

# BICT 2017 Technical Program at a Glance

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## DAY 1 (March 15)

8:30 – 9:00	Registration
9:00 – 9:10	Opening
9:10 – 10:10	Keynote: Prof. Jane Hillston (University of Edinburgh, UK)
10:10 – 10:35	Coffee break
10:35 – 11:50	Session I: Best paper session
12:00 – 14:00	Lunch
14:00 – 15:40	Session II LUC workshop
15:40 – 16:20	Poster session & Coffee break
16:20 – 18:00	Session III
18:00 – 20:00	Banquet

## DAY 2 (March 16)

8:30 – 9:00	Registration
9:00 – 10:30	Invited talk: Prof. Hargsoon Yoon (Norfolk State University, USA) Invited talk: Prof. Samantha Kleinberg (Stevens Institute of Technology, USA) Invited talk: Prof. Narayan Ganesan
10:30 – 10:45	Coffee break
10:45 – 12:00	Session IV
12:00 – 14:00	Lunch
14:00 – 14:30	Invited talk: Dr. Vishakha Sharma (Georgetown University, USA)
14:30 – 15:20	Session V
15:20 – 15:40	Coffee break
15:40 – 16:55	Session VI (BACS)

## Conference Rooms

Babbio Atrium

- Registration, coffee break, lunch and banquet, poster/interactive session

Babbio #122:

- All sessions (except for the poster/interactive session and workshop)

Babbio #104:

- LUC workshop

## Paper Presentation Guidelines

Presentation time

- 25 minutes, including QAs

Equipment available

- Projector
- Connection to a projector
- Microphone
- (Please bring your own laptop. PCs will NOT be available at presentation rooms.)

#### Session chairs

- Arrive early.
- Ensure your session runs strictly on schedule.
- Give a 5-minute-remaining warning to each paper presenter.

### **Poster Presentation Guidelines**

- Poster boards are available to present your poster
- Poster size is up to A0 (84.1cm x 118.9cm)

# BICT 2017 Full Program

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## DAY 1 (March 15)

8:30 – 9:00 Registration

9:00 – 9:10 Opening

9:10 – 10:10 Keynote

### **Studying Smart Cities as Collective Adaptive Systems**

*Jane Hillston (University of Edinburgh, UK)*

Chair: *Adriana Compagnoni (Stevens Institute of Technology, USA)*

10:10 – 10:35 Coffee break

10:35 – 11:50 Session I: Best papers

Chair: *Tadashi Nakano (Osaka University, Japan)*

### **Evolutionary pressures in emerging societies of secondary users in cognitive radio networks**

*Wisniewska, Anna (City University of New York, USA); Khan, Bilal (University of Nebraska-Lincoln, USA); Al-Fuqaha, Ala (Western Michigan University, USA); Dombrowski, Kirk (University of Nebraska-Lincoln, USA); Abu Shattal, Mohammad (Western Michigan University, USA)*

### **A cellular model of swarm intelligence in bees and robots**

*Szopek, Martina (Karl-Franzens University Graz, Austria); Stefanec, Martin (Karl-Franzens University Graz, Austria); Bodi, Michael (Karl-Franzens University Graz, Austria); Radspieler, Gerald (Karl-Franzens University Graz, Austria); Schmickl, Thomas (Karl-Franzens University Graz, Austria)*

### **Hyperdimensional Computing for Noninvasive Brain-Computer Interfaces: Blind and One-Shot Classification of EEG Error-Related Potentials**

*Rahimi, Abbas (UC Berkeley, USA); Kanerva, Pentti (UC Berkeley, USA); Millán, José del R. (EPFL, Switzerland); Rabaey, Jan M. (UC Berkeley, USA)*

12:00 – 14:00 Lunch

14:00 – 15:40 Session II

Chair: *Aftab Ahmad (The City University of New York, USA)*

### **Fuzzy Logic Training for Predicting Age of Rats**

*Dow, Douglas Eric (Wentworth Institute of Technology, USA); Hayashi, Isao (Kansai University, Japan)*

### **Efficient Feature Vector Clustering for Automatic Speech Recognition Systems**

*Lazli, Lilia (Université du Québec à Montreal, Montreal, Canada); Boukadum, Mounir (École de technologie supérieure, Canada); Mohamed, Otmane Ait (Concordia University, Canada)*

**Affinity Based Search Amount Control in Decomposition Based Evolutionary Multi-Objective Optimization**

*Sato, Hiroyuki (The University of Electro-Communications, Japan); Miyakawa, Minami (Hosei University, JSPS Research Fellow, Japan); Takadama, Keiki (The University of Electro-Communications, Japan)*

**Polynomial Mean-Centric Crossover for Directed Mating in Evolutionary Constrained Multi-Objective Continuous Optimization**

*Miyakawa, Minami (JSPS Research Fellow, Hosei University, Japan); Sato, Hiroyuki (The University of Electro-Communications, Japan); Sato, Yuji (Hosei University, Japan)*

14:00 – 15:40 Workshop on Logics for Unconventional Computing (LUC)

Chair: *Andrew Schumann (University of Information Technology and Management in Rzeszow, Poland)*

**On Arithmetic Functions in Actin Filament Networks**

*Andrew Schumann (University of Information Technology and Management in Rzeszow, Poland)*

**Quantitative Assessment of Ambiguities in Plasmodium Propagation in Terms of Complex Networks and Rough Sets**

*Krzysztof Pancierz (Faculty of Mathematics and Natural Sciences, Poland)*

**Talmudic Foundations of Mathematics**

*Andrew Schumann (University of Information Technology and Management in Rzeszow, Poland); Alexander V. Kuznetsov (Voronezh State University, Russia)*

**Automatic role-oriented assignment of channels in the ad hoc network of hierarchically organized agents**

*Alexander V. Kuznetsov (Voronezh State University, Russia)*

15:40 – 16:20 Poster/Interactive Session and Coffee break

**Fuzzy Logic Training for Predicting Age of Rats**

*Dow, Douglas Eric (Wentworth Institute of Technology, USA); Hayashi, Isao (Kansai University, Japan)*

**Anticipating Diabetic Kidney Disease Through Measurements of Albumin in Diabetes Patients**

*Nieto-Chaupis, Huber (Universidad de Ciencias y Humanidades, Peru)*

**Bio-inspired Active Attack for Identification of Networked Control Systems**

*Sa, AlanOliveira de (Brazilian Navy, Brazil); Carmo, LuizFernando Rust da Costa (Inmetro, Brazil); Machado, RaphaelCarlos Santos (Inmetro, Brazil)*

**Epidemic Information Dissemination in Mobile Molecular Communication Networks for Target Detection Applications**

*Okaie, Yutaka (Osaka University, Japan); Nakano, Tadashi (Osaka University, Japan); Hara, Takahiro (Osaka University, Japan)*

**Anonymity and Aggressive Behavior in an Online Forum**

*Okaie, Yutaka (Osaka University, Japan); Nakano, Tadashi (Osaka University, Japan)*

**Can the hypothesis of brain signal modularity be tested?**

*Ahmad, Aftab (The City University of New York, USA)*

16:20 – 18:00 Session III

Chair: *Tadashi Nakano (Osaka University, Japan)*

**Relating Feed-Forward Loop Crosstalk to Robust Information Transport Across Transcriptional Networks**

*Syed, Khajamoinuddin (Virginia Commonwealth University, USA); Abdelzaher, Ahmed (Virginia Commonwealth University, USA); Mayo, Michael (US Army Engineer Research and Development Center, USA); Perkins, Edward (US Army Engineer Research and Development Center, USA); Ghosh, Preetam (Virginia Commonwealth University, USA)*

**Epidemic Information Dissemination in Mobile Molecular Communication Networks for Target Detection Applications**

*Okaie, Yutaka (Osaka University, Japan); Nakano, Tadashi (Osaka University, Japan); Hara, Takahiro (Osaka University, Japan)*

**A Framework of Nanomechanical Communication Systems Based on State Transitions**

*Nasif, Ahmed (University of Wisconsinakosh, USA); Mahfuz, MohammadUpal (University of WisconsinGreen Bay, USA); Thota, Jagadeep (University of WisconsinGreen Bay, USA)*

**Impacts of Erasure Coding on Robustness against Molecular Packet Losses in Aqueous, Collisional Environments**

*Egashira, Hiroaki (Shibaura Institute of Technology, Japan); Suzuki, Junichi (University of Massachusetts, Boston, USA); Mitzman, Jonathan S. (University of Massachusetts, Boston, USA), Nakano, Tadashi (Osaka University, Japan); Fukuda, Hiroaki (Shibaura Institute of Technology, Japan)*

18:00 – 20:00 Banquet

**DAY 2 (March 16)**

8:30 – 9:00 Registration

9:00 – 10:30 Invited talks

Chair: *Adriana Compagnoni (Stevens Institute of Technology, USA)*

**Sensing and Functional Imaging of Dynamic and Networked Neural Activity in the Brain**

*Hagsoon Yoon (Norfolk State University, USA)*

**Understanding Human Health and Disease from Data at Multiple Scales**

*Samantha Kleinberg (Stevens Institute of Technology, USA)*

**TBA**

*Narayan Ganesan (VP at Morgan Stanley; Washington University in St. Louis)*

10:30 – 10:45 Coffee break

10:45 – 12:00 Session IV

Chair: *Bilal Khan (University of Nebraska-Lincoln, USA)*

**Robotic oligarchy: How a few members can control their whole society by doing almost nothing**

*Stefanec, Martin (Karl-Franzens University Graz, Austria); Szopek, Martina (Karl-Franzens University Graz, Austria); Thenius, Ronald (Karl-Franzens University Graz, Austria); Radspieler, Gerald (Karl-Franzens University Graz, Austria); Schmickl, Thomas (Karl-Franzens University Graz, Austria)*

**Performance Optimization of Self-organizing Bioparticles for Multi-target Detection and Gravitation Problems**

*Yang, Jian (Osaka University, Japan); Iwasaki, Satoru (Osaka University, Japan); Abraham, Anthony (Osaka University, Japan); Hagad, JuanLorenzo (Osaka University, Japan); Obuchi, Takuya (Osaka University, Japan); Nakano, Tadashi (Osaka University, Japan)*

**Simulating Self-replicating Patterns of DNA Tiles**

*Gautam, Vinay K (Norwegian University of Science and Technology, Norway); Prasath, Rajendra (Norwegian University of Science and Technology, Norway)*

12:00 – 14:00 Lunch

14:00 – 14:30 Invited talk

Chair: *Adriana Compagnoni (Stevens Institute of Technology, USA)*

**An Eye-tracking Study to Enhance Usability of Big Data in Cancer Precision Medicine**

*Vishakha Sharma (Georgetown University, USA)*

14:30 – 15:20 Session V

Chair: *Adriana Compagnoni (Stevens Institute of Technology, USA)*

**Anticipating Diabetic Kidney Disease Through Measurements of Albumin in Diabetes Patients**

*Nieto-Chaupis, Huber (Universidad de Ciencias y Humanidades, Peru)*

**A Survey of Location Aware Ant Colony Optimization Routing Protocols in MANETs**

*Zhang, Hang (University of Goettingen, Germany); Wang, Xi (University of Goettingen, Germany); Hogrefe, Dieter (University of Goettingen, Germany)*

15:20 – 15:40 Coffee break

15:40 – 16:55 Session VI (BACS)

Chair: *William Casey (Carnegie Mellon University, USA)*

**Model abstractions of Device-Delay for Interactive Cyber Physical Systems under Uncertainty**

*Ghosh, Krishnendu (Miami University, USA)*

**Bio-inspired Active Attack for Identification of Networked Control Systems**

*Sa, AlanOliveira de (Brazilian Navy, Brazil); Carmo, LuizFernando Rust da Costa (Inmetro, Brazil); Machado, RaphaelCarlos Santos (Inmetro, Brazil)*

**This Malware Looks Familiar: Laymen Identify Malware Run-time Similarity with Chernoff faces and Stick Figures**

*Kanal, Eliezer (Carnegie Mellon University, USA); VanHoudnos, Nathan (Carnegie Mellon University, USA); Casey, Will (Carnegie Mellon University, USA); French, David (Carnegie Mellon University, USA); Lindauer, Brian (Carnegie Mellon University, USA); Moon, Seungwhan (Carnegie Mellon University, USA); Jansen, Peter (Carnegie Mellon University, USA); Carbonell, Jamie (Carnegie Mellon University, USA); Wright, Evan (Anomali Inc., USA)*