Towards Context-aware Recommendations: Strategies for Exploiting Multi-criteria Communities 105
Thuy Ngoc Nguyen, An Te Nguyen

A Content-Context-Centric Approach for Detecting Vandalism in Wikipedia 115
Lakshmish Ramaswamy, Raga Tummalapenta, Kang Li, Calton Pu

Distributed Systems

Workflow Definition by Cloud Collaboration 123
Chi Wu-Lee, Gwan-Hwan Hwang

Ensuring Compliance of Collaborative and Distributed Workflows 133
David Knuplesch, Manfred Reichert, Rüdiger Pryss, Walid Fdhila, Stefanie Rinderle-Ma

SBaaS: Safe Box as a Service 143
Mounira MSAHLI, Ahmed Serhrouchni

Concurrency Control and Awareness Support for Multi-synchronous Collaborative Editing 148
Mehdi Ahmed Nacer, Pascal Urso, Valter Balegas, Nuno Preguica

MobiCloud: A Reliable Collaborative MobileCloud Management System 158
Ahmed Khalifa, Mohamed Eltoweissy

Mobile Collaboration

Making Offloading Decisions Resistant to Network Unavailability for Mobile Cloud Collaboration 168
Huijun Wu, Dijiang Huang, Samia Bouzefrane

Collaboration Support Through Mobile Processes and Entailment Constraints 178
Rüdiger Pryss, Steffen Musiol, Manfred Reichert

uBeeMe – a Platform to Enable Mobile Collaborative Applications 188
Jan Gäbler, Ronny Klauck, Mario Pink, Hartmut König

A Hybrid Mobility Model based on Social, Cultural and Language Diversity 197
Lutful Karim, Qusay Mahmoud

Building Multi-model Collaboration in Detecting Multimedia Semantic Concepts 205
Hsin-Yu Ha, Fausto Fleites, Shu-Ching Chen

Social Network

Modeling Privacy Settings of an Online Social Network from a Game-Theoretical Perspective 213
Jundong Chen, Matthias Brust, Ankunda Kiremire, Vir Phoha

Web Based Collaborative Social Album Authoring System Using Facebook Photos 221
Changhyeon Lee, Fathoni Musyaffa, Yong-Moo KWON

Silence Behavior Mining on Online Social Networks 231
Qingbo Hu, Guan Wang, Shuyang Lin, Philip Yu

Robust and Fast Authentication of Session Cookies in Collaborative and Social Media Using Position-Indexed Hashing 241
Amerah Alabrah, Mostafa Bassiouni

Click Traffic Analysis of Short URL Spam on Twitter 250
De Wang, Shamkant Navathe, Ling Liu, Danesh Irani, Acar Tamersoy, Calton Pu

Privacy and Trust

Privacy Aware Service Selection of Composite Web Services 260
Anna Squicciarini, Barbara Carminati, Sushama Karumanchi

Byzantine Resistant Reputation-based Trust Management 269
amira bradai, walid Ben-Ameur, hossam afifi

Collaborative Approach for Inter-domain Botnet Detection in Large-scale Networks 279
Hachem Guerid, Karel Mittig, Ahmed Serhrouchni

Cheeka : A mobile application for personal safety 289
Ananda Kanagaraj S, Arjun G, Shahina A

Private Overlay of Enterprise Social Data and Interactions in the Public Web Context 295
Kundan Singh, Venkatesh Krishnaswamy

Team Collaboration

Social Team Awareness 305
Delfina Malandrino, Ilaria Manno, Alberto Negro, Andrea Petta, Vittiorio Scarano, Luigi Serra

Towards improving user satisfaction in decentralized P2P networks 315
Marco Biazzini, Patricia Serrano Alvarado, Raziel Carvajal Gomez

Increasing Awareness in Distributed Software Teams: a First Evaluation 325
Kevin Dulllemond, Rini Solingen

Browser-Based Collaborative Modeling in Near Real-Time 335
Petru Nicolaescu, Michael Derntl, Ralf Klamma

MapReduce-Guided Scalable Compressed Dictionary Construction for Evolving Repetitive Sequence Streams 345
Pallabi Parveen, Pratik Desai, Bhavani Thuraisingham, Latifur Khan

Virtual Collaboration

A Collaborative Virtual Workspace for Factory Configuration and Evaluation 353
Ingo Zinnikus, Xiaoqi Cao, Matthias Klusch, Christopher Krauss, Andreas Nonnengart, Torsten Spieldenner, Philipp Slusallek

Dynamic Strategies of Conflict Resolution on Human Perception of Equality within Multi-user Collaborative Virtual Environments 363
Aida Erfanian, Tao Zeng, Yaoping Hu

Leadership's Effect on Overall Temporal Patterns of Global Virtual Teams 371
Ian Brooks, Kathy Swigger

Impact of Mediating Technologies on Talk and Emotion: Questioning "Commonsense" 380
JoonSuk Lee, Deborah Tatar

Improving Textual Merge Result 390
Mehdi Ahmed Nacer, Pascal Urso, François Charoy

Recommendation Systems

Profile Sharing Recommendation System for Enterprise Collaboration 400

Shivangi Agarwal, Krishna Dhara, Venkatesh Krishnaswamy

Understanding Venue Popularity in Foursquare 409
Xuelian Long, Lei jin, James Joshi

A Social Trust Based Friend Recommender for Online Communities 419
Surya Nepal, Cecile Paris, Payam Aghaei Pour, Sanat Bista, Jill Freyne

A Capability Requirements Approach for Predicting Worker Performance in Crowdsourcing 429
Umair ul Hassan, Edward Curry

Answering Complex Location-Based Queries with Crowdsourcing 438
Karim Benouaret, Raman Valliyur-Ramalingam, Francois Charoy

Web Data Management

Personal Health Record Storage on Privacy Preserving Green Clouds 448
Kirill Belyaev, Indrakshi Ray, Indrajit Ray, Gary Luckasen

Data Architecture for Telehealth Services Research: A Case Study of Home Tele-Monitoring 458
Surya Nepal, Julian Jang-Jaccard, Branko Celler, Bo Yan, Leila Alem

Shared Editing on the Web: A Classification of Developer Support Libraries 468
István Koren, Andreas Guth, Ralf Klamma

Domain Ontology-based Feature Reduction for High Dimensional Drug Data and its Application to 30-Day Heart Failure Readmission Prediction 478
Sisi Lu, Ye Ye, Rich Tsui, Howard Su, Ruhsary Rexit, Sahawut Wesaratchakit, Xiaochu Liu, Rebecca Hwa

Context Awareness and Awareness Support

Enterprise 2.0 in Action: Potentials for Improvement of Awareness Support in Enterprises 485
Hilda Tellioglu, Simon Diesenreiter

When to Interrupt Global Software Engineers to Provide them with What Information? 495
Ben van Gameren, Rini van Solingen

DynaSurface:A Framework for Device Notifications using Nano Coatings in Connected Devices 505
Nagaraju Samudrala, Manjushree B.M.

How to tag it right? Semi-automatic support for email management. 515
Mateusz Dolata, Nils Jeners, Wolfgang Prinz

TrustCol Workshop

Supporting Secure Collaborations with Attribute-based Access Control 525
Carlos Rubio-Medrano, Clinton D'Souza, Gail-Joon Ahn

Data-based access control in Named Data Networking 531
balkis hamdane, Mounira Msahli, Ahmed Serhrouchni, Sihem Guemara El Fatmi

Analysis of Heuristic Based Access Pattern Obfuscation 537
Huseyin Ulusoy, Murat Kantarcioglu, Bhavani Thuraisingham, Ebru Cankaya, Erman Pattuk

Android Keylogging Threat 545
Fadi Mohsen, Mohamed Shehab

Security Analysis of Mobile Applications: A Case Study of a Collaboration Tool in Healthcare 553
Julian Jang-Jaccard, Jane Li, Surya Nepal, Leila Alem

Finding Anomalies in Windows Event Logs Using Standard Deviation 563
John Dwyer, Traian Marius Truta

Accurate Weather Forecasting Through Locality Based Collaborative Computing 571
Bård Fjukstad, John Bjørndalen, Otto Anshus

C-IOT Workshop

A Linked Fusion of Things, Services, and Data to Support a Collaborative Data Management Facility 579
Eric Stephan, Todd Elsethagen, Adam Wynne, Chitra Sivaraman, Matt Macduff, Larry Berg, Will Shaw

Designing for Self-Configuration and Self-Adaptation in the Internet of Things 585
Arjun Athreya, Bruce DeBruhl, Patrick Tague

A Collaborative Approach for Metadata Management for Internet of Things 593
Umair ul Hassan, Murilo Bassora, Ali Vahid, Sean O'Riain, Edward Curry

Computation Integrity in Mobile Cloud: Running Probabilistically Checkable Proof on Android 599
Clinton Walker, Qijun Gu, Terry Penner

Design and Verification of Cellphone-based Cyber-Physical Systems: A Position Paper 603
Rodion Podorzhny

Internet of Things Forensics: Challenges and Approaches 608
Edewede Oriwoh, David Jazani, Gregory Epiphaniou, Paul Sant

SmartMart: IoT-based In-store Mapping for Mobile Devices 616
Dylan Hicks, Kevin Mannix, Hannah Bowles, Byron Gao

Organizations Preparing Organizations for the IoT 622
Kelly Slaughter, Gurshaman Baweja