

Canadian Workshop on Information Theory

June 2-5, 2019

Morning Sessions

Sunday, June 2	Monday, June 3	Tuesday, June 4	Wednesday, June 5
Location: Room 1102	Location: Room 1110	Location: Room 1110	Location: Room 1110
8:00 am - 9:00 am Registration and Continental Breakfast	8:00 am - 9:00 am Registration and Continental Breakfast	8:00 am - 9:00 am Registration and Continental Breakfast	8:00 am - 9:00 am Registration and Continental Breakfast
	8:45 am - 9:00 am Welcome		
9:00 am - 12:30 pm Tutorial: Theoretical Foundation of Blockchain Technology Chen Feng, University of British Columbia (Okanagan Campus)	9:00 am - 10:00 am Plenary Talk: What Machines Can Learn from Humans about Compression Tsachy Weissman, Stanford University	9:00 am - 10:00 am Plenary Talk: Universal Features - Information Extraction and Data-Knowledge Integration Lizhong Zheng, Massachusetts Institute of Technology	9:00 am - 10:00 am Plenary Talk: Communication Theory for Key Agreement by Public Discussion Gerhard Kramer, Technical University of Munich
	10:00 am - 10:15 am Coffee Break	10:00 am - 10:15 am Coffee Break	10:00 am - 10:15 am Coffee Break
10:30 am - 11:00 am Coffee Break	10:15 am - 11:15 am Dynamic Spectrum Access under Partial Observations: A Restless Bandit Approach (invited) Nima Akbarzadeh, Aditya Mahajan	10:15 am - 11:15 am On Optimal Information-Theoretically Secure Key Management (invited) En-hui Yang, Xin-Wen Wu	10:15 am - 11:15 am Performance Analysis of Turbo Codes over the Bernoulli-Gaussian Impulsive Noise Channel Ghassan M. Kraidy, Hassan Hamad Performance Analysis of Low Density Parity-Check Codes over the Bernoulli-Gaussian Channel Ghassan M. Kraidy Zipper Codes: Spatially-Coupled Product-Like Codes with Iterative Algebraic Decoding Alvin Y. Sukmadjti, Umberto Martínez-Peñas, Frank R. Kschischang Index Assignment Optimized for Partial Encryption Mehrshad Kafi, Sorina Dumitrescu
	11:15 am - 11:30 am Coffee Break	11:15 am - 11:30 am Coffee Break	11:15 am - 11:30 am Coffee Break
	11:30 am - 12:30 pm Multi-Server Private Information Retrieval with Coded Side Information Fateme Kazemi, Esmaeil Karimi, Anoosheh Heidarzadeh, Alex Sprintson Coded Caching: Global vs Local Content Popularity Abhin Shah, Nikhil Karamchandani, Suhas Diggavi Information Storage in Multilayer Resistive Memories Susanna Rumsey, Stark Draper, Frank R. Kschischang Hierarchical Coded Matrix Multiplication Shahrzad Kiani, Nuwan S. Ferdinand, Stark Draper	11:30 am - 12:30 pm Multiple Access Binary Computation Offloading via Reinforcement Learning Mahsa Salmani, Foad Sohrabi, Timothy N. Davidson, Wei Yu Image Retrieval via Canonical Correlation Analysis Kangdi Shi, Xiaohong Liu, Muhammad Alrabeiah, Xintong Guo, Jie Lin, Huan Liu, Jun Chen Maximal Information Leakage based Privacy Preserving Data Disclosure Mechanisms Tianrui Xiao, Ashish Khisti Infection-Curing Games over Polya Contagion Networks Greg T Harrington, Fady Alajaji, Bahman Gharesifard	11:30 am - 12:30 pm An Optimal Finite Alphabet NOMA Scheme for Two-User Uplink Channels Jina Zhen, Anzhong A Wong, Jian-Kang Zhang, Max Wong Key Performance Indicators in Multidimensional Constellations for Uplink SCMA Systems Monirosharieh Vameghestahbanati, Ian D. Marsland, Ramy Gohary, Halim Yanikomeroglu A Soft Metric for Assessing the Compliance of WLAN Devices Ammar Alhosainy, Ramy Gohary, Ioannis Lambadaris Reduced Complexity Ordering in Subspace MIMO Detection Algorithms Mohammad Kazem Izadinasab, Oussama Damen
12:30 pm - 1:30 pm Lunch Break	12:30 pm - 1:30 pm Lunch Break	12:30 pm - 1:30 pm Lunch Break	12:30 pm - 1:30 pm Lunch Break

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Afternoon Sessions

Sunday, June 2	Monday, June 3	Tuesday, June 4	Wednesday, June 5
Location: Room 1102	Location: Room 1110	Location: Room 1110	Location: Room 1110
1:30 pm - 5:00 pm	1:30 pm - 2:30 pm	1:30 pm - 2:30 pm	1:30 pm - 2:30 pm
Tutorial: Information Theory for Real-Time Communication Victoria Kostina, California Institute of Technology	Plenary Talk: Active Hypothesis Testing, Information Acquisition, and Active Learning Tara Javidi, University of California, San Diego	Plenary Talk: Private Information Retrieval Capacity Sennur Ulukus, University of Maryland, College Park	Massive MIMO Channels Under the Joint Power Constraints Mahdi Khojastehnia, Sergey Loyka, Francois Gagnon
			Performance Analysis of Adaptive Modulation in MIMO-MRC Systems with Transmit Beamforming over Rayleigh Product Channels Faten Ben Abdallah, Mohamed Lassaad Ammari, Paul Fortier
			Optimal Node Density for Multi-RAT Coexistence in Unlicensed Spectrum Phillip B Oni, Steven D Blostein
			Performance Analysis of a Perfect SI Cancellation Scheme for Differential Channel-Unaware TWRNs Salime Bameri, Ramy Gohary
	2:30 pm - 2:45 pm Coffee Break	2:30 pm - 2:45 pm Coffee Break	2:30 pm - 2:45 pm Coffee Break
	2:45 pm - 3:45 pm	2:45 pm - 3:45 pm	2:45 pm - 3:45 pm
	On Source-Channel Communication over Multiple-Access Interference Relay Channels with Phase Uncertainties Subhajit Majhi, Meysam Shahrbaaf Motlagh, Patrick Mitran	Keynote: 5G Today and Tomorrow Peiyong Zhu, Huawei	Performance Analysis for Massive MIMO Systems with Two-Layer Linear Receive Processing Wahiba Abid, Sebastien Roy, Mohamed Lassaad Ammari
3:00 pm - 3:30 pm Coffee Break	On the Capacity of the Two-User IM/DD Interference Channel Zhenyu Zhang, Anas Chaaban		Cognitive Decision Making for the Long-haul Fiber Optic Communication Systems Mahdi Naghshvarianjahromi, Shiva Kumar, Jamal Deen
	Extremal Results for the Relative-Entropy Ratio of Collinear Probability Distributions Shengtian Yang, Jun Chen		Smart Long-haul Fiber Optic Communication Systems Using Brain-like Intelligence Mahdi Naghshvarianjahromi, Shiva Kumar, Jamal Deen
	Capacity of Generalized Discrete-Memoryless Push-to-Talk Two-Way Channels Jian-Jia Weng, Fady Alajaji, Tamas Linder		On the Performance of Slotted Vector-Disjunctive Channel Fedor Ivanov, Pavel Rybin, Valentin Afanassiev
	3:45 pm - 4:00 pm Coffee Break		3:45 pm - 4:00 pm Coffee Break
	4:00 pm - 5:00 pm	4:00 pm	4:00 pm - 5:00 pm
	Sum - Capacity-Achieving Distributions in the Input-Dependent Gaussian Noise Optical Multiple Access Channel with Peak and Average Intensity Constraints Morteza Soltani, Zouheir Rezki, Anas Chaaban	Niagara Falls - Buses depart for Niagara Falls outside of McMaster University Student Centre	Automated EEG Source Error Thresholding (AESET) in L2-Regularization Inverse Problems Younes Sadat-Nejad, Soosan Beheshti
	A Bounded-Noise Model for Nondispersive Optical Fiber Reza Rafie Borujeny, Frank R. Kschischang		Scalar Quantizer Design for Two-Way Channels Saeed Rezazadeh, Fady Alajaji, Wai-Yip Geoffrey Chan
	Performance Analysis of FSO MIMO Multiplexing Links with Beam Wander and Nonzero Boresight Pointing Errors Hossein Safi, Akbar Dargahi, Julian Cheng		Address Space Partitioning for the Parallel Dictionary LZW Data Compression Algorithm Malek Safieh, Juergen Freudenberger
	Angular MIMO for Underwater Wireless Optical Communications: Channel Modelling and Capacity Abdallah Ghazy, Steve Hranilovic, Mohammad-Ali Khalighi		Lattice-based Robust Distributed Source Coding for Three Correlated Sources Dania Elzouki, Sorina Dumitrescu, Jun Chen
	5:00 pm - 6:00 pm Annual Meeting of Canadian Society of Information Theory (ITB/A113)		
5:30 pm - 8:30 pm Reception (Phoenix Bar & Grill)		9:30 pm AND 10:30 pm Buses depart from Niagara Falls Queen Victoria Restaurant	