

BDAH 2014 Program

PRE-CONFERENCE WORKSHOPS: TUESDAY 22 JULY 2014

9 – 12:30pm (Tea Break: 10.30–11am)	WORKSHOP #1 Introduction to SNOMED Clinical Terminology <i>Jay Kola</i> <i>Noesis Informatica</i>	WORKSHOP #3: Geospatial Analytics for Healthcare <i>Tin Seong Kam¹, Kai Xin Thia² and Jonathon Kay Chin Khoo²</i> ¹ Singapore Management University ² Khoo Teck Puat Hospital
12:30 – 1:30pm	LUNCH	
1:30 – 5:00pm (Tea Break: 3.00–3.30pm)	WORKSHOP #2 Predictive and Decision Analytics for proactive business processes in Emergency Room and Outpatient Clinic Services <i>Kar Way Tan</i> <i>Singapore Management University</i>	WORKSHOP #4: Case Study based Introduction to Healthcare Analytics with R <i>Vik Gopal¹ and Dan Wu²</i> ¹ National University of Singapore ² Khoo Teck Puat Hospital
5:00pm	END	

DAY ONE: WEDNESDAY 23 JULY 2014

8:00 – 8:45am	REGISTRATION AND NETWORKING	
8:45 – 9:00am	WELCOME by A/Prof Danny Poo , Organizing Chair & Director, Centre for Health Informatics, NUS	
9:00 – 9:20am	OPENING ADDRESS by Guest of Honour Mr. Gan Kim Yong , Minister For Health, Singapore	
9:20 – 10:00am	KEYNOTE : Overseas Speaker from Cerner	
10.00 – 10:45am	COFFEE AND EXHIBITION WALKAROUND	
10:45 – 12:15pm	PAPER PRESENTATION SESSION #1, #2	
	ANALYTICS FOR MANAGING	CLINICAL ANALYTICS (DISEASE

	HOSPITAL OPERATIONS	RELATED)
	<p>Linking Process Quality and Resource Usage: An Empirical Analysis</p> <p><i>Dimitrios Andritsos¹ and Chris Tang²</i></p> <p>¹HEC Paris ²UCLA Anderson School of Management</p>	<p>A Methodology for Improving Completeness, and Its Application with Colonoscopy Data</p> <p><i>Alisa Wechsler¹, Adir Even¹ and Ahuva Weiss-Meilik²</i></p> <p>¹Ben Gurion University of the Negev ²Sourasky Medical Center</p>
	<p>Discrete Event Simulation and Data Analytics Optimize Healthcare Systems' Clinical and Financial Performance</p> <p><i>David Morgareidge and Jun Zhang</i></p> <p><i>RTKL Associates Inc.</i></p>	<p>Predicting Kidney Complications in Diabetes Patients</p> <p><i>Mohsen Sangi, Khin Than Win and Farid Shiravani</i></p> <p><i>University of Wollongong</i></p>
	<p>A Multi-Agent Based Simulation Model to Improve Patient Flow Distribution</p> <p><i>Jianpei Wen and Jie Song</i></p> <p><i>Peking University</i></p>	<p>On Learning Clinical Pathways for Chronic Kidney Disease from Electronic Health Record Data: A Preliminary Graphical Approach</p> <p><i>Yiye Zhang, Rema Padman and Larry Wasserman</i></p> <p><i>Carnegie Mellon University</i></p>
12:15 – 1:15pm	CONFERENCE LUNCH	
1.15 – 1.55pm	KEYNOTE : Mr Bruce Liang, CIO, MOH	
2:00 – 3.30pm	PAPER PRESENTATION SESSION #3, #4	
	HEALTHCARE ECONOMICS AND MEASURES	CLINICAL ANALYTICS (DRUGS & EMR)
	<p>Reducing Medical Bankruptcy through Crowdfunding: Evidence from giveforward.com</p> <p><i>Gordon Burtch¹ and Jason Chan²</i></p> <p>¹University of Minnesota ²New York University Scale</p>	<p>A Novel Approach To The Utilization and Visualization of Electronic Medical Records (EMR) for Quality Surveillance of Inpatient Diabetes Care</p> <p><i>Chuen Seng Tan¹, Dillon Neo¹, Hoang D. Nguyen², E-Shyong Tai¹, Lin Wee Hwee², Danny Chiang Choon Poo², Eric Yin Hao Khoo¹ and Shih Ling Kao¹</i></p> <p>¹National University Health System</p>

		² <i>National University of Singapore</i>
	<p>Can Health Information Sharing Reduce Duplicate Testing? A Longitudinal Analysis of Patient Switching Behavior across Multiple Hospitals</p> <p><i>Sezgin Ayabakan¹, Indranil Bardhan¹, Zhiqiang Eric Zheng¹ and Kirk Kirksey²</i></p> <p>¹<i>The University of Texas at Dallas</i> ²<i>The University of Texas Southwestern Medical Center</i></p>	<p>Disease and Medication Networks: An Insight into Disease-Drug Interactions</p> <p><i>Dipanwita Dasgupta and Nitesh V. Chawla</i></p> <p><i>University of Notre Dame</i></p>
	<p>Development and Evaluation of the Healthcare Analytics Maturity for Effective Nursing Administration (HAMENA) Scale</p> <p><i>Genedine Lim¹, Violeta Lopez², Danny Poo² and Michelle Cleary³</i></p> <p>¹<i>Ministry of Health, Singapore</i> ²<i>National University of Singapore</i> ³<i>University of Western Sydney</i></p>	<p>Classification of Adverse Drug Reactions using Improved Decision Tree Algorithm</p> <p><i>Subramanian Appavu Alias Balamurugan¹ and K.V Uma²</i></p> <p>¹<i>K.L.N.College of Information Technology</i> ²<i>Thiagarajar College of Engineering</i></p>
3:30 – 4:15pm	COFFEE AND POSTER SESSION #1	
4:15 – 5:15pm	<p>WORKSHOP #5</p> <p>Interactive Data Visualization Techniques applied to Healthcare Decision Making</p> <p><i>Zhecheng Zhu</i></p> <p><i>National Healthcare Group</i></p>	
5:15pm	END OF DAY 1	

DAY TWO: THURSDAY 24 JULY 2014

8:00 – 9.00am	REGISTRATION AND NETWORKING
9:00 – 9:20am	Welcome back and Day 1 Highlights by Dr Sharon Tan, Program Co-Chair
9.20 – 10.00am	KEYNOTE : TBA

10.00 – 10:45am	COFFEE AND EXHIBITION WALKAROUND	
10:45 – 12:15pm	PAPER PRESENTATION SESSION #5, #6	
	PREDICTIVE MODELS FOR HOSPITAL OPERATIONS	FROM HEALTHCARE DATA TO KNOWLEDGE
	<p>A Risk Index Predicting 30-day Hospital Readmission in General Medicine Patients</p> <p><i>Xia Wu, Kai Pik Tai, Joanna Chia and Chi Hong Hwang</i></p> <p><i>Jurong Health Services</i></p>	<p>Ontological Topography: Mapping the Bright, Light, Blind/Blank Spots in Healthcare Knowledge</p> <p><i>Arkalgud Ramaprasad¹ and Thant Syn²</i></p> <p><i>¹University of Illinois at Chicago</i></p> <p><i>²University of Miami</i></p>
	<p>Probabilistic Detection of Disease Outbreaks Using Individual Level Electronic Health Records</p> <p><i>Peter Dawson, Ralph Gailis and Alaster Meehan</i></p> <p><i>DSTO, Australia</i></p>	<p>Data Realities and Big Data Analytics: Risks for the Health Industry</p> <p><i>Evelyn Hovenga¹, Heather Grain¹ and Cherrie Lowe²</i></p> <p><i>¹eHealth Education Pty Ltd</i></p> <p><i>²Trendcare Systems Pty Ltd</i></p>
2:00 – 3:30pm	<p>Comparison of Regression-based and Neural Networks-based Prediction Models for Operating Room Scheduling</p> <p><i>Rung-Chuan Lin¹, Mustafa Sir² and Kalyan Pasupathy³</i></p> <p><i>¹University of Missouri</i></p> <p><i>²Antalya University</i></p> <p><i>³Mayo Clinic</i></p>	<p>Role of System Design in Fostering Small Talk: A First Step towards Generation of Big Data in Online Patient Communities</p> <p><i>Sankara Subramanian Srinivasan</i></p> <p><i>Idaho State University</i></p>
12:15 – 1:15pm	CONFERENCE LUNCH	
1.15 – 1.55pm	KEYNOTE : Dr James Yip, CMIO, NUHS	
2:00 – 3:30pm	PAPER PRESENTATION SESSION #7, #8	
	SOCIAL MEDIA	TECHNIQUES FOR HEALTHCARE BIG DATA ANALYTICS
	<p>Leveraging social influence to address overweight and obesity: an agent-based social network study</p>	<p>BIOSPIDA: A Relational Translator and Automatic Storage for NCBI ASN.1 Databases</p>

	<p><i>Jun Zhang¹, David Morgareidge¹ and David Shoham²</i></p> <p><i>¹RTKL Associates Inc</i></p> <p><i>²Loyola University Chicago</i></p>	<p><i>Matthew Hagen and Eva Lee</i></p> <p><i>Georgia Institute of Technology</i></p>
	<p>Social Media and Drug Sales</p> <p><i>Vicky Ching Gu¹, Wenjing Duan², Qing Cao³ and Andrew B. Whinston⁴</i></p> <p><i>¹University of Houston–Clear Lake</i></p> <p><i>²George Washington University</i></p> <p><i>³Texas Tech University</i></p> <p><i>⁴University of Texas at Austin</i></p>	<p>Scaling Personalized Healthcare with Big Data</p> <p><i>Keith Feldman and Nitesh V. Chawla</i></p> <p><i>University of Notre Dame</i></p>
	<p>Using Twitter to Measure Public Discussion of Diseases</p> <p><i>Chris Weeg, Andy Schwartz, Shawndra Hill, Raina Merchant, Catalina Arango and Lyle Ungar</i></p> <p><i>University of Pennsylvania</i></p>	<p>Considerations for analysis of SNOMED CT coded data</p> <p><i>Jay Kola</i></p> <p><i>Noesis Informatica</i></p>
3:30 – 4:15pm	COFFEE AND POSTER SESSION #2	
4:15 – 5:00pm	CLOSING CEREMONY AND AWARDS PRESENTATION	
5:00pm	END OF CONFERENCE	

POSTER SESSION #1:

Cardiovascular related mortality in hypertensive patients who were newly prescribed perindopril or lisinopril: a 5–year cohort study of 15,622 cases

Kelvin Kf Tsoi¹, Martin Cs Wong¹, Wilson Ws Tam¹, Hoyee W Hirai¹, Xq Lao¹, Harry Hx Wang¹, Mandy Wm Kwan¹, Clement Sk Cheung², Ellen Lh Tong², Nt Cheung², Bryan P Yan¹, Helen MI Meng¹ and Sian M Griffiths¹

¹Chinese University of Hong Kong

²Hospital Authority of Hong Kong

Association between Fine Particulate Matter (PM2.5) and General Outpatient Clinic Consultations for Upper Respiratory Tract Infections in Hong Kong

Wilson Tam¹, Kelvin Kf Tsoi¹, Tze Wai Wong¹, Lorna Ng² and Andromeda Hs Wong¹

¹Chinese University of Hong Kong

²Kwong Wah Hospital

Some Views on Big Data and Health System Engineering in China

Ding Li¹, Jifa Gu² and Yijun Liu²

¹Southwestern University of Finance and Economics

²Chinese Academy of Sciences

Understanding Complex Patient Flow Pathways in Emergency Department Using Large Scale Data
Fanwen Meng¹, R.K. Palvannan¹, Kiok Liang Teow¹, Seow Yian Tay², Eugene Guo Liang Lam², Chee Kheong Ooi² and Christopher Kok Keng Soh²

¹National Healthcare Group

²Tan Tock Seng Hospital

Developing Depression Symptoms Prediction Models to Improve Depression Care Outcomes:
Preliminary Results

Haomiao Jin and Shinyi Wu

University of Southern California

Emergency Department Patients Hospitalized Characteristics Analysis Based on Data Mining

Zhu Ting, Luo Li and Zhang Xinli

Sichuan University

Empirical Study on Data Mining and Big Data Analytics for Healthcare Informatics

Appavu Balamurugan¹ and Agnes Christy²

¹KLN College of Information Technology

²Sathyabama University

Implementing an Accurate Machine Utilization Model in Large Radiation Oncology Center

John Chen, Whee Sze Ong and Kam Weng Fong

National Cancer Center of Singapore

POSTER SESSION #2:

Appointment Scheduling and Resource Allocation for Medical Diagnostic Facilities

Weifen Zhuang

Xiamen University

A Dynamic Clinical Decision Support System Clinical Quality Dashboard in Juronghealth

Christine Xia Wu, Xiao Li, Joanna Chia and Chi Hong Hwang

Jurong Health Services

Proposed Deployment of 30-day Hospital Unplanned Readmission Risk Index in An Acute Hospital Setting

Kai Pik Tai, Xia Wu, Chi Siong Chua, Li Lian Low and Chi Hong Hwang

Jurong Health Services

A Mixed-Poisson Model for Predicting Hospital Average Length of Stay

Weichang Yu, Christine Wu and Chi Hong Hwang

Alexandra Hospital

Conformance and Extension Analysis using Process Mining: A Mental Health Case Study

Zahra Hajihashemi¹, Mihail Popescu¹ and Kalyan Pasupathy²

¹University of Missouri

²Mayo Clinic

Comparative Study of Classification Methods for Predicting 30-Day Readmissions after Acute Hospitalization in the U.S.

Margaret Neff¹, Kehao Zhu¹, James Eckhart¹, Jiali Zhou², Nicholas Ballester³, Pratik Parikh³ and Nan Kong¹

¹Purdue University

²Tsinghua University

³Wright State University

Effectiveness of a Health Card Program on Appointment Compliance

Junhui Jiang¹, Sharon Swee-Lin Tan¹, Khim Yong Goh¹ and Dan Wu²

¹National University of Singapore

²Khoo Teck Puat Hospital