2nd ACM SIGHIT International Health Informatics Symposium

January 28-30, 2012

Miami, Florida

Program at a Glance

	Jan 28 (Saturday)	Jan 29 (Sunday)	Jan 30 (Monday)
7:00 – 8:30 am	Breakfast [Grande Promenade]		Breakfast [Mediterranean Center]
8:30 – 9:00 am	Opening Ceremony [Grande Promenade]		
9:00 – 10:00 am	Keynote Speech I [Grande Promenade]	Keynote Speech II [Grande Promenade]	Best Paper Award & SIGHIT business meeting [Mediterranean Center, 9:15-10:00]
10:00 – 10:30 am	Coffee Break [Mediterranean West and Center]		
10:30 am – 12:00 pm	Session D1-1 / Extended Abstract Poster	Session D2-1 / Panel II	Session D3-1 / Tutorial III
12:00 pm – 1:00 pm	Lunch [Starlight Ballroom]		
1:00 – 2:30 pm	Session D1-2 / Panel I	Session D2-2 / Panel III	Session D3-2 / Panel IV
2:30 – 3:00 pm	Coffee Break [Mediterranean West and Center]		
3:00 – 4:30 pm	Session D1-3 / Tutorial I / Doctoral Consortium Poster Session	Session D2-3 / Tutorial II	Session D3-3
4:30 – 5:00 pm	Break	Town Hall Meeting	
5:00 – 6:30 pm	Poster/Demo I	Poster/Demo II	
7:00 – 9:00 pm	Banquet [Pool Side]		

Jan 28, Saturday

	Mediterranean West	Mediterranean Center	Miramar North	Spanish Suite
10:30 am – 12:00 pm	Session D1-1A	Session D1-1B		Extended Abstract Poster Session
1:00 – 2:30 pm	Session D1-2A	Session D1-2B	Panel I	
3:00 – 4:30 pm	Session D1-3A	Session D1-3B	Tutorial I (3:00 – 5:00 pm)	
5:00 – 6:30 pm				Poster/Demo I

Doctoral Consortium Poster Session: 3:00 – 5:00 pm, **Vista Room**

Jan 29, Sunday

	Mediterranean West	Mediterranean Center	Miramar North	Spanish Suite
10:30 am – 12:00 pm	Session D2-1A	Session D2-1B	Panel II	
1:00 – 2:30 pm	Session D2-2A	Session D2-2B	Panel III	
3:00 – 4:30 pm	Session D2-3A	Session D2-3B	Tutorial II	
4:30 – 5:00 pm		Town Hall Meeting		
5:00 – 6:30 pm				Poster/Demo II

Jan 30, Monday

	Mediterranean West	Mediterranean Center	Miramar North	Spanish Suite
10:30 am – 12:00 pm	Session D3-1A	Session D3-1B	Tutorial III (10:00 am – 12:00 pm)	
1:00 – 2:30 pm	Session D3-2A	Session D3-2B	Panel IV	
3:00 – 4:30 pm	Session D3-3A	Session D3-3B		

Keynote Speech I

BIOMEDICAL TEXT MINING FOR SEMANTIC SEARCH AND KNOWLEDGE DISCOVERY

Professor Sophia Ananiadou
School of Computer Science
Director, National Centre for Text Mining
Manchester Interdisciplinary Biocentre
University of Manchester

Abstract:

Due to increasing specialisation, silo effects and literature deluge, researchers are struggling to draw out general truths and to generate hypotheses to test. This is especially true when considering the needs of biomedicine. Natural language processing techniques are urgently needed, including aids to link the scientific literature with appropriate knowledge in scientific databases, and to provide textual evidence in hypothesis generation and semantic search. The evidence to generate hypotheses for comprehensive diagnostics, pharmacological interventions, treatments, etc., is hidden in text. In addition, the type of evidence needed is complex, requiring techniques beyond statistical keyword search mechanisms, such as question answering about facts, relations and events of biomedical relevance. The extraction of semantic metadata from text allows advanced semantic search. In my talk, I will discuss such issues and also present some of the biomedical text mining services developed at the UK National Centre for Text Mining addressing the needs of the biomedical community for semantic search and knowledge discovery.

Biography:

Professor Sophia Ananiadou is Director of the UK National Centre for Text Mining (NaCTeM), and full Professor of Computer Science in the School of Computer Science, University of Manchester, UK. She is the main designer of the text-mining tools and services currently used in NaCTeM, i.e. terminology management, information extraction, intelligent searching, and association mining. Her research projects include text mining-based visualisation of biochemical networks, data integration using text mining (on infectious diseases, for the PathoSystems Resource Integration Center), building biolexica and bio-ontologies, and automatic event extraction of bioprocesses. She also leads work to support scientists in evidence finding via text mining based search, within the UK PubMed Central project, and collaborates with centers in the US and Japan to develop text mining infrastructures for the community.

She has been awarded the Daiwa Adrian prize (2004) and the IBM UIMA innovation award (2006, 2007, 2008) for her work on interoperability of text-mining tools in biomedicine. She has over 160 publications in journals, conferences and books.

Keynote Speech II

BRAIN-COMPUTER INTERFACES: PROGRESS, PROBLEMS, AND POSSIBILITIES

Jonathan R. Wolpaw, M.D.
Chief, Laboratory of Neural Injury and Repair
Wadsworth Center
New York State Department of Health and State University of New York

Abstract:

Brain-computer interfaces (BCIs) have a promising future, with researchers in laboratories all over the world using many different brain signals, recording methods, and signal processing approaches to realize increasingly capable systems. These BCI systems can control a variety of external devices, from cursors and avatars on computer screens, to televisions and wheelchairs, to robotic arms and neuroprostheses. People with and without disabilities have tested these systems, and a few people who are severely disabled are already using them for important purposes in their daily lives. Furthermore, several groups are beginning to explore BCI-based methods for improving rehabilitation for people with strokes and other neuromuscular disorders. Thus, BCIs are poised to become a major new technology for people with disabilities, and possibly for the general population as well. At the same time, the realization of this bright future depends on advances in four critical areas. First, both non-invasive and invasive BCIs need better signal-acquisition hardware. Second, the real-life usefulness of BCI systems for people with disabilities requires convincing clinical validation. Third, effective strategies for BCI dissemination and ongoing support must be developed. Fourth, and perhaps most important, if non-invasive or invasive BCIs are to be widely used for anything more than the most basic communication functions, their reliability must be greatly improved. Better reliability may be achieved with BCI design strategies that are based on the principles underlying the excellent reliability of natural neuromuscular actions. These strategies include: effective engagement of brain adaptive capacities; task-appropriate distribution of control between the brain and the BCI; and BCI use of signals from multiple brain areas. Effective attention to these critical areas by scientists and engineers throughout the world can realize the exciting future envisioned for BCI technology.

Biography:

Over the past 30 years, Dr. Wolpaw's laboratory has developed and used operant conditioning of spinal reflexes as a model for defining the plasticity underlying learning. His work has demonstrated operant conditioning of spinal reflexes, has showed that this conditioning changes the spinal cord physiologically and anatomically, and has begun to reveal the underlying mechanisms. His group's recent work shows that reflex conditioning can guide spinal cord plasticity in spinal cord-injured rats and can thereby improve locomotion. Clinical researchers are now finding evidence that such conditioning can improve locomotion in people with partial spinal cord injuries. For the past 20 years, Dr. Wolpaw has also led development of EEG-based brain-computer interface (BCI) technology to provide non-muscular communication and control to people who are paralyzed. This work has shown that noninvasive EEG-based BCI technology can give movement control similar to that achieved by electrodes placed in the brain. Most recently, his group has begun to provide BCI systems to severely disabled people for daily use in their homes. This work is demonstrating that a BCI can restore communication ability to people for whom conventional assistive communication devices are inadequate. Dr. Wolpaw and his research group have been funded for many years by NIH, other Federal agencies, and a variety of private foundations, and have received numerous national and international awards.

Detailed Program

Registration Desk opening hours
Mediterranean West Foyer

Jan 27: 5:00 pm – 8:00 pm
Jan 28: 7:00 am – 6:00 pm
Jan 29: 7:00 am – 6:00 pm
Jan 30: 7:00 am – 6:00 pm

January 28, 2011 (Saturday)

8:30 – 9:00 am
Opening Ceremony
Grande Promenade

9:00 – 10:00 am
Keynote Speech I
Grande Promenade

Biomedical Text Mining for Semantic Search and Knowledge Discovery
Professor Sophia Ananiadou, School of Computer Science,
Director, National Centre for Text Mining,
Manchester Interdisciplinary Biocentre
University of Manchester

10:30 am – 12:00 pm
Session D1-1A Machine Learning I
Mediterranean West

Session Chair: Ted Pedersen, University of Minnesota

Robust Discovery of Local Patterns: Subsets and Stratification In Adverse Drug Reaction Surveillance
Johan Hopstadius and G. Niklas Norén

Utilizing Assigned Treatments as Labels for Supervised Machine Learning in Clinical Decision Support
Ruty Rinott, Boaz Carmeli, Carmel Kent, Yonatan Maman, Yoav Rubin and Noam Slonim

MEDLINE MeSH Indexing: Lessons Learned from Machine Learning and Future Directions
Antonio Jimeno, James G. Mork, Bartłomiej Wilkowski, Dina Demner-Fushman and Alan Aronson

Session D1-1B Health Software and Middleware Design
Mediterranean Center

Session Chair: Courtney Corley, Pacific Northwest National Laboratory

An Event-based BSN Middleware that supports Seamless Switching between Sensor Configurations
Christian Seeger, Kristof Van Laerhoven and Alejandro Buchmann

Enhancing User-productivity and Capability through Integration of distinct software in Epidemiological Systems
Suruchi Deodhar, Keith Bisset, Jiangzhuo Chen, Yifei Ma and Madhav Marathe

Digital-Pheromone Based Difficulty Adaptation in Post-Stroke Therapeutic Games
Abdelkader Gouaïch, Nadia Hocine, Liesjet Van Dokkum and Denis Mottet

Extended Abstract Poster Session
Spanish Suite

Organizing RadLex Lexicon for Efficient Retrieval of Radiology Documents
I.V. Ramakrishnan, Jesmin Jahan Tithi, Ashish Bagate, Vinayak Khot, Faisal Ahmed, Donald Harrington and Ronak Talati

Implementing a Specification for Exceptional Data in Multilevel Modeling of Healthcare Applications
Timothy Cook and Luciana Cavalini

Effect of Measuring Number of Steps with Digital Pedometer on Female Student Physical Activity
Masashi Sugano and Rika Hirano

An Agenda for Ultra-Large-Scale System Research for Global Health Informatics
Julio Facelli

Supporting a Healthy Lifestyle by Re-Using Personal Online Data
Jochen Meyer, Elif Cakir Turgut and Axel Helmer

Knowledge Discovery System for Automated Quality Measure Abstraction
Faisal Farooq, Shipeng Yu, Balaji Krishnapuram and R. Bharat Rao

A Statewide Data Repository for Population Analytics
William Reiter, Nicholas Anderson and Aaron Abend

An Open Source Decision Support System Implementation
Ashraf Farrag

iADRs: Towards a Web-based Interactive Adverse Drug Reaction Analyzing System
Wen-Yang Lin, He-Yi Li, Jyh-Wei Du, Wen-Yu Feng and Chiao-Feng Lo

Everest: A Framework for Developing HL7v3 Applications
H. Keith Edwards, Justin Fyfe and Duane Bender

Modeling of Nursing Knowledge for Multilevel Information Systems
Joyce Nogueira, Timothy Cook and Luciana Cavalini

Development of a Clinical Decision Support System for Wound Management at Two Hospitals in Singapore
Christopher S.G. Khoo, Isabel H.L. Ng and Ee Yuee Chan

Situation Role-based Privacy Control Using Dynamic Credentials for Emergency Health Services
Soon Ae Chun, Joon Hee Kwon and Haesung Lee

Migration of a Pre-Hospital Cardiology Emergency System from Data Model to Multilevel Modeling
Christiano Alvernaz, Timothy Cook and Luciana Cavalini

A Privacy-Aware Database for Quality Assessment in Medicine
Jan Sliwa and Emmanuel Benoist

Sentiment Analysis of Speech Prosody for Dialogue Adaptation in a Diet Suggestion Program
Scott Crouch and Rajiv Khosla

Statistical Analysis of PET Images
Patrizia Vizza, Pierangelo Veltri and Giuseppe Lucio Cascini

A New Paradigm for the Development of Future Medical Software Systems
Gerrit Meixner and Detlef Zuehlke

Medicaid Fraud Detection Using Data Broker Services
Rajeev Agrawal, Naser El-Bathy and Cameron Seay

Connection between Traditional Medicine and disease
Kotoe Katayama, Rui Yamaguchi, Seiya Imoto, Keiko Matsuura, Kenjij Watanabe and Satoru Miyano

Addressing Extensibility Requirements for Health Informatics Data
Mallikarjun Shankar and Christopher Tomkins-Tinch

Towards Dynamic Ontologies Repository Building
Gayo Diallo and Michel Simonet

On the choice of centralized vs decentralized systems for EPR in Hospitals
Mario Cannataro, Pietro Hiram Guzzi, Giuseppe Tradigo, and Pierangelo Veltri

10 Advantages of using Avatars in Patient-Centered Computer-based Interventions for Behavior Change
Christine Lætitia Lisetti

1:00 – 2:30 PM
Session D1-2A Mobile Devices for Health Management
Mediterranean West

Session Chair: Derek Hansen, Brigham Young University

Mobile Interface Design for Low-Literacy Populations
Beenish Chaudry, Katherine Connelly, Katie Siek and Janet Welch

Using SMS to Provide Continuous Assessment and Improve Health Outcomes for Children With Asthma
Tae-Jung Yun, Hee Young Jeong, Tanisha D. Hill, Burt Lesnick, Randall Brown, Gregory D. Abowd and Rosa I. Arriaga

The MONARCA Self-assessment System - Persuasive Personal Monitoring for Bipolar Patients
Jakob E. Bardram and Mads Frost

Session D1-2B Emergency Preparedness and Risk Assessment
Mediterranean Center

Session Chair: Carlo Combi, Universita' degli Studi di Verona

10-year CVD Risk Prediction and Minimization via Inverse Classification
Chen Yang, W. Nick Street and Jennifer G. Robinson

Optimizing Epidemic Protection for Socially Essential Workers
Chris Barrett, Rickard Beckman, Keith Bisset, Jiangzhuo Chen, Thomas Dubois, Stephen Eubank, V. S. Anil Kumar, Bryan Lewis, Madhav Marathe, Aravind Srinivasan and Paula Stretz

Panel I
Miramar North

Detecting and Using Document Structure

Panelists:
Sophia Ananiadou, NaCTeM, University of Manchester, UK
Maryann Martone, Department of Neuroscience, University of California, San Diego
Ágnes Sándor, Xerox Research Europe, Grenoble
Hagit Shatkay, University of Delaware, Newark, DE
Anita de Waard, Elsevier Labs, Burlington, VT (Panel Chair)

3:00 – 4:30 pm
Session D1-3A Patient and Consumer Information Needs and Behavior
Mediterranean West

Session Chair: Kelly Caine, Indiana University

An Exploratory Study of Consumer Health Information Searching Behavior in MedlinePlus
Yan Zhang, Peiling Wang, Amy Heaton and Heidi Winkler

Age Differences in Credibility Judgment of Online Health Information
Q. Vera Liao and Wai-Tat Fu

Designing Inpatient Technology to Meet the Medication Information Needs of Cardiology Patients
Lauren Wilcox, Steven Feiner, Andy Liu, Sarah Collins, Susan Restaino and David Vawdrey

Session D1-3B Health Information Processing
Mediterranean Center

Session Chair: Malika Mahoui, Indiana University Purdue University Indianapolis

A Statistical Medical Summary Translation System
Han-Bin Chen, Hen-Hsen Huang, Jengwei Tjiu, Ching-Ting Tan and Hsin-Hsi Chen

Deploying an Interactive Machine Learning System in an Evidence-Based Practice Center
Byron Wallace, Kevin Small, Carla Brodley, Joseph Lau and Thomas Trikalinos

3:00 – 5:00 pm
Tutorial I
Miramar North

Role of Semantic Web in Health Informatics
Satya Sahoo, Amit Sheth and Guo–qiang Zhang

Doctoral Consortium
Vista Room

Session Chair:
Javed Mostafa, University of North Carolina at Chapel Hill
Yuan An, Drexel University

Electronic Whiteboards in Emergency Medicine
Rasmus Rasmussen

Enabling Public Health Surveillance in Online Social Media through Data Mining
Scott H. Burton

Integrating Flexible Clinical Pathways into CDSS
Wen Yao

Testing Electronic Health Records Applications with a Security Test Pattern Catalog Developed Using Empirical Data
Benjamin H. Smith

Designing Social TV Services to Foster Elderly Social Interactions
Malek AlaouiTroyes

Automated identification of Redundant and Relevant New Information in Clinical Notes
Rui Zhang

Social Tags and Controlled Vocabularies for Health Information Retrieval
Michael Zarro

Consent-based Access Control for Sharing Private Electronic Information
Atif Khan

UCONLEGAL: A Usage Control Model for Healthcare Regulations
Ramya Gopalan

5:00 – 6:30 pm
Poster/Demo I
Spanish Suite

Session Chair: Kelly Caine, Indiana University

Posters – Regular and Short Papers

Unsupervised Pattern Discovery in Electronic Health Care Data using Probabilistic Clustering Models
Benjamin M. Marlin, Dave Kale, Robinder Khemani and Randall Wetzel

A Probabilistic Imputation Framework for Regression Analysis using Variably Aggregated, Multi-source Healthcare Data
Yubin Park and Joydeep Ghosh

Sub-cellular Feature Detection and Automated Extraction of Collocated Actin/Myosin Regions
Justin Martineau, Ronil Mokashi, David Chapman, Michael Grasso, Mary Brady, Yelena Yesha, Yaacov Yesha, Antonio Cardone and Alden Dima

A Spectral Clustering Technique for Studying Post-Transplant Kidney Functions
Aryya Gangopadhyay, Ashish Joshi and Ravinder Wali

Medical Case-Driven Classification of Microblogs: Characteristics and Annotation
Mustafa Sofean, Avaré Stewart, Matthew Smith and Kerstin Denecke

Public Health Community Mining in YouTube
Scott Burton, Richard Morris, Michael Dimond, Joshua Hansen, Christophe Giraud-Carrier, Johsua West, Carl Hanson and Michael Barnes

1-Norm Support Vector Machine for College Drinking Risk Factor Identification
Michael Zuba, Joseph Gilbert, Yu Wu and Jinbo Bi

Medical Question Answering: Translating Medical Questions into RDF Graphs
Asma Ben Abacha and Pierre Zweigenbaum

An Analytical Solution for Consent Management in Patient Privacy Preservation
Qihua Wang and Hongxia Jin

Integrating Clinical Pathways into CDSS using Context and Rules – A Case Study in Heart Disease
Wen Yao and Akhil Kumar

Smart Alarms: Multivariate Medical Alarm Integration for Post CABG Surgery Patients
Nicholas Stevens, Ana Rosa Giannareas, Vanessa Kern, Adrian Viesca Trevino, Andrew King, Margaret Fortino-Mullen and Insup Lee

Modifying Without a Trace: General Audit Guidelines are Inadequate for Electronic Health Record Audit Mechanisms
Jason King, Ben Smith and Laurie Williams

UCON(LEGAL): A Usage Control Model for HIPAA
Ramya Gopalan, Annie Anton and Jon Doyle

Enhancing Accountability of Electronic Health Record Usage via Patient-centric Monitoring
Daisuke Mashima and Mustaque Ahamad

Declarative Privacy Policy: Finite Models and Attribute-Based Encryption
Peifung E. Lam, John C. Mitchell, Andre Scedrov, Sharada Sundaram and Frank Wang

Applying Linked Data Principles to Represent Patient's Electronic Health Records at Mayo Clinic: A Case Report
Jyotishman Pathak, Richard Kiefer and Christopher Chute

Component-Based App Design for Platform-Oriented Devices in a Medical Device Coordination Framework
Kejia Li, Steve Warren and John Hatcliff

An Intelligent Web-based Decision Support Tool for Enhancing Asthma Guideline Adherence
Jinbo Bi and Arun Abraham

Increasing Elderly Social Relationships through TV-Based Services
Malek Alaoui, Myriam Lewkowicz and Ahmed Seffah

Electronic Whiteboards in Emergency Medicine: A Systematic Review
Rasmus Rasmussen

A Software Tool for Large-Scale Sharing and Querying of Clinical Documents Modeled Using HL7 Version 3 Standard
Praveen Rao, Tivakar Komara Swami, Deepthi Rao, Michael Barnes, Swati Thorve and Prasad Natoo

MNFL: The Monitoring and Notification Flow Language for Assistive Monitoring
Alex Edgcomb and Frank Vahid

Automated Syndrome Classification using Early Phase Emergency Department Data
Deepika Mahalingam, Javed Mostafa, Debbie Travers, Stephanie Haas and Anna Waller

Considering Privacy and Effectiveness of Authorization Policies for Shared Electronic Health Records
Thomas Trojer, Basel Katt and Thomas Schabetsberger

Investigating Barriers to Electronic Medical Record Use during Collaborative Information Seeking Activities
Arvind Karunakaran, Young Hee Nam and Madhu Reddy

Personalization is not a Panacea: Balancing Serendipity and Personalization in Medical News Content Delivery
Xiangyu Fan, Javed Mostafa, Ketan Mane and Cassidy Sugimoto

Demos

PANI: An Interactive Data-driven Tool for Targets Prioritization in Signaling Networks
Huey Eng Chua, Sourav S Bhowmick, Lisa Tucker-Kellogg, Yingqi Wang, C Forbes Dewey Jr and Hanry Yu

IFC Soft: Visual Comparison of Flow Cytometry Data Using Self-Organizing Maps
Kyle Thayer, Li Xiong and Vicki Hertzberg

ASCOT: Assisting Search and Creation of Clinical Trials
Ioannis Korkontzelos and Sophia Ananiadou

Demonstration of Digital Mockups for the Testing of a Medical Ventilator
Bailey Miller, Frank Vahid and Tony Givargis

January 29, 2011 (Sunday)

9:00 – 10:00 am
Keynote Speech II
Grande Promenade

Brain-Computer Interfaces: Progress, Problems, and Possibilities
Professor Jonathan R. Wolpaw, M.D.
Chief, Laboratory of Neural Injury and Repair
Wadsworth Center
New York State Department of Health and State University of New York

10:30 am – 12:00 pm
Session D2-1A Machine Learning II
Mediterranean West

Session Chair: Rong Xu, Case Western Reserve University

Combining Wearable and Environmental Sensing into an Unobtrusive Tool for Long-Term Sleep Studies
Marko Borazio and Kristof Van Laerhoven

An Evaluation of Measures to Dissociate Language and Communication Disorders From Healthy Controls Using Machine Learning Techniques
Judith Gaspers, Kristina Thiele, Philipp Cimiano, Anouschka Foltz, Prisca Stenneken and Marko Tscherepanow

Human Motion Primitive Identification and Activity Recognition Using a Bag-of-Features Approach
Mi Zhang and Alexander Sawchuk

Session D2-1B Health Systems Simulation and Workflow Management
Mediterranean Center

Session Chair: Julio Cesar Facelli, University of Utah

An Evolving Multi-Agent Scenario Generation Framework for Simulations in Preventive Medicine Education
Manan Gupta, Jeffrey Bertrand, Sabarish Babu, Philip Polgreen and Alberto Segre

Splash: A Platform for Analysis and Simulation of Health
Wang-Chiew Tan, Peter Haas, Ron Mak, Cheryl Kieliszewski, Pat Selinger, Paul Maglio, Susanne Glissmann, Melissa Cefkin and Yinan Li

Modelling Temporal, Data-Centric Medical Processes
Carlo Combi, Mauro Gambini, Sara Migliorini and Roberto Posenato

Panel II
Miramar North

Increasing data availability and focus of analytical research for 4P's (Patient, Provider, Pharmaceutical and Payer) of healthcare: trends, opportunities and gaps

Panelists:
Balaji Krishnapuram, Siemens (Panel Chair)
Shusaku Tsumoto, Shimane University
James Golden, Accenture

1:00 – 2:30 PM
Session D2-2A Web-based Informatics and ICT adoption
Mediterranean West

Session Chair: Yan Zhang, University of Texas at Austin

Trust Cues Fostering Initial Consumers' Trust: Usability Inspection of Nutrition and Healthcare Websites
Yin-Leng Theng, Lynette Goh, May Thet Tin, Rajkumar Sopra and Senthil Kumar Praveen Kumar

Veiled Viral Marketing: Disseminating Information on Stigmatized Illnesses via Social Networking Sites
Derek Hansen and Christianne Johnson

A Meta-analysis of ICT Adoption and Use by Medical Professionals in Sub-Saharan Africa
Jeff Crow, Ramona Broussard, Lorrie Dong, Jeanine Finn, Brandon Wiley and Gary Geisler

Session D2-2B Domain Specific Support Tools
Mediterranean Center

Session Chair: Neil Smalheiser, University of Illinois at Chicago

Mining Processes in Dentistry
Ronny Mans, Hajo Reijers, Michiel Van Genuchten and Daniel Wismeijer

iCircos: Visual Analytics for Translational Bioinformatics
Suresh Bhavnani, Mamta Abbas, Vickie Mcmicken, Numan Oezguen and Jeffry Tupa

Data Anonymization using an Improved Utility Measurement
Stuart Morton, Malika Mahoui and P. Joseph Gibson

Panel III
Miramar North

Towards Data: A Human/Machine-oriented Approach of Medical Data Collection

Panelists:
Shusaku Tsumoto, Shimane University (Panel Chair)
Mihoko Otake, University of Tokyo
Hiroshi Nakajima, OMRON
Takayuki Fujita, University of Hyogo
Yan Chow, Kaiser Permanente Information Technology

3:00 – 4:30 pm
Session D2-3A Designing ICT systems for Healthcare Workers
Mediterranean West

Session Chair: Suresh Bhavnani, University of Texas, Medical Branch

Medical Equipment Library Design: Revealing Issues and Best Practice Using DiCoT
Julia Werth and Dominic Furniss

User-Centered Development of UI Elements for Selecting Items on a Digital Map Designed for Heavy Rugged Tablet PCs in MCIs
Tayfur Coskun, Amal Benzina, Eva Artinger, Clemens Binder and Gudrun Klinker

Envisioning Healthcare Work: Models for Prospective Evaluation of New Systems
Penelope Sanderson, Tania Xiao, Clinton Freeman and Wendy Broxham

Session D2-3B Health Information Integration and Mapping
Mediterranean Center

Session Chair: Albert Lai, Ohio State University

Exploiting Semantic Structure for Mapping User-specified Form Terms to SNOMED CT Concepts
Ritu Khare, Yuan An, Jiexun Li, Il-Yeol Song and Xiaohua Hu

Linking multiple disease-related resources through UMLS
Aurélie Névéol, Jiao Li and Zhiyong Lu

3:00 – 5:00 pm
Tutorial II
Miramar North

Measuring the Similarity and Relatedness of Concepts in the Medical Domain
Ted Pedersen, Serguei Pakhomov, Bridget Mcinnes and Ying Liu

4:30 – 5:00 pm
Town Hall Meeting
Mediterranean Center

ACM SIG Governing Board Executive Committee Members:
Vicki Hanson, Chair
Andrew Sears
Joseph A. Konstan

5:00 – 6:30 pm
Poster/Demo II
Spanish Suite

Session Chair: Kelly Caine, Indiana University

Posters – Regular and Short Papers

Creating and refining the groupings of pharmacovigilance terms
Marie Dupuch, Cédric Bousquet and Natalia Grabar

Detection of Unsafe Actions in Laparoscopic Cholecystectomy Videos
Ashwini Lahane, Yelena Yesha, Michael Grasso, Anupam Joshi, Adrian Park and Jimmy Lo

Comparing drug-class membership in ATC and NDF-RT
Fleur Mougin, Anita Burgun and Olivier Bodenreider

Automated Identification of Relevant New Information in Clinical Narrative
Rui Zhang, Serguei Pakhomov and Genevieve Melton

A Multivariate Probabilistic Method for Comparing Two Clinical Datasets
Yuriy Sverchkov, Shyam Visweswaran, Gilles Clermont, Milos Hauskrecht and Gregory Cooper

Automated Search For Patient Records; Classification of Free-Text Medical Reports Using Conditional Random Fields
Ivko Cvejic and Jun Zhang

Using SNOMED Semantic Concept Groupings to Enhance Semantic-Type Assignment Consistency in the UMLS
Duo Wei, Michael Halper and Gai Elhanan

Knowledge-based and Knowledge-Lean Methods Combined in Unsupervised Word Sense Disambiguation
Antonio Jimeno and Alan Aronson

CIS System Hazards Derived from Literature Using Systems and Human Factors Perspectives
Fieran Mason-Blakley and Jens Weber

In Silico Identification of Endo16 Regulators in the Sea Urchin Endomesoderm Gene Regulatory Network
Huey Eng Chua, Sourav S Bhowmick, Lisa Tucker-Kellogg, Zhao Qing, C Forbes Dewey Jr and Hanry Yu

Multidimensional Temporal Mining in Clinical Data
Shusaku Tsumoto

Towards an Automated Assistant for Clinical Investigations
Vivek Nigam, Tajana Ban Kirigin, Andre Scedrov, Carolyn Talcott, Max Kanovich and Ranko Perovic

An Open Architecture for Messaging-Based Consumer-Health Question-Answering
Susan Mcroy, Vishnuvardhan Vaidhayanathan, Amy May and Hayeon Song

Detecting Negation of Medical Problems in French Clinical Notes
Louise Deleger and Cyril Grouin

Towards Frabjous: A Two-Level System for Functional Reactive Agent-Based Simulation
Oliver Schneider, Christopher Dutchyn and Nathaniel Osgood

SPLiCE: A Software Product Line for Healthcare
Antonio Gomes, Artur Ziviani, Bruno Correa, Iuri Teixeira and Vinicius Moreira

An Ontological Medical Decision Support System for Critical Environments
John A. Doucette, Atif Khan and Robin Cohen

The Medical Device Dongle: An Open-Source Standards-Based Platform for Interoperable Medical Device Connectivity
Philip Asare, Danyang Cong, Santosh Vattam, Baek-Gyu Kim, Shan Lin, Oleg Sokolsky, Margaret Mullen-Fortino and Insup Lee

Personalized Medication Management: Towards a Design of Individualized Support for Elderly Citizens at Home
Nervo Verdezoto and Jesper Wolff Olsen

Towards Event Sequence Representation, Reasoning, and Visualization for EHR Data
Cui Tao, Krist Wongsuphasawat, Kimberly Clark, Catherine Plaisant, Ben Shneiderman and Christopher Chute

Flexible Patient-Controlled Security for Electronic Health Records
Thomas Hupperich, Hans Löhr, Ahmad-Reza Sadeghi and Marcel Winandy

Stess@work: From Measuring Stress to its Understanding, Prediction and Handling with Personalized Coaching
Jorn Bakker, Leszek Holenderski, Rafal Kocielnik, Mykola Pechenizkiy and Natalia Sidorova

Move2Play: An Innovative Approach to Encouraging People to Be More Physically Active
Pavol Bielik, Michal Tomlein, Peter Krátky, Štefan Mitrík, Michal Barla and Mária Bieliková

Designing the Patient Problem List for Meaningful Use
Kenneth Spry

Mapping Patient Treatment Profiles and Electronic Medical Records to Clincial Guideline for Use in Patient Care
Ketan Mane, Phillips Owen, Charles Schmitt, Chris Bizon and Kenneth Gersing

Demos

Clinical Decision Support for Integrated Cyber-Physical Systems: A Mixed Methods Approach
Alex Roederer, Andrew Hicks, Enny Oyeniran, Insup Lee and Soojin Park

CLAHRC Healthcare Improvement Support System (HISS)
Vasa Curcin and Thomas Woodcock

Analyzing Clinical Data in XML: Bridging the Gaps
Joshua Hui, Peter Schwarz and Sarah Knoop

FUSE: A System for Data-Driven Multi-Level Functional Summarization of Protein Interaction Networks
Boon-Siew Seah, Sourav S Bhowmick, C Forbes Dewey Jr and Hanry Yu

January 30, 2011 (Monday)

9:15 – 10:00 am
Best Paper Award & SIGHIT Business Meeting
Mediterranean Center

10:00 am – 12:00 pm
Tutorial III
Miramar North

Assisted Living Technologies for Older Adults
Parisa Rashid

10:30 am – 12:00 pm
Session D3-1A BioNLP
Mediterranean West

Session Chair: Antonio Jimeno Yepes, National Library of Medicine

Semantic Relatedness Study Using Second Order Co-Occurrence Vector Computed by Biomedical Corpora, UMLS and WordNet
Ying Liu, Bridget T. Mcinnes, Ted Pedersen, Serguei Pakhomov and Genevieve Melton-Meaux

Medical Event Coreference Resolution using the UMLS Metathesaurus and Temporal Reasoning
Preethi Raghavan, Eric Fosler-Lussier, Chris Brew and Albert Lai

A Corpus of Clinical Narrative Annotated with Temporal Information
Lucian Galescu and Nate Blaylock

Session D3-1B Health Digital Library and Information Extraction
Mediterranean Center

Session Chair: Joydeep Ghosh, University of Texas at Austin

Semi-supervised Image Classification for Automatic Construction of a Health Image Library
Yang Chen, Guo-Qiang Zhang and Rong Xu

Firework Visualization: A Model for Local Citation Analysis
Si-Chi Chin, Charisse Madlock-Brown, W. Nick Street and David Eichmann

An Up-to-date Knowledge-Based Literature Search and Exploration Framework for Focused Bioscience Domains
Ramakanth Kavuluru, Christopher Thomas, Amit Sheth, Victor Chan, Wenbo Wang, Alan Smith, Armando Sato and Amy Walters

1:00 – 2:30 PM
Session D3-2A Issues with Data Sharing
Mediterranean West

Session Chair: Yuan An, Drexel University

Combining NLP with Evidence-Based Methods to Find Text Metrics Related to Perceived and Actual Text Difficulty
Gondy Leroy and James Endicott

Uniquessness and How it Impacts Privacy in Health-Related Social Science Datasets
Raquel Hill, A. Cheyenne Solomon, Erick Janssen, Stephanie Sanders and Julia Heiman

Session D3-2B Assistive Technologies
Mediterranean Center

Session Chair: Christopher Khoo, Nanyang Technological University

MARHS: Mobility Assessment System with Remote Healthcare Functionality for Movement Disorder Diseases
Sunghoon Lee, Jonathan Woodbridge, Ani Nahapetian and Majid Sarrafzadeh

Embodying Care in Matilda – An Affective Communication Robot for the Elderly in Australia
Rajiv Khosla

Panel IV
Miramar North

Social Media for Consumer Health

Panelists:
Yan Zhang, University of Texas at Austin (Panel Chair)
Wai-Tat Fu, University of Illinois at Urbana-Champaign
Prasenjit Mitra, Pennsylvania State University
John Yen, Pennsylvania State University

3:00 – 4:30 pm
Session D3-3A Health Data Collection and Knowledge Discovery
Mediterranean West

Session Chair: Shusaku Tsumoto, Shimane University

Human Network Data Collection In the Wild: The Epidemiological Utility of Micro-contact and Location Data
Mohammad Hashemian, Kevin Stanley, Dylan Knowles, Jonathan Calver and Nathaniel Osgood

Sentiment Lexicons for Health-related Opinion Mining
Lorraine Goeuriot, Jin-Cheon Na, Wai Yan Min Kyaing, Christopher Khoo, Yun-Ke Chang and Yin-Leng Theng

Data Exploration and Knowledge Discovery in a Patient Wellness Tracking (PWT) System at a Nurse-Managed Health Services Center
Yuan An, Ritu Khare, Il-Yeol Song and Xiaohua Hu

Session D3-3B Electronic Health Records and Privacy Policy
Mediterranean Center

Session Chair: Wai-Tat Fu, University of Illinois at Urbana-Champaign

Towards HIPPA-compliant Healthcare Systems
Ruoyu Wu, Gail-Joon Ahn and Hongxin Hu

Lessons Learned from England's National Electronic Health Record Implementation: Implications for the International Community
Kathrin Cresswell, Ann Roberston and Aziz Sheikh

Tutorial I

Role of Semantic Web in Health Informatics

Leveraging the rapidly increasing amount of health care data to demonstrably enhance quality of clinical research and patient care has become a critical challenge for health care providers, researchers, and informaticians. In addition to the sheer volume of the data, the large disparity in storage formats, distributed locations, and variable quality of data, is exacerbating data management issues. There is an urgent need to address these issues to enable multi-center clinical studies, comply with new health care policies that encourage adoption of Electronic Health Records (EHR), and effectively move towards the National Institutes of Health roadmap of translational research.

The Semantic Web initiative by the World Wide Web Consortium (W3C) has defined a set of standards and technologies for representing, integration, and querying large-scale data with increasing use in health care, exemplified by the W3C Health Care and Life Sciences (HCLS) Interest Group.

This tutorial will weave together three themes and the associated topics:

1. The role of biomedical ontologies as a community driven and agreed upon knowledge model, in health care data integration, interoperability, sharing, and storage.
2. Key technologies with focus on Semantic provenance and integration to ensure data quality, compliance with regulatory requirements, and preserving audit trails in health informatics.
3. In-practice tools and real world use cases built to serve the needs of sleep medicine researchers, cardiologists involved in clinical practice, and work on vaccine development for human pathogen will be used as real world experience in the use of Semantic Web technologies in health informatics.

Presenters:

Satya Sahoo is assistant professor in the division of medical informatics at the Case Western Reserve University. Satya has led the development of three NCBO-listed ontologies. In addition, he has collaborated with the NLM, National Institute on Drug Abuse, Microsoft Research, and the Center for Tropical and Global Emerging Diseases on use of Semantic provenance for data management. Satya is member of the W3C HCLS for past 4 years and is also an invited expert in the W3C Provenance Interchange Working Group.

Amit Sheth is the LexisNexis Ohio Eminent Scholar at the Wright State University, Dayton OH. He directs Kno.e.sis - the Ohio Center of Excellence in Knowledge-enabled Computing (http://knoesis.org). He is an IEEE fellow and is one of the highly cited authors in Computer Science (h-index = 68). He has led NIH funded projects that used Semantic Web technologies in biomedical research.

Guo-Qiang Zhang is chief of biomedical informatics division at the Case Western Reserve University with 20 years of experience in ontologies, algorithms, and image analysis. He is also the informatics co-director of Case Clinical and Translational Science Award (CTSA) center and the associate Director in the Case Comprehensive Cancer Center. He led the development of the ontology-driven Physio-MIMI platform for multi-center sleep medicine research involving Case Western Reserve University, University of Michigan, University of Wisconsin and Marshfield Clinic.

Tutorial II

Measuring the Similarity and Relatedness of Concepts in the Medical Domain

The ability to quantify the degree to which concepts are similar or related to each other is a key component in many Natural Language Processing and Artificial Intelligence applications. For example, in a document search application, it can be very useful to identify text snippets that contain terms that are similar to (but not identical) to those provided by a user. This tutorial will introduce the underlying theory behind measures of semantic similarity and relatedness, and show how these can be applied in the medical domain by using open source software (UMLS::Similarity http://umls-similarity.sourceforge.net) which takes advantage of information found in the Unified Medical Language System (UMLS) of the National Library of Medicine. The tutorial will also show users how to use recently created human reference standard data to calibrate and evaluate existing measures.

Those who attend this tutorial will learn how to:

1. understand the distinction between semantic relatedness and semantic similarity,
2. measure semantic similarity and relatedness using information from ontologies, definitions, and corpora,
3. use these measures from the command line, API, and web services using the open--source software package UMLS::Similarity,
4. integrate these measures into different NLP and AI applications, and
5. conduct experiments using freely available human reference standard data.
6. This tutorial will be accessible to any Health Informatics student, professional, or researcher with an interest in Natural Language Processing, ontologies, or Artificial Intelligence. No prior knowledge is assumed.

Presenters:

Ted Pedersen (Ph.D., 1998, Computer Science, Southern Methodist University) is a Professor in the Department of Computer Science at the University of Minnesota, Duluth. His research interests are in natural language processing and computational linguistics, and focus on identifying the meaning of words and phrases in written text. He is the recipient of a National Science Foundation CAREER award.

Serguei Pakhomov (Ph.D., 2001, Linguistics, University of Minnesota) is an Associate Professor at the College of Pharmacy, University of Minnesota. His research interests include natural language processing of the text of electronic health records for the purposes of extracting information useful for clinical practice and research. He is the recipient of the National Institutes of Health Clinical and Translational Scholar Award.

Bridget T. McInnes (Ph.D., 2009, Computer Science, University of Minnesota) is a Postdoctoral Associate at the College of Pharmacy, University of Minnesota. Her research interests are in natural language processing in the biomedical domain and focus on quantifying the relatedness between biomedical and clinical concepts. She was the recipient of a National Library of Medicine Research Participation Fellowship in 2008.

Ying Liu (Ph.D., 2007, Computer Science, University of Alabama at Birmingham) is a Postdoctoral Associate at the College of Pharmacy, University of Minnesota. Her research interests are in data mining in both general and biomedical texts. She won first place in the University of Alabama at Birmingham Graduate Student Research Day 2005 for her work on outlier detection.

Tutorial III

Assisted Living Technologies for Older Adults

The increasing aging population is a challenging health care problem in US and many other parts of the world. The population of the US, as well as the other industrialized countries is aging rapidly. This aging population is going to bring new challenges to our society, such as an increase in age-related diseases, rising health care costs, shortage of health care professionals, and lack of quality care for everyone.

This tutorial will explore intelligent technologies and methods that can help health care professionals to provide better quality care for the older adults, monitor their health conditions in place, as well as technologies that allow the older adults to live more independently. It will highlight current challenges and important future directions in the field. It will also cover a number of successful case studies such as smart homes and intelligent reminder systems.

Presenters:

Parisa Rashidi is a research scientist at University of Florida, Gainesville. She has been working on smart environments and assisted living technology since 2006. She received her BS.c degree in computer engineering from University of Tehran in 2005, her MS.c in computer science from Washington State University in 2007, and her PhD degree in computer science from Washington State University in 2011. Her interests include applying data mining and artificial intelligence techniques to assisted living technology, health informatics problems, and smart environments. She worked on the CASAS smart home project for dementia patients from 2006 to 2010 and has published numerous papers in this area. She also has served on the reviewing board of several international journals and conferences, as well as related NSF panels.

Panel I

Detecting and Using Document Structure

The detection of discourse structure of scientific documents is important for a number of tasks, including biocuration efforts, text summarisation, and the creation of improved formats for scientific publishing. Currently, many parallel efforts exist to detect a range of discourse elements at different levels of granularity, and for different purposes, including extraction of information from complex documents, alignment of parallel corpora across languages, and support for document summarization (particularly multi-document summarization). Another interesting class of applications comes from "bibliometrics" and "scientometrics". For example, for analysis of argument structure in full text articles from the scientific literature, it may be important to know where a particular reference is cited or where a particular statement is made (Background, Discussion, etc.). Another application might include tracking over time where (in what sections) an entity or concept is mentioned, to determine whether the mentions migrate from research claims into the "Background" or eventually to the "Methods" sections of articles, as the concept moves from "foreground" (subject of the research) to "background".

In this panel we would like to, explore compare, contrast and evaluate different scientific discourse annotation schemes and tools, in order to answer questions such as:

- What motivates a certain level, method, viewpoint for annotating scientific text?
- What is the annotation level for a unit of argumentation: an event, a sentence, a segment? What are advantages and disadvantages of all three?
- How easily can different schemes to be applied to texts? Are they easily trainable?
- Which schemes are most portable? Can they be applied to both full papers and abstracts? Can they be applied to texts in different domains?
- How granular should annotation schemes be? What are the advantages/disadvantages of fine and coarse grained annotation categories?
- What correlations occur among document structure, argumentation, and rhetorical functions?
- Is there a common framework that could be used for domain-independent document structure annotation?

Sophia Ananiadou, NaCTeM, University of Manchester, UK
Maryann Martone, Department of Neuroscience, University of California, San Diego
Ágnes Sándor, Xerox Research Europe, Grenoble
Hagit Shatkay, University of Delaware, Newark, DE
Anita de Waard, Elsevier Labs, Burlington, VT **(Panel Chair)**

Panel II

Increasing Data Availability and Focus of Analytical Research for 4P's (Patient, Provider, Pharmaceutical and Payer) of Healthcare: Trends, Opportunities and Gaps

Healthcare systems around the world are struggling to keep up with patient needs, and improve quality of care while reducing costs at the same time. At the same time, more and more data is being captured around healthcare processes in the form of Electronic Health Records (EHR), health insurance claims, medical imaging databases, disease registries, spontaneous reporting sites, and clinical trials. The panelists with extensive experience and representing the 4P's of healthcare: Patients, Provider (hospitals, labs, clinics), Pharmaceutical and Payer (insurance companies, government) will discuss questions such as the following:

1. What are the data sources that are becoming available across the 4Ps? How do they vary by geographies?
2. What are the problems that are becoming feasible to be addressed by the Analytics/Data Mining community and who is the beneficiary for the addressed problems? In short, who and what can data analytics help with?
3. Success stories and failures
4. Where are the gaps in the problems that are being addressed by the community and what can be done to bridge those gaps?

Panelists:

Balaji Krishnapuram, Siemens **(Panel Chair)**
Shusaku Tsumoto, Shimane University
James Golden, Accenture

Panel III

Towards Data: A Human/Machine-oriented Approach of Medical Data Collection

More than twenty years have passed since clinical data were computerized as a hospital information system, whose stored data include all the histories of clinical activities in a hospital, including accounting information, medical image, laboratory data and electronic patient records. Due to the traceability of all the information, a hospital cannot function without its information system. Furthermore, if it is extended into electronic healthcare records, it may not be a dream for each patient to benefit from their personal database with all the healthcare information. Recent advances in data mining will support this trend: analysis of such large scale databases enable us to visualize and capture what we have not seen only from clinical sites. However, it is notable that conventional computerized data are described by medical staff or measured by various kinds of medical instruments. They can be viewed as summaries of clinical processes, which remove background information behind the observations. Thus, analysis based on these data cannot overcome their limitations. One of the reasons why data mining is not successful for medical risk is that it takes a long time even for medical staff to interpret the results obtained and fill the gap between their knowledge and extracted patterns.

If we want to go beyond these summaries and to get more information in order to capture the whole clinical actions or patients' behavior, we have to monitor and store their details through more sophisticated methods, such as sensor networks. For example, if we want to prevent medical incidents, in-hospital infections we have to monitor the behavior of medical staff, and if we want to prevent chronic diseases (metabolic syndromes) in an efficient way, we have to monitor the measurements of behavior of patients. Thus, although "On data" approaches are important for future medicine and healthcare, Ones of "Towards data" are more important for IT-oriented future development of these fields, which has been proposed by the organizer. These data collection and their analysis will be new challenges for healthcare IT and thanks to the recent developments of sensors and devices: it will not be a dream or science fiction.

This panel gives recent advances in IT technology for data collection, their problems and their future vision: not only hardware-based or sensor-based, but also human-oriented, or human-agent-interaction based will be discussed by the panelists who play important roles in building up these fields.

Shusaku Tsumoto, Shimane University (**Panel Chair**)
Mihoko Otake, University of Tokyo
Hiroshi Nakajima, OMRON
Takayuki Fujita, University of Hyogo
Yan Chow, Kaiser Permanente Information Technology

Panel IV

Social Media for Consumer Health

Community-based social media, characterized by its ability to glean collective wisdom through supporting communication, information sharing, and collaboration between individual users, is imposing a greater impact on people's daily information seeking, knowledge construction, and decision making. Unsurprisingly, the impact of social media has extended to the health care domain, as consumers have begun to share health-related experiences and knowledge online. Currently, about one-third of Americans who go online to research their health use social networks to find fellow patients and discuss their conditions, and 36% of social network users evaluate and leverage other consumers' knowledge before making healthcare decisions, such as choosing providers, determining a course of treatment, and managing their health risks. In a recent study, Pew Research declares that social media sites are becoming important hubs for health advice.

As social media emerge as a platform for disseminating and sharing of health-related information, more research is needed to elucidate the nature and working mechanisms of this new medium. This panel will explore the potential of social media, such as social networks and online health communities, for promoting consumer health from the following aspects:

1. How do end-users use social network sites (SNSs), a popular form of social media, for health- and wellness-related purposes? How do they perceive SNSs as a place for health information and communication? What kind of questions do they ask their social ties? What factors impact their decisions of using SNSs for health information?
2. Do we have the tools that end-users can use to discern high quality information from those that are of dubious quality on SNSs and other social media sites? In the event of viral rumor-spreading that can happen quite rapidly in social media, what can public health organizations do to counter false information? How do we develop tools to enable national and international health officials to monitor the spread of false information and intervene fast to prevent its spread? How do we improve the existing tools ranging from those used at the individual scale to that at the aggregated national and international scale?
3. Online health communities have enabled people to obtain emotional support from other users. What are important factors associated with the positive impacts of online health communities? The success of these communities, to a large degree, is critically dependent on the active engagement of leaders. What are the characteristics of leaders in these communities? How can we facilitate the dissemination of valuable patients' experiential knowledge and stories to the right people at the right time using social media integrated with online health communities?
4. Research on social media often focuses either on regularities or patterns at the network level (e.g., social network analysis) or cognitive or affective behavior at the individual level. It is, however, possible that the interactive impact to individuals and their social context (as shaped by the online environment) can result in the emergence of new regularities. What are the benefits of bridging studies on individual information processing with higher level approach such as social network analysis or social computing method in health informatics?

Yan Zhang, University of Texas at Austin **(Panel Chair)**
Wai-Tat Fu, University of Illinois at Urbana-Champaign
Prasenjit Mitra, Pennsylvania State University
John Yen, Pennsylvania State University

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Tiffany Veinot, University of Michigan, USA
Chunhua Weng, Columbia University, USA
Bo Xie, University of Maryland, USA
Michael Xie, The Children's Hospital of Philadelphia, USA
Ping Yu, University of Wollongong, Australia

Demo Track

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Dan Morris, Microsoft Research, USA
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Extended Abstract Track

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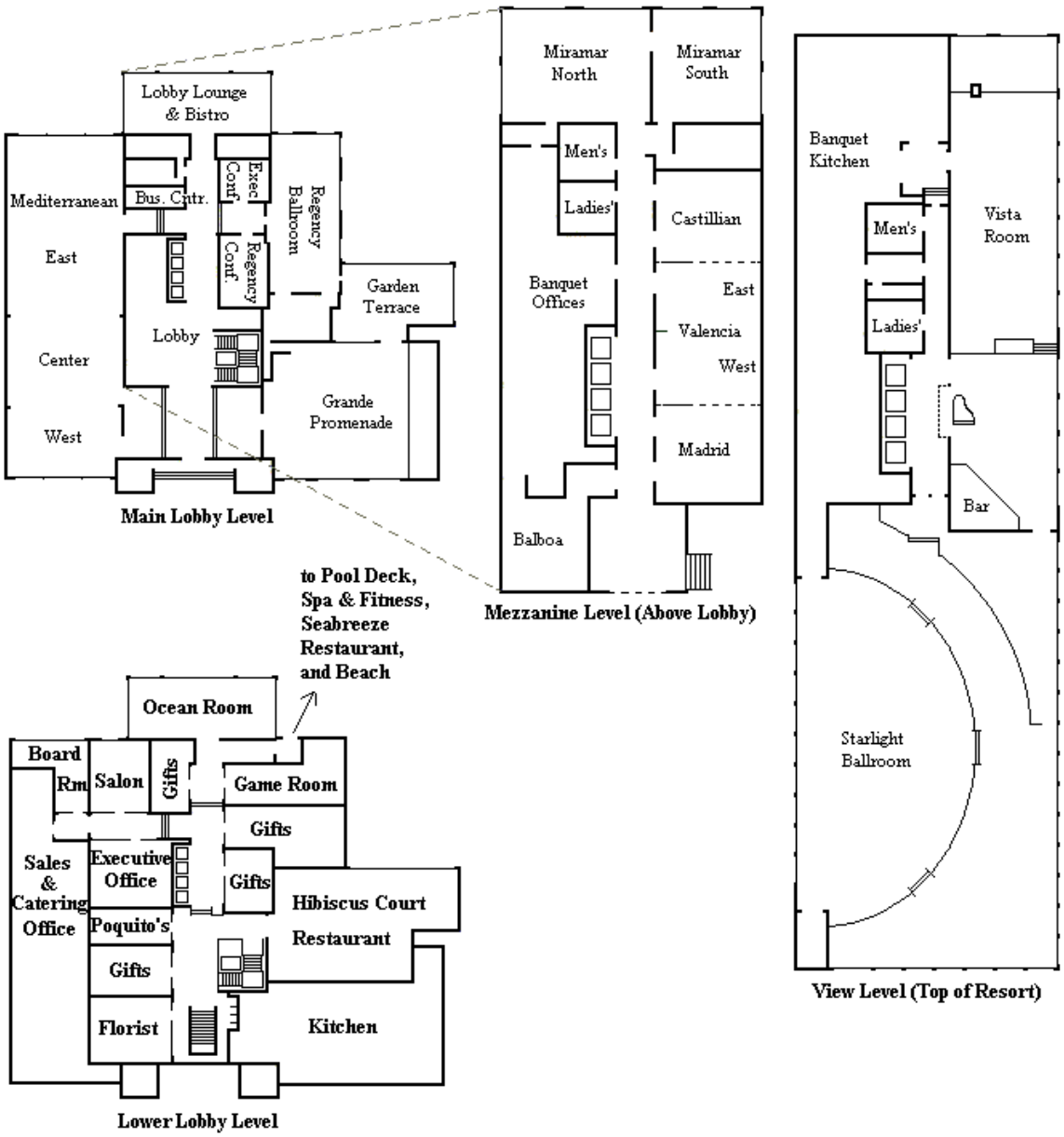
Simone Ludwig, North Dakota State University, USA
Claudio Palazzi, University of Padua, Italy
M. Theresa Perry, RTRN Data and Technology Coordinating Center, USA

Hotel Floor Map



The Spanish Suite is comprised of the Madrid, Valencia East & West and the Castillian Rooms located on the Mezzanine level.

Where to Eat

In the hotel (4833 Collins Avenue)

- Hibiscus Court
  - Buffet breakfast.
- Seabreeze Bar & Grill
  - Hamburgers, salads, and sandwiches.
- Ocean Bar & Bistro
  - American and island-themed dishes (Dinner Only).
- Poquito To Go
  - To-go breakfast/lunch items.
  - Seating in the Ocean View Room or Pool Deck
- Room service
  - From 6:30 a.m. to 11 p.m. daily (Lunch for Friday to Sunday only)

Near the hotel

A. 1500°
   - 4525 Collins Avenue (walk: 6 minutes)

B. Restaurants at Fountainbleau Miami Beach
   - 4441 Collins Avenue, Miami Beach, FL (walk: 8 minutes)

C. Four Points By Sheraton Miami Beach
   - 4343 Collins Avenue, Miami Beach, FL (walk: 13 minutes)

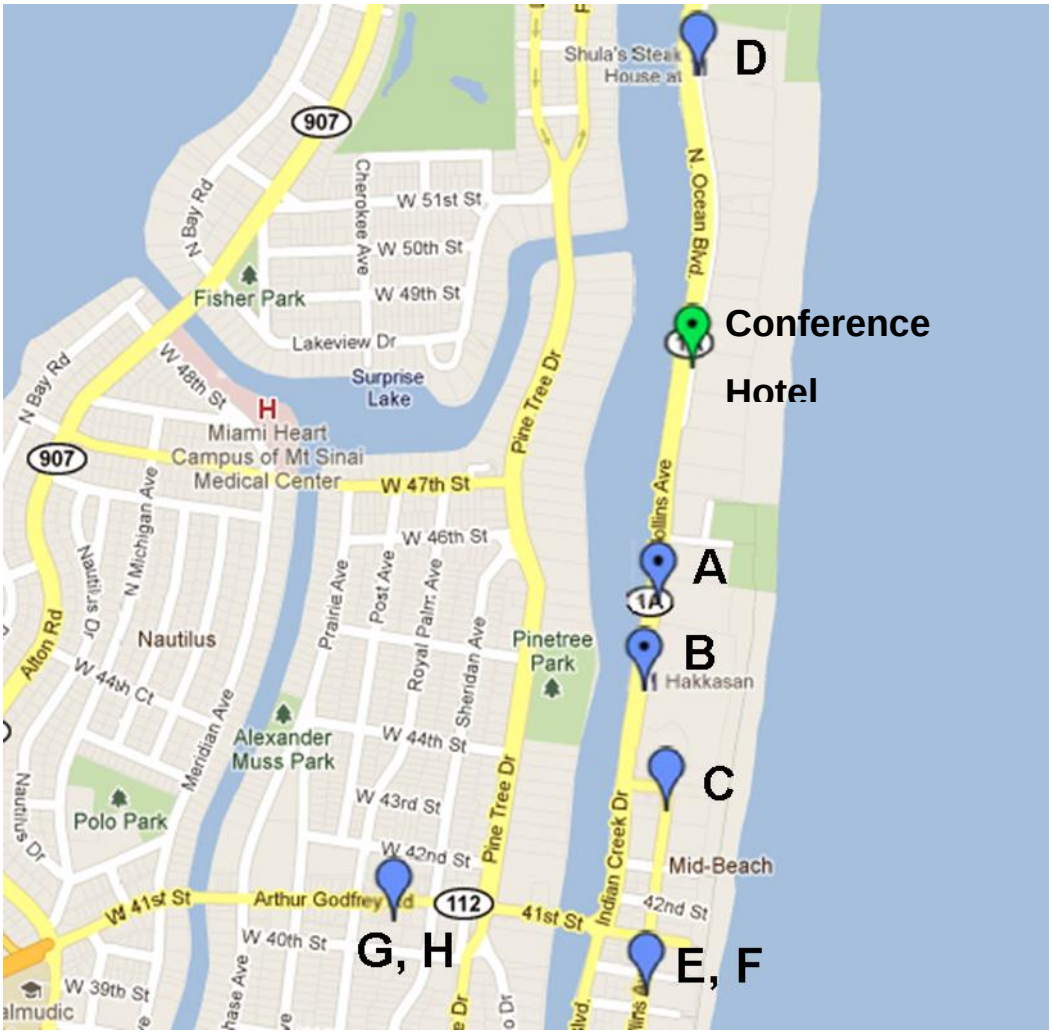
D. Shula's Steakhouse
   - 5225 Collins Avenue, Miami, FL (walk: 8 minutes)

E. Morton's The Steakhouse
   - 4041 Collins Avenue (walk: 18 minutes)

F. Carrabba's Italian Grill
   - 3921 Collins Avenue (walk: 18 minutes)

G. Forge Restaurant
   - 432 West 41st Street, Miami Beach, FL (walk: 21 minutes)

H. More options in 41st Street (walk: >=21 minutes)



South Beach and Lincoln Road (car: 10 – 20 minutes)

A Larios On The Beach
- 820 Ocean Drive, Miami Beach, FL

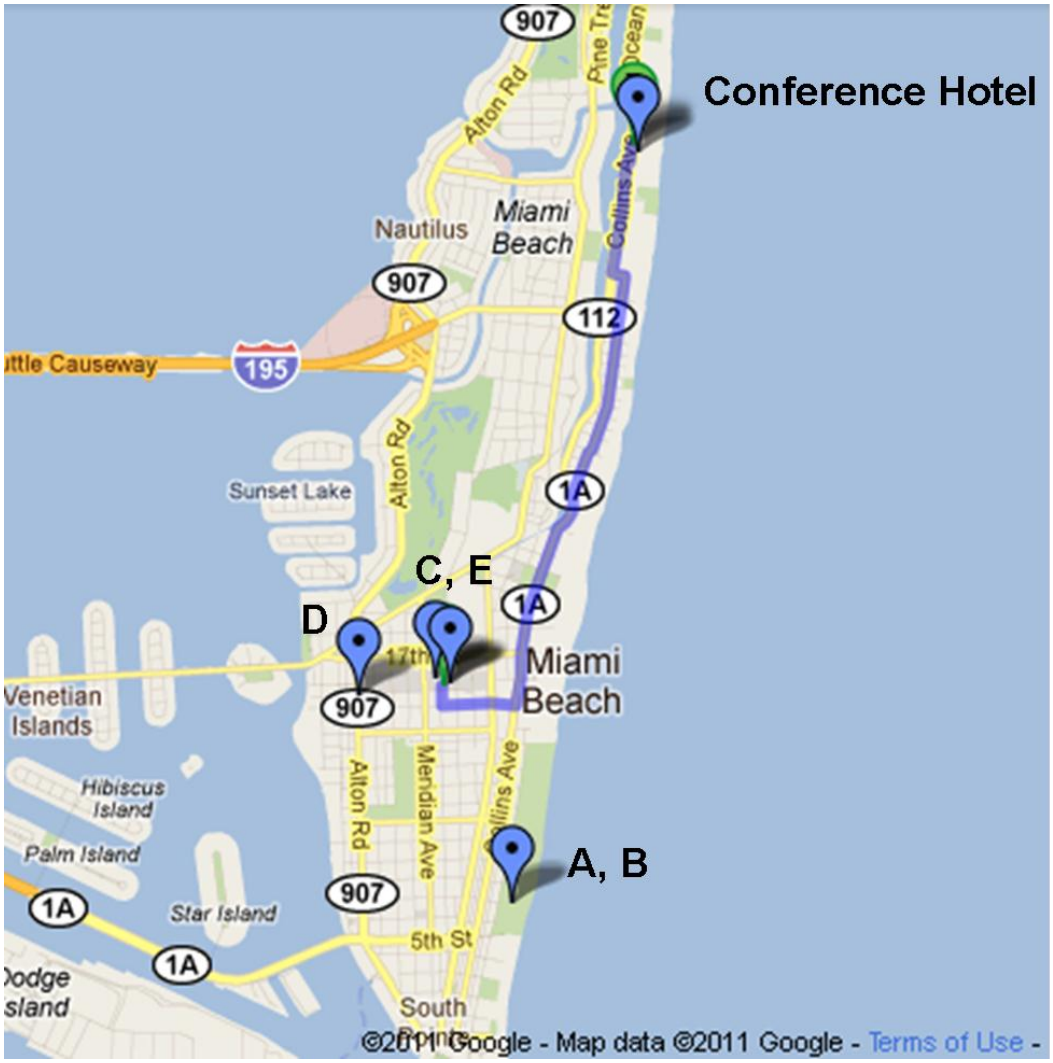
B News Cafe
- 800 Ocean Dr, Miami Beach, FL

C Soprano Restaurant: F
- 646 Lincoln Road, Miami Beach, FL

D Baires Grill
- 1116 Lincoln Road, Miami Beach, FL 33139

E Nexxt Cafe
- 700 Lincoln Road, Miami Beach, FL

F Many more options on Lincoln Road and Ocean Drive.



Public Transportation-Metrobus (please double-check with the driver for your destination)

- To South Beach:
  - South Beach Local (25¢ per trip). Buses run every 12 to 20 minutes daily, stopping at popular destinations throughout South Beach.
  - Line 108
- To Lincoln Road:
  - Lines 107G, 112L, 119S, 120M, 108
- To Downtown Miami:
  - Line 120M
- To Airport
  - Line 150 Airport Flyer

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