

IEEE ISI 2009 Program

Program Features

Workshops:

- § 2nd International Workshop on Social Computing
- § 2nd Workshop on Cybercrime and Computer Forensics
- § Assured Information Sharing

Tutorials:

- § Lawfully-Authorized Electronic Surveillance for Wireless Communications Subscribers
- § Secure and Private Social Networks
- § Data Mining for Security Applications

Keynote and Invited Speakers:

- § Arthur Becker, IARPA
- § Steve Hawkins, Raytheon Corporation
- § Tim Finin, University of Maryland
- § Douglas Harris, University of Texas at Dallas
- § Hsinchun Chen, University of Arizona
- § Shari Pfleeger, Rand Corporation
- § Tom Hill, Hewlett Packard
- § Christopher Steinberg, Director, Information Assurance Programs, Rockwell Collins
- § Sajal Das, US National Science Foundation
- § Michael Grimaila, Air Force Institute of Technology
- § Fredrick Sheldon, Oak Ridge National Laboratory

Meet the Authors Poster Session

Conference Reception

Conference Dinner at South Fork Ranch

June 8, 2009 (Monday)		
7:00-8:00am	Registration	Ballroom Foyer
8:00am-12:00pm	Workshop I: 2nd International Workshop on Social Computing (SOCO 2009)	Longhorn I-II
	Tutorial I: Lawfully-Authorized Electronic Surveillance for Wireless Communications Subscribers: Requirements and Technology Overview	Longhorn III-IV
12:00-1:30pm	Lunch	Boots & Brix
1:30-5:30pm	Workshop II: 2 nd Workshop on Cybercrime and Computer Forensics (WCCF 2009)	Longhorn I-II
	Tutorial II: Secure and Private Social Networks	Longhorn III-IV
6:00-8:30pm	Conference Reception	Spurs

June 9, 2009 (Tuesday)

7:00am-8:00am	Registration and Breakfast	Ballroom Foyer
8:00am-8:15am	Welcome and Conference Opening	Salon EFG
8:15am-9:00am	Keynote Talk: Dr. Arthur Becker, Program Director, Knowledge Discovery and Dissemination, The Intelligence Advanced Research Projects Activity	Salon EFG
9:00am-9:50am	<u>Sessions T1-I, T1-II</u>	
	T1-I: Adversarial Data and Text Mining Session Chair: Moshe Koppel	Longhorn I-II
	<p><i>Yulei Zhang, Yan Dang and Hsinchun Chen.</i> Gender Difference Analysis of Political Web Forums: An Experiment on an International Islamic Women's Forum</p> <p><i>Huiqi Zhang, Ram Dantu and João Cangussu.</i> Change Point Detection based on Call Detail Records</p>	
	T1-II: Situational Awareness and Decision Making Session Chair: Murat Kantarcioglu	Longhorn III-IV
9:50am-10:15am	Break (Refreshments Provided)	
	Ballroom Foyer	
10:15am-11:30am	<u>Sessions T2-I, T2-II</u>	
	T2-I: Network-based Data Analytics Session Chair: Yan Huang	Longhorn I-II
	<p><i>Ryan Layfield, Murat Kantarcioglu and Bhavani Thuraisingham.</i> On the Mitigation of Bioterrorism through Game Theory Infection Model</p> <p><i>Stephen Kelley, Mark Goldberg, Malik Magdon-Ismael and Konstantin Mertsalov.</i> Stability of Individual and Group Behavior in a Blog Network</p> <p><i>Peter Phillips and Ickjai Lee.</i> Mining Top-k and Bottom-k Correlative Crime Patterns through Graph Representations</p>	
	T2-II: Innovative and Emerging Applications Session Chair: Coskun Bayrak	Longhorn III-IV
11:30am-1:00pm	Lunch	
	Boots & Brix	
	<p><i>Daniel Schmitt, Stuart Kurkowski and Mike Mendenhall.</i> Automated Casing Event Detection in Persistent Video Surveillance</p> <p><i>Roopa Vishwanathan and Yan Huang.</i> A Two-level Protocol to Answer Private Location-based Queries</p> <p><i>Robert moskovitch, Clint Feher, Arik Messerman, Niklas Kirschnick, Tarik Mustafić, Ahmet Camtepe, Bernhard Löhlein, Ulrich Heister, Sebastian Möller, Lior Rokach and Yuval Elovici.</i> Identity Theft, Computers and Behavioral Biometrics</p>	
1:00pm-1:45pm 1:45pm – 2:30pm	Keynote Talk: Mr. Steve Hawkins, Vice President, Raytheon Corporation Keynote Talk: Dr. Tim Finin, Professor and Director, University of Maryland, Baltimore County	Salon EFG

2:30pm-3:15pm	<u>Sessions T3-I, T3-II</u>	
	T3-I: Text Mining and Content Analysis Session Chair: Christopher Yang	Longhorn I-II
	<p><i>Tianjun Fu, Chun-Neng Huang and Hsinchun Chen. Identification of Extremist Videos in Online Video Sharing Sites*</i></p> <p><i>Moshe Koppel, Navot Akiva, Eli Alshech and Kfir Bar. Automatically Classifying Documents by Ideological and Organizational Affiliation*</i></p>	
	T3-II: Infrastructure Protection and Cyber Security Session Chair: Naveen Ashish	Longhorn III-IV
	<p><i>William Eberle and Lawrence Holder. Applying Graph-Based Anomaly Detection Approaches to the Discovery of Insider Threats*</i></p> <p><i>Cyril Onwubiko. Functional Requirements of Situational Awareness in Computer Network Security*</i></p> <p><i>Micah Jones and Kevin Hamlen. Enforcing IRM Security Policies: Two Case Studies*</i></p>	
3:15pm-3:45pm	Break (Refreshments Provided) Set-up of Poster Session	Ballroom Foyer Salon D
3:45pm-5:00pm	<u>Sessions T4-I, T4-II</u>	
	T4-I: Data Mining and Data Management Session Chair: William Eberle	Longhorn I-II
	<p><i>Li Ding, Dana Steil, Matthew Hudnall, Brandon Dixon, Randy Smith, David Brown and Allen Parrish. PerpSearch: An Integrated Crime Detection System*</i></p> <p><i>Chengyang Zhang, Yan Huang, Rada Mihalcea and Hector Cuellar. A Natural Language Interface for Crime-related Spatial Queries*</i></p> <p><i>David Breitreutz and Ickjai Lee. Voronoi Representation for Areal Data Processing in Data-rich Environments*</i></p> <p><i>Stephen Kelley, Mark Goldberg, Malik Magdon-Ismael, Konstantin Mertsalov, William Wallace and Mohammed Zaki. graphOnt: An Ontology Based Library for Conversion from Semantic Graphs to JUNG*</i></p>	
	T4-II: Information Systems Security and Cyber Security Session Chair: Dennis Egan	Longhorn III-IV
	<p><i>Vikas Menon and William M. Pottenger. Higher Order Collective Classifier for Detecting and Classifying Network Events</i></p> <p><i>Xiaoran Wang and Coskun Bayrak. Injecting a Permission-based Delegation Model to Secure Web-based Workflow Systems</i></p>	
6:00pm-7:00pm 7:00pm-9:00pm	<p>Poster Session and Reception</p> <p>Conference Banquet and Award Ceremony</p> <p><i>Banquet Speaker:</i> Dr. Douglas Harris, Executive Director and Associate Dean, University of Texas at Dallas</p> <p><i>Award Speaker:</i> Dr. Hsinchun Chen, McClelland Professor of Management Information Systems, University of Arizona</p>	Salon D

June 10, 2009 (Wednesday)

7:00am-8:00am	Registration and Breakfast	Ballroom Foyer
8:00am-8:45am	Keynote Talk: Dr. Shari Pfleeger, Senior Scientist, Rand Corporation	Salon EFG
8:45am – 9:30am	Keynote Talk: Thomas Hill, Fellow, Hewlett Packard	
9:30am-10:15am	<u>Sessions W1-I, W1-II</u>	
	W1-I: Digital Forensics Session Chair: Peter Phillips	Longhorn I-II
	<i>Kimin Seo, Jaemin Choi, Yong-seok Choi, Dong-chan Lee and Sangjin Lee. Research about Extracting and Analyzing Accounting Data of Company to Detect Financial Fraud*</i> <i>Allyson Hoss and Doris Carver. Weaving Ontologies to Support Digital Forensic Analysis*</i>	
	W1-II: Information Systems Security and Cyber Security Session Chair: Ram Dantu	Longhorn III-IV
	<i>Sudarshan Chawathe. Effective Whitelisting for Filesystem Forensics</i> <i>Ann-Marie Horcher and Gurvirender Tejay. Building a Better Password: The Role of Cognitive Load in Information Security Training</i>	
10:15am-10:40am	Break (Refreshments Provided)	Ballroom Foyer
10:40am-11:45am	<u>Sessions W2-I, W2-II</u>	
	W2-I: Network-based Data Analytics Session Chair: Antonio Badia	Longhorn I-II
	<i>Teruhiko Yoneyama and Mukkai Krishnamoorthy. Observation of Network Structure in Amazon.com</i> <i>Raymond Heatherly, Murat Kantarcioglu and Bhavani Thuraisingham. Social Network Classification Incorporating Link Type Values</i>	
	W2-II: Situational Awareness and Decision Making Session Chair: Claus Atzenbeck	Longhorn III-IV
	<i>Naveen Ashish, Jay Lickfett, Sharad Mehrotra and Nalini Venkatasubramanian. The Software EBox: Information Integration for Situational Awareness</i> <i>Christopher Torpelund-Bruin and Ickjai Lee. A Voronoi-based Model for Emergency Planning Using Sequential-scan</i>	
11:45am-1:00pm	Lunch	Boots & Brix
1:00pm-1:45pm	Keynote Talk: Christopher Steinberg, Director, Information Assurance Programs, Rockwell Collins	Salon EFG
1:45pm – 2:30pm	Keynote Talk: Dr. Sajal Das, Program Director, Sensor Networks, The National Science Foundation	

2:30pm-3:15pm	<u>Sessions W3-I, W3-II</u>	
	W3-I: Adversarial Data and Text Mining Session Chair: Sudarshan Chawathe	Longhorn I-II
	<i>Yulei Zhang, Shuo Zeng, Li Fan, Yan Dang, Cathy Larson and Hsinchun Chen. Dark Web Forums Portal: Searching and Analyzing Jihadist Forums</i> <i>Christopher Yang and Tobun Ng. Web Opinions Analysis with Scalable Distance-Based Clustering</i>	
	W3-II: Privacy Management Session Chair: Allyson Hoss	Longhorn III-IV
	<i>Enkh-Amgalan Baatarjav, Ram Dantu, Yan Tang and João Cangussu. BBN-Based Privacy Management System for Facebook*</i> <i>Florian Kerschbaum, Andreas Schaad and Debmalya Biswas. Practical Privacy-Preserving Protocols for Criminal Investigations *</i>	
3:15pm-4:15pm	Break (Refreshments Provided)	Ballroom Foyer
4:15pm-5:15pm	<u>Sessions W4-I, W4-II</u>	
	W4-I: Text Mining and Content Analysis Session Chair: David Skillicorn	Longhorn I-II
	<i>Hsinchun Chen, IEDs in the Dark Web: Lexicon Expansion and Genre Classification*</i> <i>Syed Toufeeq Ahmed, Ruchi Bhindwale and Hasan Davulcu. Tracking Terrorism News Threads by Extracting Event Signatures*</i> <i>Tobun Dorbin Ng and Christopher C. Yang. A Framework for Harnessing Public Wisdom to Ensure Food Safety*</i>	
	W4-II: Innovative and Emerging Applications Session Chair: Sajal Das	Longhorn III-IV
	<i>Daniel Schmitt, Stuart Kurkowski and Mike Mendenhall. Building Social Networks in Persistent Video Surveillance*</i> <i>Shu Chen and Yan Huang. Recognizing Human Activities from Multi-Modal Sensors*</i> <i>Minrui Zhang. Color Image Watermarking Algorithm in Cepstrum Domain*</i>	
6:00pm	Shuttle Bus leaves the Hyatt Regency for Southfork Ranch	
6:30pm-9:00pm	All Conference Dinner at Southfork Ranch	

June 11, 2009 (Thursday)

7:00am-8:00am	Registration and Breakfast	Ballroom Foyer
8:00am-8:45am 8:45am – 9:30am	<p>Keynote Talk: Dr. Michael Grimaila, Professor and Scientist, Air Force Institute of Technology</p> <p>Keynote Talk: Dr. Fredrick Sheldon, Senior Scientist, Oak Ridge National Laboratory</p>	Salon EFG
9:30am-10:35am	<u>Sessions TH1-I, TH1-II</u>	
	<p>TH1-I: Adversarial Data and Text Mining Session Chair: Cathy Larson</p>	Longhorn I-II
	<p><i>Fatih Ozgul, Zeki Erdem and Chris Bowerman.</i> Prediction of Past Unsolved Terrorist Attacks</p> <p><i>David Skillicorn and Michael Bourassa.</i> Hardening Adversarial Prediction with Anomaly Tracking</p> <p><i>Antonio Badia.</i> Supporting Data Exploration in Databases</p>	
	<p>TH1-II: Information Systems Security and Cyber Security Session Chair: Uwe Glässer</p>	Longhorn III-IV
	<p><i>Gary Doss and Guvirender Tejay.</i> Developing Insider Attack Detection Model: A Grounded Approach</p> <p><i>Yanjun Zuo and Brajendra Panda.</i> Unifying Strategies and Tactics: A Survivability Framework for Countering Cyber Attacks</p>	
10:35am-11:00am	Break (Refreshments Provided)	Ballroom Foyer
11:00am-12:30pm	<p>Panel Discussion Panel Chair: Dr. Bhavani Thuraisingham Panelists: Dr. Arthur Becker, Dr. Murat Kantarcioglu, Dr. Latifur Khan, Dr. Daniel Zeng.</p>	Salon EFG
12:30pm-1:30pm	Lunch	Boots & Brix
1:30pm-5:30pm	Workshop III: Assured Information Sharing	Longhorn I-II
	Tutorial III: Data Mining for Security Applications	Longhorn III-IV

Workshop on Social Computing (SOCO)

Social computing can be broadly defined as computational facilitation of social studies and human social dynamics as well as the design and use of information and communication technologies that consider social context. The **Second International Workshop on Social Computing (SOCO 2009)** intends to bring together social computing researchers from a wide spectrum of academic disciplines to (a) report and review the current state of the art of social computing research and its applications, (b) identify key technical challenges facing social computing studies; and (c) provide a forum to bring together researchers and practitioners to identify future research opportunities. SOCO 2009 is part of the pre-conference workshop series of the IEEE ISI 2009.

Workshop on Social Computing (SOCO), June 8, 2009 (Monday)	
8:00am-8:10am	Opening Remarks
8:10am-8:50am	Invited Talk: David Skillicorn, "Anti-Social Computing"
8:50am-9:20am	<i>Ryan Layfield, Bhavani Thuraisingham, Latifur Khan, Murat Kantarcioglu and Jyothisna Rachapalli.</i> Design and implementation of a Secure Social Network System
9:20am-9:50am	<i>Xiaochen Li, Wenji Mao, Daniel Zeng, Peng Su and Fei-Yue Wang.</i> Performance Evaluation of Classification Methods in Cultural Modeling
9:50am-10:20am	Break
10:20am-10:40am	<i>Youzhong Wang, Daniel Zeng, Xiaolong Zheng and Fei-Yue Wang.</i> Propagation of Online News: Dynamic Patterns
10:40am-11:00am	<i>Balaji Rajendran and Iyakutti K.</i> Socio-contextual Model of Knowledge Sharing among User Assisting Agents
11:00am-11:20am	<i>Hengmin Zhou, Daniel Zeng and Changli Zhang.</i> Finding Leaders from Opinion Networks
11:20am-12:00pm	Panel Discussion. Research Challenges in Social Computing

Workshop on Cybercrime and Computer Forensics (WCCF)

Government agencies, corporations, and individuals all use computers, cell phones, digital cameras, and other electronic devices to produce, store, and transmit data at an increasingly faster rate. One unfortunate consequence of expanded growth in data and interconnectivity is that criminals now have easy access to a large number of potential victims to commit identity thefts, spread virus and spyware, launch Denial-of-Service attacks, and commit other types of malicious acts. The **2009 Workshop on Cybercrime and Computer Forensics (WCCF 2009)** will provide a forum for professionals in the computer forensics community and IT security industry, forensic computing software vendors, corporate and academic researchers, in an effort to disseminate ideas and experiences related to forensic computing especially in the context of cybercrime investigation.

Workshop on Cybercrime and Computer Forensics (WCCF), June 8, 2009 (Monday)	
1:30pm-1:40pm	Opening Remarks
1:40pm-2:10pm	<i>Michael Perelman, Ping Ji and Weifeng Chen.</i> Traffic and Security Analysis on Sony Playstation 3
2:10pm-2:40pm	<i>Richard Bares.</i> Hiding in a Virtual World: Using Unconventionally Installed Operating Systems
2:40pm-3:10pm	<i>Jessica Ho, Ping Ji, Weifeng Chen and Raymond Hsieh.</i> Identifying Google Talk Packets
3:10pm-3:40pm	<i>Scott Treadwell and Mian Zhou.</i> A Heuristic Approach for Detection of Obfuscated Malware
3:40pm-4:10pm	<i>Noah Guilbault and Ratan Guha.</i> Experiment Setup for Temporal Distributed Intrusion Detection System on Amazon's Elastic Compute Cloud
4:10pm-4:40pm	<i>Robert Lee, Sheau-Dong Lang and Kevin Stenger.</i> From Digital Forensic Report to Bayesian Network Representation
4:40pm-5:30pm	Panel Discussion. Digital Forensics training, education and certification

Workshop on Assured Information Sharing

Information sharing is critical for organizations in defense, intelligence and healthcare among other. However it is also important for the organizations to enforce appropriate policies so that only certain information is shared. For example, an agency may want to share all of its data with as local agency and only certain data with a foreign agency. The policies may include those for enforcing confidentiality, privacy and trust. The workshop will explore approaches to information sharing together with policy management. It will bring together members from academia, industry and government to address this important topic. The output of the workshop will be published as a book on Assured Information Sharing to be edited by the workshop chairs. Additional information about this workshop is forthcoming.

Workshop on Assured Information Sharing, June 11, 2009 (Thursday)	
1:30pm-2:00pm	<i>Tim Finin.</i> Assured Information Sharing Life Cycle
2:00pm-2:30pm	<i>Murat Kantarcioglu.</i> Incentive based information sharing
2:30pm-3:00pm	<i>Shouhuai Xu.</i> A Characterization of The Problem of Secure Provenance Management
3:00pm-3:30pm	<i>B. Prabhakaran.</i> Video and Animation Information Sharing
3:30pm-4:00pm	Break
4:00pm-4:30pm	<i>Farhan Hussain.</i> Hadoop technologies for information sharing
4:30pm-5:00pm	<i>Steven Sieda.</i> Geospatial Information Sharing
5:00pm-5:30pm	<i>Bhavani Thuraisingham.</i> Directions for Assured Information Sharing