

**Technical Program of  
IEEE/ACM ASONAM 2017  
FOSINT-SI 2017, HI-BI-BI 2017, FAB 2017  
and collocated workshops**

**31 July – 3 August 2017  
Mercure Hotel  
Sydney - Australia**

**Academic & industry Sponsors**



**Program Overview for  
IEEE/ACM ASONAM 2017 -- FOSINT-SI 2017 – HI-BI-BI 2017 – FAB 2017  
and collocated workshops**

**July 31, 2017 (Workshop- Poster/Demo/PhD forum)**

**Morning Coffee/Tea – Level 2 Pre-function Area**

08:00 - 08:30	<b>Registration</b>			
08:30 - 10:30	<b>Grand Central room-1</b>	<b>Grand Central room-2</b>	<b>Wynyard room</b>	<b>Museum room</b>
	Tutorial 1	MSNDS 2017	SNAAT 2017	SNAA 2017

**Coffee Break – Level 2 Pre-function Area**

11:00 - 13:00	<b>Grand Central room-1</b>	<b>Grand Central room-2</b>	<b>Wynyard room</b>	<b>Museum room</b>
	Tutorial 2	MSNDS 2017	TeLeSON 2017	SNAA 2017

**Lunch – Level 2 Pre-function Area**

14:00 - 16:00	<b>Grand Central room-1</b>	<b>Grand Central room-2</b>	<b>Wynyard room</b>	<b>Museum room</b>
	Tutorial 3	MSNDS 2017	SI 2017	Posters Madness, Demos, PhD Forum Session

**Reception – Level 2 Pre-function Area**

**Poster, Demo, PhD forum session**

**18:30 – 20:30**

**Invited Presentation 18:45 -19:15ss**

**Speaker:** Ramsey Billups, Gemalto Cogent, Inc. Reston, VA USA

**Title:** Mining & Analyzing Social Media Data for Identification using Biometrics

## August 1, 2017 (Main Conference)

### Morning Coffee/Tea – Level 2 Pre-function Area

08:00 - 08:30	<b>Grand Central Room</b>
	<b>Opening Ceremony for ASONAM</b>
08:30 - 09:30	<b>Grand Central Room</b>
	<b>Keynote Speaker I</b> Philippa Pattison - The University of Sydney, Australia Topic: Modelling social interactions Chair: Jaideep Srivastava

### Coffee Break – Level 2 Pre-function Area

10:00 - 12:00	<b>Grand Central room-1</b>	<b>Grand Central room-2</b>	<b>Wynyard room</b>	<b>Museum room</b>	<b>St James room</b>
	<b>ASONAM – S1 Social Media Analysis (I)</b>	<b>ASONAM – S2 Graph Modeling Analysis (I)</b>	<b>ASONAM – S3 Social Influence (I)</b>	<b>FOSINT-SI Keynote Speaker</b> James Martin: Macquarie University Topic: Darknet Drug Trading: Key Concepts, Trends and Possibilities Chair: David Skillicorn	<b>FAB - S1</b>

### Lunch – Level 2 Pre-function Area

13:00 - 15:00	<b>Grand Central room-1</b>	<b>Grand Central room-2</b>	<b>Wynyard room</b>	<b>Museum room</b>	<b>St James room</b>
	<b>ASONAM – S4 Social Media Analysis (II)</b>	<b>ASONAM – S5 Graph Modeling Analysis (II)</b>	<b>ASONAM – S6 User Profiling &amp; Modeling</b>	<b>FOSINT-SI S1</b>	<b>FAB - S2</b>

### Coffee Break – Level 2 Pre-function Area

15:30 - 17:30	<b>Grand Central room-1</b>	<b>Grand Central room-2</b>	<b>Wynyard room</b>	<b>Museum room</b>	<b>St James room</b>
	<b>ASONAM – S7 Social Media Analysis (III)</b>	<b>ASONAM – S8 Graph Modeling Analysis (III)</b>	<b>ASONAM – S9 Machine Learning &amp; Data Mining (I)</b>	<b>FOSINT-SI S2</b>	<b>ASONAM – Industrial Track S1</b>

## August 2, 2017 (Main Conference)

### Morning Coffee/Tea – Level 2 Pre-function Area

08:00 - 09:00	<b>Grand Central Room</b>
	<b>Keynote Speaker 2</b> Xing Xie - Microsoft Inc., China Deep User Understanding for Building Intelligent Bots <b>Chair:</b> Guandong Xu

### Coffee Break – Level 2 Pre-function Area

09:30 - 11:30	<b>Grand Central room-1</b>	<b>Grand Central room-2</b>	<b>Wynyard room</b>	<b>Museum room</b>
	ASONAM – S10 <b>Community Detection Analysis (I)</b>	ASONAM – S11 <b>Agent, Sentiment and Label Analysis</b>	FAB - S3	ASONAM – Industrial <b>Track S2</b>

### Lunch – Level 2 Pre-function Area

13:00 - 14:00	<b>Grand Central Room</b>
	<b>Keynote Speaker 3</b> Meeyoung Cha - Korea Advanced Institute of Science and Technology, South Korea Detecting rumors and fake news online <b>Chair:</b> Jian Pei

### Coffee Break – Level 2 Pre-function Area

14:30 - 16:30	<b>Grand Central room-1</b>	<b>Grand Central room-2</b>	<b>Wynyard room</b>	<b>Museum room</b>
	ASONAM – S12 <b>Behavior Analysis (I)</b>	ASONAM – S13 <b>Community Detection Analysis (II)</b>	Multidisciplinary Track S1	ASONAM – Industrial <b>Track S3</b>

### Banquet (Cruise)

18:00 - 22:00

(everyone attending must be inside the cruise before 18:00)

## August 3, 2017 (Main Conference)

### Morning Coffee/Tea – Level 2 Pre-function Area

08:30 - 09:30	<b>Grand Central Room</b>			
	<b>Keynote Speaker 4</b> <b>Jian Pei Simon</b> - Fraser University, Canada Enabling AI Applications by Network Analysis and Mining: from Algorithms to Systems and from Academia to Industry <b>Chair:</b> Meeyoung Cha			

### Coffee Break – Level 2 Pre-function Area

10:00 - 12:00	<b>Grand Central room-1</b>	<b>Grand Central room-2</b>	<b>Wynyard room</b>	<b>Museum room</b>
	ASONAM – S14 Recommender System	ASONAM – S15 Behavior Analysis (II)	HIBIBI S1	FAB - S4

### Lunch – Level 2 Pre-function Area

13:00 - 15:00	<b>Grand Central room-1</b>	<b>Grand Central room-2</b>	<b>Wynyard room</b>	<b>Museum room</b>
	ASONAM – S16 Diffusion	ASONAM – S17 Anomalous Behavior	HIBIBI S2	Multidisciplinary Track S2

### Coffee Break – Level 2 Pre-function Area

15:30 - 17:30	<b>Grand Central room-1</b>	<b>Grand Central room-2</b>	<b>Wynyard room</b>	<b>Museum room</b>
				Multidisciplinary Track S3

**17:00 (Closing)**

# Main Conference Program

## ASONAM – S1: Social Media Analysis (I)

**Session Chair:** Walid Magdy

1. Discovery, Retrieval, and Analysis of 'Star Wars' botnet in Twitter (**Regular**) Juan Echeverria and Shi Zhou
2. The Effect of Population Control Policies on Societal Fragmentation (**Regular**) Zvi Lotker and David Peleg
3. Understanding and Classifying Online Amputee Users on Reddit (**Short**) Xing Yu and Erin Brady
4. DBSTexC: Density-Based Spatio-Textual Clustering on Twitter (**Short**) Minh D. Nguyen and Won-Yong Shin
5. Mining Twitter and Taxi Data for Predicting Taxi Pickup Hotspots (**Short**) Sankarshan Mridha, Sayan Ghosh, Robin Singh, Sourangshu Bhattacharya and Niloy Ganguly

## ASONAM – S2: Graph Modeling Analysis (I)

**Session Chair:** TAN Chee Wei

1. HyperHeadTail: a Streaming Algorithm for Estimating the Degree Distribution of Dynamic Multigraphs (**Regular**) Andrew Stolman and Kevin Matulef
2. Deep Network Embedding with Aggregated Proximity Preserving (**Short**) Xiao Shen and Fu Lai Chung
3. Edge Sample and Discard: A New Algorithm for Counting Triangles in Large Dynamic Graphs (**Short**) Guyue Han and Harish Sethu
4. On Link Formation in Heterogeneous Information Networks: A View Based on Multi-Label Learning (**Short**) Ke-Jia Chen, Shijun Xue, Yun Li and Bin Liu
5. Flow-Aware Vertex Protection Strategy on Large Social Networks (**Short**) Arie Wahyu Wijayanto and Tsuyoshi Murata

## ASONAM – S3: Social Influence (I)

**Session Chair:** Radosław Michalski

1. Influence Maximization Meets Efficiency and Effectiveness: A Hop-Based Approach (**Regular**) Jing Tang, Xueyan Tang and Junsong Yuan
2. Do Sticky Elites Produce Online Knowledge of Higher Quality? (**Regular**) Sorin Matei, Amani Abu Jabal and Elisa Bertino
3. Fast Estimation of Closeness Centrality Ranking (**Short**) Akрати Saxena, Raluca Gera and S. R. S. Iyengar
4. Rumor Source Detection in Finite Graphs with Boundary Effects by Message-passing Algorithms (**Short**) Pei-Duo Yu, Chee Wei Tan and Hung-Lin Fu
5. On the Robustness of Influence Maximization Algorithms against Non-Adversarial Perturbations (**Short**) Sho Tsugawa and Hiroyuki Ohsaki

## ASONAM – S4: Social Media Analysis (II)

**Session Chair:** Tim Weninger

1. Interpretation of Semantic Tweet Representations (**Regular**) Ganesh J, Manish Gupta and Vasudeva Varma
2. Which friends are more popular than you? Contact strength and the friendship paradox in social networks (**Short**) James Bagrow, Christopher Danforth and Lewis Mitchell
3. On Quantifying Predictability in Online Social Media Cascades Using Entropy (**Short**) Naimisha Kolli, Balakrishnan Narayanaswamy and Ramakrishnan K R
4. Towards Diversified Local Users Identification using Location Based Social Networks (**Short**) Chao Huang, Dong Wang and Shenglong Zhu
5. Optimizing the Effectiveness of Incentivized Social Sharing (**Short**) Joseph Pfeiffer Iii and Elena Zheleva

## ASONAM – S5: Graph Modeling Analysis (II)

**Session Chair:** Erik Saule

1. Organizational Tie (De)activation During Crisis **(Regular)** Sean Fitzhugh and Arwen Decostanza
2. A Unified Framework to Estimate Global and Local Graphlet Counts for Streaming Graphs **(Regular)** Xiaowei Chen and John Lui
3. Observe Locally Rank Globally **(Short)** Akрати Saxena, Raluca Gera and S. R. S. Iyengar
4. Improved Stance Prediction in a User Similarity Feature Space **(Short)** Kareem Darwish, Walid Magdy and Tahar Zanouda
5. A Dynamic Algorithm for Updating Katz Centrality in Graphs **(Short)** Eisha Nathan and David Bader

## ASONAM – S6: User Profiling & Modeling

**Session Chair:** Lee, Kyumin

1. Finding topical experts in Twitter via query-dependent personalized PageRank **(Regular)** Preethi Lahoti, Gianmarco De Francisci Morales and Aristides Gionis
2. Identity vs. Attribute Disclosure Risks for Users with Multiple Social Profiles **(Regular)** Athanasios Andreou, Oana Goga, Patrick Loiseau and Krishna P. Gummadi
3. TrollSpot: Detecting misbehavior in commenting platforms **(Short)** Tai Ching Li, Joobin Gharibshah, Evangelos Papalexakis and Michalis Faloutsos
4. Simultaneous Inference of User Representations and Trust **(Short)** Shashank Gupta, Pulkit Parikh, Manish Gupta and Vasudeva Varma
5. From Retweet to Believability: Utilizing Trust to Identify Rumor Spreaders on Twitter **(Regular)** Bhavtosh Rath, Wei Gao, Jing Ma and Jaideep Srivastava

## ASONAM – S7: Social Media Analysis (III)

**Session Chair:** Bivas Mitras

1. Analyzing the Use of Twitter to Disseminate Visual Impairments Awareness Information **(Regular)** Majed Al Zayer and Mehmet Gunes
2. Longitudinal Modeling of Social Media with Hawkes Process based on Users and Networks **(Regular)** P.K. Srijith, Michal Lukasik, Kalina Bontcheva and Trevor Cohn
3. The Role of Different Tie Strength in Disseminating Different Topics on a Microblog **(Short)** Felicia Natali, Kathleen M. Carley, Feida Zhu and Binxuan Huang
4. Text Watermarking in Social Media **(Short)** Stefano Giovanni Rizzo, Flavio Bertini, Danilo Montesi and Carlo Stomeo
5. Unbiased Sampling of Social Media Networks for Well-connected Subgraphs **(Short)** Dong Wang, Zhenyu Li, Gareth Tyson, Zhenhua Li and Gaogang Xie

## ASONAM – S8: Graph Modeling Analysis (III)

**Session Chair:** Zhao, Ying

1. An Analysis of Citation Recommender Systems: Beyond the Obvious **(Regular)** Haofeng Jia and Erik Saule
2. Real-Time Targeted-Influence Queries over Large Graphs **(Regular)** Alessandro Epasto, Ahmad Mahmoody and Eli Upfal
3. Diving Deep into Clickbaits: Who Use Them to What Extents in Which Topics with What Effects? **(Regular)** Md Main Uddin Rony, Naemul Hassan and Mohammad Yousuf
4. Network analysis of NIH grant critiques **(Short)** Dastagiri Reddy Malikireddy, Madeline Jens, Amarette Filut, Anupama Bhattacharya, You Geon Lee, Molly Carnes and Anna Kaatz
5. Expertise Discovery in Decentralised Online Social Networks **(Short)** Safina Showkat Ara, Subhasis Thakur and John Breslin

## ASONAM – S9: Machine Learning & Data Mining (I)

**Session Chair:** Rami Puzi

1. Identifying On-time Reward Delivery Projects with Estimating Delivery Duration on Kickstarter **(Regular)** Thanh Tran, Kyumin Lee, Nguyen Vo and Hongkyu Choi
2. *Don't Walk, Skip! Online Learning of Multi-scale Network Embeddings* **(Regular)** Bryan Perozzi, Vivek Kulkarni, Haochen Chen and Steven Skiena
3. *Revisiting Resolution and Inter-Layer Coupling Factors in Modularity for Multilayer Networks*, **(Regular)** Alessia Amelio and Andrea Tagarelli
4. Social Media in State Politics: Mining Policy Agendas Topics **(Short)** Lei Qi, Rihui Li, Johnny Wong, Wallapak Tavanapong and David Peterson
5. Principal Pattern Mining on Graphs **(Short)** Chun-Yen Kuo, Mi-Yen Yeh and Jian Pei

## ASONAM – S10: Community Detection Analysis (I)

**Session Chair:** Won-Yong Shin

1. Streaming Graph Sampling with Size Restrictions **(Regular)** Anita Zakrzewska and David A. Bader
2. MCDA: A Parameterless Algorithm for Detecting Communities in Multidimensional Networks **(Short)** Oualid Boutemine and Mohamed Bouguessa
3. Using Community Structure to Categorize Computer Science Conferences - Initial Results, **(Short)** Suhendry Effendy and Roland Yap
4. InferIP: Extracting actionable information from security discussion forums **(Short)** Joobin Gharibshah, Tai Ching Li, Maria Solanas Vanrell, Evangelos E. Papalexakis, Andre Castro, Konstantinos Pelechrinis and Michalis Faloutsos
5. Categorizing Conferences in Computer Science Using Community Structure **(Short)** Suhendry Effendy and Roland Yap
6. Attributed Graph Clustering: an Attribute-aware Graph Embedding Approach **(Short)** Esra Akbas and Peixiang Zhao

## ASONAM – S11: Agent, Sentiment and Label Analysis

**Session Chair:** Sho Tsugawa

1. Rearrange Social Overloaded Posts to Prevent Social Overload **(Short)** Yun-Yen Chuang, Hung-Min Hsu, Tsui-Ying Lin and Ray-I Chang
2. Anomalous Reviews Owing to Referral Incentive **(Short)** Noor Abu-El-Rub, Amanda Minnich and Abdullah Mueen
3. Analyzing Disproportionate Reaction via Comparative Multilingual Targeted Sentiment in Twitter **(Short)** Karin Sim Smith, Richard McCreddie, Craig Macdonald and Iadh Ounis
4. The Influence of Emotional Valence Shifts on the Spread of Information in Social Networks **(Short)** Ema Kusen, Mark Strembeck, Giuseppe Cascavilla and Mauro Conti
5. EmotionSensing: Predicting Mobile User Emotions **(Short)** Mahnaz Roshanaei, Shivakant Mishra and Richard Han

## ASONAM – S12: Behavior Analysis (I)

**Session Chair:** Shivakant Mishra

1. One Size Does Not Fit All: Profiling Personalized Time-Evolving User Behaviors **(Regular)** Pravallika Devineni, Evangelos Papalexakis, Danai Koutra, A. Seza Doğruöz and Michalis Faloutsos
2. Transfer Learning for Multi-language Twitter Election Classification **(Regular)** Xiao Yang, Richard McCreddie, Craig Macdonald and Iadh Ounis
3. Of Bots and Humans (on Twitter) **(Short)** Zafar Gilani, Reza Farahbakhsh, Gareth Tyson, Liang Wang and Jon Crowcroft
4. Who Will Stop Contributing? Predicting Inactive Editors in Wikipedia **(Short)** Harish Arelli and Francesca Spezzano
5. You Shall Know a Place by the Conversations It Seeds **(Short)** Syed Fahad Sultan, Hicham G. Elmongui and Sohaib Ahmad Khan



6. Revealing and Detecting Malicious Retweeter Groups (**Short**) Nguyen Vo, Kyumin Lee, Cheng Cao, Thanh Tran and Hongkyu Choi

## **ASONAM – S13: Community Detection Analysis (II)**

**Session Chair:** Jeffrey Chan

1. Efficiently Clustering Very Large Attributed Graphs (**Regular**) Alessandro Baroni, Alessio Conte, Maurizio Patrignani and Salvatore Ruggieri
2. Medical Personal Classification in Social Media (**Regular**) Nikhil Pattisapu, Manish Gupta, Ponnurangam Kumaraguru and Vasudeva Varma
3. Community Detection in Evolving Networks (**Short**) Tejas Puranik and Lata Narayanan
4. Extracting Social Lists from Twitter (**Short**) Ankan Mullick, Pawan Goyal, Niloy Ganguly and Manish Gupta
5. Community detection methods can discover better structural clusters than ground-truth communities (**Short**) Vinh-Loc Dao, Cécile Bothorel and Philippe Lenca

## **ASONAM – S14: Recommender System**

**Session Chair:** Lilian Berton

1. Semi-supervised Collaborative Ranking with Push at the Top (**Regular**) Rana Forsati, Iman Barjasteh and Abdol-Hossein Esfahanian
2. *Cyberbullying Detection with Weakly Supervised Machine Learning*(**Regular**) Elaheh Raisi and Bert Huang
3. Reveal: Fine-grained Recommendations in Online Social Networks (**Short**) Markos Aivazoglou, Antonios Roussos, Sotiris Ioannidis, Dimitris Spiliotopoulos and Jason Polakis
4. REACT: REcommending Access Control decisions To social media users (**Short**) Gaurav Misra and Jose M. Such
5. Utilizing Microblogs for Post-Disaster Relief: Automatic Identification and Matching of Resource Need and Availability (**Short**) Moumita Basu, Kripabandhu Ghosh, Somenath Das, Ratnadeep Dey, Somprakash Bandyopadhyay and Saptarshi Ghosh

## **ASONAM – S15: Behavior Analysis (II)**

**Session Chair:** Elio Masciadri

1. An Empirical Study on Team Formation in Online Games (**Regular**) Essa Alhazmi, Jeremy Blackburn, Sameera Horawalavithana, Adriana Iamnitchi and John Skvoretz
2. Towards Understanding Crisis Events On Online Social Networks Through Pictures (**Regular**) Prateek Dewan, Anshuman Suri, Varun Bharadhwaj, Aditi Mithal and Ponnurangam Kumaraguru
3. Exploring Social Media for Event Attendance (**Short**) Vinicius Monteiro de Lira, Craig Macdonald, Iadh Ounis, Chiara Renso, Raffaele Perego and Valeria Cesario Times
4. Book Reading Behavior on Goodreads Can Predict the Amazon Best Sellers (**Short**) Suman Kalyan Maity, Abhishek Panigrahi and Animesh Mukherjee
5. Investigating selection behavior of new and old users in online emerging user-object networks (**Short**) Anita Chandra, Himanshu Garg and Abyayananda Maiti

## **ASONAM – S16: Diffusion**

**Session Chair:** Zhao, Ying (CIV)

1. The Impact of Social Curiosity on Information Spreading on Networks (**Regular**) Didier Vega-Oliveros, Lilian Berton, Federico Vazquez and Francisco Rodrigues
2. BotWalk: Efficient Adaptive Exploration of Twitter Bot Networks (**Regular**) Amanda Minnich, Nikan Chavoshi, Danai Koutra and Abdullah Mueen
3. Information Diffusion and Economic Development (**Regular**) Christopher Smith-Clarke and Licia Capra
4. Temporal pattern of (re)tweets reveal cascade migration (**Short**) Ayan Kumar Bhowmick, Martin Gueuning, Jean-Charles Delvenne, Renaud Lambiotte and Bivas Mitra

## **ASONAM – S17: Anomalous Behavior**

**Session Chair:** Abyayananda Maiti

1. Classification of Twitter Accounts into Automated Agents and Human Users (**Regular**) Zafar Gilani, Ekaterina Kochmar and Jon Crowcroft
2. Fake it till you make it: Fishing for Catfishes (**Regular**) Walid Magdy, Yehia Elkhatib, Gareth Tyson, Sagar Joglekar and Nishanth Sastry
3. Temporal Anomaly Detection in Social Media (**Short**) Jacek Skryzalin, Richard Field, Andrew Fisher and Travis Bauer

## **ASONAM 2017 Industrial Track**

### **Industrial Track – S1**

**Session Chair:** Gang Li

- Jose Berengueres, Guillem Duran and Dani Castro. Happiness, an inside job? Turnover prediction using employee likability, engagement and relative happiness
- Hao Wang. Does "Fans Economy" Work for Chinese Pop Music Industry ?
- Haiyun Xu, Kun Dong, Ling Wei, Chao Wang and Shu Fang. How to Identify Cooperation Partners based on multisource data
- Jian Xu and Nitesh V. Chawla. Mining Features Associated with Effective Tweets

### **Industrial Track – S2**

**Session Chair:** Piotr Bródka

- Yapa Hetti Pathirannahalage Prasan Priyadarshana and Lochandaka Ranathunga. Verb Sentiment Scoring: A Novel Approach for Sentiment Analysis Based on Adjective-Verb-Adverb Combinations
- Imran Ashraf, Soojung Hur and Yongwan Park. Finding factors and vehicles involved in two vehicle accidents through the use of Social Network Analysis
- Yuan Li, Yiheng Sun and Noshir Contractor. Graph mining assisted semi-supervised learning for fraudulent cash-out detection
- Haneen Alrawashdeh, Faten Shwede and Sherief Abdallah. How post time and type affect user engagement on public profiles in the Arab World

### **Industrial Track – S3**

**Session Chair:** Yongwan Park

- Gaurav Misra, Jose M. Such and Lauren Gill. A Privacy Assessment of Social Media Aggregators
- Dat Tien Nguyen, Ferda Ofli, Muhammad Imran and Prasenjit Mitra. Damage Assessment from Social Media Imagery Data During Disasters
- Emad Zahedi, Masoud Mirmomeni and Abdol-Hossein Esfahanian. An Evolutionary Framework for Analyzing the Distance Preserving Property of Weighted Graphs

## Poster/Demo and PhD Forum Session

**Session Chair: Panagiotis Karampelas**

### Demo Papers

Each DEMO paper will have 15 minutes presentation during the poster/demo session on 31 July 2017; send your slides to Dr. Panagiotis Karampelas <pkarampelas@gmail.com> at least 24 hours before the session, that is by 6:00 PM Sydney time on 30 July 2017

Posters should be 90 x 120 CM

- Ying Zhao, Douglas MacKinnon, Charles C. Zhou, Discovering High-Value Information from Crowdsourcing
- Samir Al-janabi, Abubaker Hamid, Ryszard Janicki, datumPIPE: Data Generator and Corrupter for Multiple Data Quality Aspects
- Walid Magdy and Mohamed Eldesouky, ClassStrength: A Multilingual Tool for Tweets Classification
- Bin Wu, Xuesong Tong, Qian Guo, CES: A System for Community Evaluation
- Firoj Alam, Muhammad Imran, Ferda Ofli, Image4Act: Online Social Media Image Processing for Disaster Response

### PhD Forum Papers

Each PhD forum paper will have 15 minutes presentation during the poster/demo session on 31 July 2017; send your slides to Dr. Panagiotis Karampelas <pkarampelas@gmail.com> at least 24 hours before the session, that is by 6:00 PM Sydney time on 30 July 2017

Posters should be 90 x 120 CM

- Jason Cohn, Siddharth Muthukumaran and Larry I-birnbaum: Semantic Dimensions: A Multi-Objective Approach
- Maria Glenski and Tim Weninger. Predicting User-Interactions on Reddit

### Poster Papers

Each Poster paper will have 3 minutes presentation during the poster/demo session on 31 July 2017; send your slides to Dr. Panagiotis Karampelas <pkarampelas@gmail.com> at least 24 hours before the session, that is by 6:00 PM Sydney time on 30 July 2017

Posters should be 90 x 120 CM

- Zijian Zhang, Jiamou Liu, Ziheng Wei, Yingying Tao and Quan Bai, From Secrete Admirer to Cyberstalker – A Measure of Online Interpersonal Surveillance
- Satoshi Furutani, Chisa Takano and Masaki Aida, Method for Estimating the Eigenvectors of a Scaled Laplacian Matrix Using the Resonance of Oscillation Dynamics on Networks
- Md Saddam Hossain Mukta, Mohammed Eunus Ali and Jalal Mahmud, Identifying and Predicting Temporal Change of Basic Human Values from Social Network Usage,
- Aishwarya Naresh Reganti, Tushar Maheshwari, Amitava Das, Tanmoy Chakraborty and Ponnurangam Kumaraguru, Understanding Psycho-Sociological Vulnerability of ISIS Patronizers in Twitter
- Zixing Zhang, Bin Wu and Zeao Wang, A Parallel Framework for Large-scale Multidimensional Heterogeneous Network Analysis
- Aviad Elyashar, Jorge Bendahan and Rami Puzis, Measurement of Online Discussion Authenticity within Online Social Media
- Chaima Dhahri, Kazunori Matsumoto and Keiichiro Hoashi, Personalized Mood Prediction Over Online Social Networks: Data Analysis on Cyber-Social-Physical Dimensions
- Jisun An, Haewoon Kwak and Bernard Jansen, Personas for Content Creators via Decomposed Aggregate Audience Statistics
- Rana Forsati, Iman Barjasteh, Dennis Ross and Abdol-Hossein Esfahanian, Learning the Implicit Preference of Users for Effective Recommendation
- Jun-Home Chen and Jyi-Shane Liu, The Analysis on Power Migration: The Realtionship Between Progeny Networks and Geographical Interlocking Shareholdings

- Andreea Nita, Steluta Manolache, Cristiana Maria Ciocanea and Laurentiu Rozylowicz, Characterizing protected areas management using ego-networks

## ASONAM 2017 – Tutorials

### Tutorial 1

Title: Network Inference for Cyber Security in Online Social Networks

Speaker: Professor Chee Wei Tan

Affiliation: City University of Hong Kong

Bio: Chee Wei Tan is an Associate Professor of Computer Science at City University of Hong Kong. He received his M.A. and Ph.D. degrees from Princeton University in Electrical Engineering. He was a Postdoctoral Scholar at the California Institute of Technology (Caltech). His industrial experience includes corporate research at Fraser Research Lab in Princeton and Qualcomm R&D in San Diego. Dr. Tan was the recipient of the Princeton University Gordon Wu Prize for Excellence and was twice selected to participate at the US National Academy of Engineering China-America Frontiers of Engineering Symposium in 2013 and 2015. He received the IEEE Information Theory Society Chapter of the Year Award in 2015 for the promotion of information theory education and research as the Hong Kong Chapter Chairman. He currently serves as an Editor of the IEEE/ACM Transactions on Networking and the IEEE Transactions on Communications. His research interests include networks, statistical inference in data analytics, cyber-security, information theory, optimization theory and its applications. He is the author of the monograph "Network Optimization by Perron-Frobenius Theory" in the Foundations and Trends in Networking series published by Now Publishers in 2015 and a forthcoming book "Network Inference for Cyber Security in Complex Networks" published by Springer in 2018.

### Tutorial 2

Title: Methodological Approaches to Location-Based Social Networking (LBSN) Research

Speakers: Dr Roba Abbas, Prof Katina Michael

Affiliation: University of Wollongong

Bio:

Dr Katina Michael is a professor in the Faculty of Engineering and Information Sciences at the University of Wollongong, Australia. Katina is the IEEE Technology and Society Magazine editor-in-chief, and IEEE Consumer Electronics Magazine senior editor. Since 2008 she has been a board member of the Australian Privacy Foundation. Michael researches on the socio-ethical implications of emerging technologies, including Location-Based Social Networking Applications. She has written and edited six books, guest edited

numerous special issue journals on themes related to radio-frequency identification (RFID) tags, supply chain management, location-based services, location-based social networking, innovation and surveillance/uberveillance. Among them is a 2009 reference volume on Innovative Automatic Identification and Location Based Services. Katina has an industry background on the application of geographic information systems in telecommunications engineering with Nortel Networks.

Dr Roba Abbas is an Honorary Fellow and Research Associate with the Faculty of Engineering and Information Sciences at the University of Wollongong, Australia and is the Associate Editor (Administrator) for the IEEE Technology and Society Magazine. She completed her Australian Research Council (ARC)-funded Doctor of Philosophy on the topic of Location-Based Services Regulation in 2012, earning special commendations for her thesis titled Location-Based Services Regulation in Australia: A Socio-Technical Approach. She has a strong interest in socio-technical theory, social media, and location-enabled technologies such as Location-Based Social Networking, and has published numerous papers in these areas. Abbas has co-edited the Privacy and Security Issues in Social Networks section in the Encyclopedia of Social Network Analysis and Mining, and has previously co-edited a special issue in Cases on Information Technology on the Social Implications of Emerging Technologies. She has written numerous papers for outlets such as the Computer Law and Security Review and IT and People.

### **Tutorial 3**

Title: Adversarial Analytics

Speaker: David Skillicorn

Affiliation: Queen's University, Kingston, Canada

Bio: David Skillicorn is a Professor in the School of Computing at Queen's University. His undergraduate degree is from the University of Sydney and his Ph.D. from the University of Manitoba. He has published extensively in the area of adversarial data analytics, including his recent books "Understanding High-Dimensional Spaces" and "Knowledge Discovery for Counterterrorism and Law Enforcement". He has also been involved in interdisciplinary research on radicalisation, terrorism, and financial fraud. He consults for the intelligence and security arms of government in several countries, and appears frequently in the media to comment on cybersecurity and terrorism.

# Symposium/Workshop Program

## **Social Network Analysis in Applications (SNAA 2017) Workshop**

**Chairs:** Piotr Brodka, Katarzyna Musial, and Marcin Budka

- Rohit Iyer; Johnny Wong, Identifying Policy Agenda Sub-Topics in Political Tweets based on Community Detection
- Jee Jung Choi; Jungmin Kim; Heungseok Park; Wonjae Lee, Extracting Placeness from Social Media: an Ontology-Based System
- Prathamesh Deshpande and Balaraman Ravindran, MCEIL: An Improved Scoring Function for Overlapping Community Detection using Seed Expansion Methods
- Chainarong Amornbunchornvej, Margaret C. Crofoot and Tanya Berger-Wolf, Identifying Traits of Leaders in Movement Initiation
- Marwan Ghanem; Florent Coriat; Lionel Tabourier, Ego-betweenness centrality in link streams
- Meng Qin; Di Jin; Bogdan Gabrys; Katarzyna Musial-Gabrys, Adaptive Community Detection Incorporating Topology and Content in Social Networks
- Fei Gao, Katarzyna Musial and Bogdan Gabrys, A Community Bridge Boosting Social Network Link Prediction Model
- Ralucca Gera; Victor Castro; Oludare Adeniji; David Cohick; Akрати Saxena, Generative Models for the Layers of Terrorist
- Rohit Iyer, Johnny Wong, Wallapak Tavanapong and David Peterson, Identifying Policy Agenda Sub-Topics in Political Tweets based on Community Detection

## **Mining and Analyzing Social Networks for Decision Support (MSNDS 2017) Workshop**

MSNDS 2017 Session 1

**Chair:** Min-Yuh Day

- Nazim Choudhury; Shahadat Uddin, Dynamic Similarity Metrics for Link Prediction in Longitudinal Networks
- Shih-Hung Wu; Yi-Hsiang Hsieh; Liang-Pu Chen; Fanghuizhu Liu, Temporal Model of the Online Customer Review Helpfulness Prediction
- Jaroslaw Jankowski; Artur Karczmarczyk; Piotr Bródka; Radosław Michalski, Increasing Coverage of Information Diffusion Processes by Reducing the Number of Initial Seeds
- Chih-Chien Wang; Min-Yuh Day; Chien-Chang Chen; Jai-Wei Liou, Temporal and Sentiment Analysis for A Real Case of Fake Reviews in Taiwan

## **Mining and Analyzing Social Networks for Decision Support (MSNDS 2017) Workshop**

MSNDS 2017 Session 2

**Chair:** Shih-Hung Wu

- Karina Sokolova and Charles Perez, The social media effect on the success of Leetchi crowdfunding projects
- Min-Yuh Day and Hung-Chou Teng, A Study of Deep Learning to Sentiment Analysis on Word of Mouth of Smart Bracelet
- Arijit Chatterjee; Kendall Nygard, Predicting Stock Close Price Using Microsoft Azure
- Kuo-Chung Chu and Min Yang Xiao, A Study on the Correlation between Breast Cancer and Air pollution

## **Mining and Analyzing Social Networks for Decision Support (MSNDS 2017) Workshop**

MSNDS 2017 Session 3

**Chair:** Min-Yuh Day

- Andreea Nita, Steluta Manolache, Cristiana Ciocanea and Laurentiu Rozyłowicz, A social network approach to diagnose public participation in protected areas management Insights from a Natura 2000 case study
- Li Chen Cheng, Judy C. R. Tseng and Tsai- Yu Chung, Case Study of Fake Web Reviews
- Li Chen Cheng, Pin-Yi Li and Ssu-Hua Chen, Explore users' preference from Facebook fan pages

## **Teaching, Learning, and Social Networks (TeLeSoN-2017) Workshop**

**Chair:** Jalal Kawash

- Andrea Molinari. Learning Management Systems and the integration with social media services: a case study
- Paúl E. Vintimilla-Tapia, Jack F. Bravo-Torres, Pablo L. Gallegos-Segovia, Esteban F. Ordóñez-Morales, Martín López-Nores and Yolanda Blanco-Fernández. SOPPIA: Social Opportunistic Intelligent Ambient of Learning.
- Avijit Gayen, Maitry Bhavsar and Joydeep Chandra. Towards a Social Trust Based Measure of Scientific Productivity
- Sakhila Thapa. Social Networking Service (SNS) Enhance Learning Environment of Youth: As an Effective Tool

## **Social Network Analysis Surveillance Techniques (SNASt 2017)**

### **Workshop**

**Chair:** Panagiotis Karampelas

- Yanfang Ye, Shifu Hou and Aaron Saas, Deep Neural Networks for Automatic Android Malware Detection
- Yasuyuki Tanaka and Atsuhiko Goto, Suspicious FQDN Evaluation based on Variations in Malware Download URLs
- Bin Wu, Cuiyun Zhang and Qian Guo, A Parallel Network Community Detection Algorithm Based on Distance Dynamics
- Omar Jaafor and Babiga Birrega, Collective classification in multi-layer social networks

## **Social Influence (SI 2017) Workshop**

**Chairs:** Radosław Michalski and Jarosław Jankowski

- Jun Yang; Zhaoguo Wang; Fangchun Di; Liyue Chen; Chengqi Yi: State Information Propagator or Influencer? A Data-driven Approach for Evaluating Emotional Effect in Online Information Diffusion
- Flora Amato; Vincenzo Moscato; Antonio Picariello; Giancarlo Sperli; Diffusion Algorithms in Multimedia Social Networks: a preliminary model
- Chantal Nguyen, Kimberly Schlesinger, and Jean Carlson, Data-Driven Models for Individual and Group Decision Making
- Wynn Stirling; Luca Tummolini; Social Influence Diffusion and Coordinated Decision Making on Networks
- Ralucca Gera; Ryan Miller; Scott Warnke; Akрати Saxena; Miguel Miranda-Lopez, Three is The Answer: Combining Relationships to Analyze Multilayered Terrorist Networks

## **HIBIBI 2017 Program**

### **HIBIBI 2017 – S1**

**Session Chair:** Tansel Ozyer

- Esra Gündoğan and Buket Kaya, Mehmet Kaya. Prediction of Symptom-Disease Links in Online Health Forums
- Abhinav Choudhury, Shruti Kaushik and Varun Dutt. Social-Network Analysis for Pain Medications: Influential physicians may not be high-volume prescribers
- Chyi-In Wu. The Evolution of Adolescent's Friendship Networks with Body Mass Index
- Ahmed Kasem, Tansel Ozyer, Reda Alhajj. Effectiveness of Mobile Electrocardiogram in Healthcare: From Mobile Application and Development to Community Reaction

## **HIBIBI 2017 – S2**

**Session Chair:** Khaled Elhajj

- Hengyi Hu, Amr Elrafey and Larry Kerschberg. Using Modular Ontologies to Capture Causal Knowledge contained in Bayesian Networks
- Zihui Hou and Jeffery Zheng. Mapping ECG Signals on Variant Maps
- Dennis Hsu, Melody Moh and Teng Moh. Mining Frequency of Drug Side Effects over a Large Twitter Dataset Using Apache Spark
- Tran Hoa and Nguyen Ngoc Ha. Edge-weighting Hyperlink-Induced Topic Search (E-HITS) Algorithm

## **FAB 2017 PROGRAM**

**FAB 2017 - Session-1: Prediction and Recommendation**

**Session Chair:** Ahmad Kassem

- Arnoux Thibaud, Lionel Tabourier and Matthieu Latapy, Combining structural and dynamic information to predict activity in link streams
- Davide Feltoni Gurini, Fabio Gasparetti, Alessandro Micarelli and Giuseppe Sansonetti, Dynamic Social Recommendation
- Apalak Khatua and Aparup Khatua, Cricket World Cup 2015: Predicting User's orientation through Mix Tweets on Twitter Platform
- Robert Roedler, Content Driven Profile Matching across Online Social Networks
- Ahmet Anıl Müngen and Mehmet Kaya, A Novel Method for Event Recommendation in Meetup

**FAB 2017 - Session 2: Community Detection**

**Session Chair:** Jalal Kawash

- Koray Ozturk, Faruk Polat and Tansel Ozyer, An Evolutionary Approach for Detecting Communities in Social Networks
- M. Amin Rigi, Irene Moser, Seddigh Righ and Chengfei Lui, Re-imaginig the Networks: Detecting Local Communities in Networks by Approximating Derivatives in Graph Space
- Eduar Castrillo, Elizabeth León and Jonatan Gómez, Fast Heuristic Algorithm for Multi-scale Hierarchical Community Detection
- Esra Erdin and Mehmet Gunes, Efficient Data Dissemination in a Distributed Social Network Environment
- Mohiuddin Ahmed, Nazim Choudhury and Shahadat Uddin, Anomaly Detection on Big Data in Financial Markets

**FAB 2017 - Session 3: Machine Learning Methods**

**Session Chair:** Mehmet Gunes

- Erick Stattner and Martine Collard, Link Clustering for Extracting Collaborative Patterns in a Scientific Co-Authored Network
- Babak Tootoonchi, Venkatesh Srinivasan and Alex Thomo, Efficient Implementation of Anchored 2-core Algorithm
- Ahmad Ahmadov, Maik Thiele, Robert Wrembel and Wolfgang Lehner, Context Similarity for Retrieval-Based Imputation
- Carson Leung, Efficient Mining of 'Following' Patterns from Very Big but Sparse Social Networks
- Mayu Kimura and Marie Katsurai, Automatic Construction of an Emoji Sentiment Lexicon
- Yuyuan Mao, Jeffrey Zheng and Wenjia Liu, Mapping Whole DNA Sequence on Variant Maps



**FAB 2017 - Session 4: Social Network and Applications****Session Chair:** Nazim Choudhury

- Jeffrey Zheng and Chris Zheng, Stationary Randomness of Quantum Cryptographic Sequences on Variant Maps
- Sharyn O'Halloran, Nikolai Nowaczyk and Donal Gallagher, Big Data and Graph Theoretic Models: Simulating the Impact of Collateralization on a Financial System
- Ertan Bütün, Mehmet Kaya and Reda Alhajj, A Supervised Learning Method for Prediction Citation Count of Scientists in Citation Networks
- Shahadat Uddin, Nazim Choudhury and Sardar M Farhad, Towards Optimal Sliding Window Size to Analyse Longitudinal and Big Network Data
- Zhonghao Yang and Jeffery Zheng, Cryptographic Sequence on Varaint Maps

**FOSINT-SI 2017 Program****FOSINT-SI 2017- Session 1: Social Network Applications****Session Chair:** Mohammad Tayibi

- Estimating users' mode transition functions and activity levels from social media, Hamilton Link, Jeremy Wendt, Richard Field, Jocelyn Marthe
- Comparing SVD and word2vec for analysis of malware forum posts, Nasser Alsadhan, David Skillicorn, Richard Frank
- Predicting Friendship Strength for Privacy Preserving: A Case Study on Facebook, Nitish Dhakal, Francesca Spezzano, Dianxiang Xu
- Efficient Privacy-preserving Adversarial Learning in Decentralized Online Social Networks, Álvaro García Recueros

**FOSINT-SI 2017- Session 2: Social Network Applications****Session Chair:** Francesca Spezzano

- Using supervised machine learning algorithms to detect suspicious URLs in online social networks, Mohammed Al-Janabi, Ed de Quincey, Peter Andras
- Social Network Based Anomaly Detection of Organizational Behavior using Temporal Pattern Mining, Ze Li, Duoyong Sun, Bo Li
- On Fighting Fire with Fire: A Computational Framework for Strategic Induction of Destabilization on Dynamic Terrorist Organizations, Vahid Behzadan, Amin Nourmohammadi, Mehmet Gunes, Murat Yuksel
- From Social Media Analysis to Ubiquitous Event Monitoring: The case of Turkish Tweets, Ahmet Enis Erdogan, Onur Can Sert, Mirun Akyuz, Tolga Yilmaz, Tansel Ozyer, Reda Alhajj
- Mining Organization of Telecommunication Fraud Groups using Social Network Analysis, Yi-Chun Chang, Seng-Cho Chou, Kuan-Ting Lai

# ASONAM 2017 Multidisciplinary Track Program

## ASONAM 2017 MDT – Session 1

**Session Chair:** Álvaro Figueira

- Álvaro Figueira and Nuno Guimarães, Detecting Journalistic Relevance on Social Media. A two-case study using automatic surrogate features
- Luciana Oliveira, Álvaro Figueira, Measuring the return on communication investments on social media: The case of the higher education sector
- Meliza De La Paz, Maria Regina Estuar, Using Social Network Analysis in Understanding The Public Discourse on Gender Violence: an Agent-Based Modelling Approach
- Rupal Bhargava, Gargi Sharma, Yashvardhan Sharma, Deep Paraphrase Detection in Indian Languages
- Elvis Omar Saravia, Shao-Chen Wu, Yi-Shin Chen, A Dynamic Influence Keyword Model for Identifying Implicit User Interests on Social Networks
- Eva K Lee, Zixing Wang, Computational influence network and its application to ranking congregation influential in disseminating HIV/AIDS awareness

## ASONAM 2017 MDT – Session 2

**Session Chair:** Min-Yuh Day

- Masaki Aida, Chisa Takano, Masayuki Murata, Dynamical Model of Flaming Phenomena on On-Line Social Networks
- Durcinoska, KSK Chung, J Young, M Solomon, Social network and healthcare coordination: Lessons learned from an Australian Cancer Care Survey
- Lucia Falzon, Caitlin McCurrie, John Dunn, Representation and Analysis of Twitter Activity: A Dynamic Network Perspective
- Amir Hossein Yazdavar, Hussein S. Al-Olimat, Monireh Ebrahimi, Goonmeet Bajaj, Tanvi Banerjee, Krishnaprasad Thirunarayan, Jyotishman Pathak, Amit Sheth, Semi-Supervised Approach to Monitoring Clinical Depressive Symptoms in Social Media
- Won Kyung Lee So Young Sohn, Weak Ties Based Recommendation for Interdisciplinary Research Collaboration

## ASONAM 2017 MDT – Session 3

**Session Chair:** Elio Masciari

- Ahmed OULD MOHAMED MOCTAR and Idrissa SARR, Ego-centered community detection in directed and weighted networks
- Nunziato Cassavia, Sergio Flescay and Elio Masciari, Choose The Best! Ranking Group of Users In Collaborative Networks
- Ralucca Gera, Nicholas Juliano, Karl R. B. Schmitt, Optimizing Network Discovery with Clever Walks
- Haewoon Kwak, Jisun An, Multiplex Media Attention and Disregard Network among 129 Countries
- Imran Ashraf, Soojung Hur, Yongwan Park, Pattern Analysis of Co-Institutional and Co-Authorship Work in LIDAR Research Area Through Social Network Analysis