2020 North American School of Information Theory (NASIT 2020) 8 - 10 July 2020, Vancouver, BC

Overview We would like to submit this proposal to host the 13th annual North American Summer School in Information Theory (NASIT) in summer 2020 at the University of British Columbia (UBC). The format and programming of the school will follow the objective of NASIT to provide graduate students a stimulating and inviting forum, (1) to learn from top scientists in the field of information theory, (2) to present their own work, and (3) to deepen their connections with their community. NASIT 2020 will be a 3-day event, during which six distinguished lecturers will present 2.5-hour tutorials, and graduate students from Canadian and American universities will present their work in poster sessions. The lecturers will be asked to stay for the entire event, and faculty members from UBC and other universities will be invited to attend and participate in the discussions around the tutorials and at poster sessions and social events.

Organizing Committee The organizing committee members with confirmed roles are listed in Appendix A.

These include liaisons to the UBC Institute for Computing, Information and Cognitive Systems (ICICS), The Pacific Institute for the Mathematical Sciences (PIMS), and the UBC Centre for Artificial Intelligence Decision-making and Action (CAIDA), which have confirmed financial support and, perhaps more significantly, will bring the event to the attention of the large group of engineering theorists, applied mathematicians and computer scientists affiliated with these institutes. In addition faculty and students from other BC Universities will be asked to cooperate and contribute to the workshop, and three liaisons have already been confirmed.

Confirmed Speakers We have confirmed five of the six tutorial speakers, who are listed in Appendix B.

We have kept one spot open for the Padovani Lecturer to be determined by the Information Theory Society in Fall 2019.

Outline of Program A coarse draft program is provided in Appendix C.

The tutorial presentations are scheduled for the mornings and afternoons, and the student poster presentation are combined with a boxed lunch to have a lot of time for exposure for the students' work and for networking.

The tour and social events will be planned in more detail closer to NASIT 2020, and their scope will also depend on the available budget. We plan on including the ECE@UBC student society and for example ICICS has already offered a tour through UBC's incubator for technology-based startup companies HATCH.

Location The 2020 NASIT would be hosted at the UBC Vancouver campus. The UBC campus is its own municipality and located beautifully between the Pacific Ocean and the Pacific Spirit Park. Vancouver downtown can be reached in about 25 minutes by bus or taxi.

There are multiple options for the event space, and we have been in contact with UBC Conferences and Accommodations for renting space. This can only be done closer to the event though. Typical options are lecture theatres with capacities of 100-150 persons for the tutorials and atrium/lobby space for poster sessions, coffee breaks and lunches. As a low-cost fall-back option, e.g. if there is a shortfall in funding, we have booked space in the ECE Department for the event dates, which is functionally sufficient but not necessarily the best option.

There is also on-campus accommodation. Through UBC Conferences and Accommodations we are currently holding 60 rooms for July 7 (arrival) to July 10 (departure) at a rate of $CAN 89/night. These rooms also allow for double occupancy. For our tutorial speakers we have been able to reserve 3 Premium Studios for July 7-10, at a price of $CAN 189/night. We expect to have further rooms for the speakers available at the time of the event either on campus or in a nearby hotel.

Information on pre and postschool possibilities for travel and sightseeing in the Vancouver, Whistler and Banff areas will be provided.

Dates and Potential Conflicts The school is scheduled to take place from Wednesday July 8th to Friday, July 10th, 2020.

This avoids overlap with the following other events potentially of interest to attendees.

- CTW, Banff, Canada, May 17-20, 2020

- SPAWC, Atlanta, USA, May 26-29, 2020
- ICC, Dublin, Ireland, June 7-11, 2020
- ISIT, Los Angeles, USA, June 21-26, 2020
- ICML, Vienna, Austria, July 13-18, 2020
- ITW, Riva del Garda, Italy, September 21-24, 2020

The dates also align with school holidays at (most) North American universities.

Budget and Requested Financial Contribution A coarse budget draft is provided in Appendix D.

- Revenue

  We would like to keep the registration fee for students participating in the school low and budget with $CAN100. We expect that about 60 student from other schools and about 20 local students and faculty register for the event. The remaining revenue comes from financial support, for which we have confirmed contributions from UBC ICICS, PIMS and UBC CAIDAS as shown in Appendix D.

  Based on what we understand has been provided in previous years, we respectfully request financial support

  - of $US 10,000 (about $CAN13,000) from the IEEE Information Theory Society and
  - of $US 10,000 (about $CAN13,000) from the Padovani foundation, which is used both for the Padovani lecturer expenses as well as other school-related expenses.

- Expenses

  The expenses are estimated based on quotes from UBC Accommodation and Conferences. The expenses of the school include room rental, poster board rental, lecturer accommodations, lecturer travel expenses, food and beverage, souvenirs, thank-you gifts, among others. Please see Appendix D.

A Organizing Committee

General Co-Chairs	Lele Wang	ECE@UBC, https://sites.google.com/site/wanglele1986
	Lutz Lampe	ECE@UBC, http://www.ece.ubc.ca/~lampe
Advisory	Ian Blake	ECE@UBC, https://www.ece.ubc.ca/~ifblake
Liaisons		
ICICS	Robert Rohling	ECE@UBC http://www.ece.ubc.ca/~rohling
PIMS	Brian Marcus	Math@UBC http://www.math.ubc.ca/~marcus
	Ozgur Yilmaz	Math@UBC https://www.math.ubc.ca/~oyilmaz
CAIDA	Kevin Leyton-Brown	CS@UBC https://www.cs.ubc.ca/~kevinlb
	Mark Schmidt	CS@UBC https://www.cs.ubc.ca/~schmidtm
UBC-Okanagan	Chen Feng	https://people.ok.ubc.ca/cfeng01/
U of Victoria	Aaron Gulliver	https://www.ece.uvic.ca/~agullive/
Simon Fraser U	Jie Liang	https://www.sfu.ca/~jiel/

B Confirmed Speakers

Name	Affiliation	Tentative title for tutorial
Michelle Effros	California Institute of Technology, USA	Network Information Theory
Negar Kiyavash	Georgia Institute of Technology, USA	Causal Inference
David Tse	Stanford University, USA	Operating Blockchains at Physical Limits
Wei Yu	University of Toronto, Canadan	Massive Random Access and Massive MIMO
Lizhong Zheng	Massachusetts Institute of Technology, USA	Understanding Deep Learning With an Information Geometric Method

C Coarse Draft Program

	Wed, July 8	Thu, July 9	Fri, July 10
9:00 am -10:15 am	Tutorial 1, Part 1	Tutorial 3, Part 1	Tutorial 5, Part 1
10:15 am -10:45 am	Coffee break		
10:45 am -12:00 pm	Tutorial 1, Part 2	Tutorial 3, Part 2	Tutorial 5, Part 2
12:00 pm - 12:30 pm	Student poster introduction	Tour or other event, lunch	Student poster introduction
12:30 pm -2:30 pm	Student poster presentation, boxed networking lunch		Student poster presentation, boxed networking lunch
2:30 pm -3:45 pm	Tutorial 2, Part 1	Tutorial 4, Part 1	Tutorial 6, Part 1
3:45 pm -4:15 pm	Coffee break		
4:15 pm -5:30 pm	Tutorial 2, Part 2	Tutorial 4, Part 2	Tutorial 6, Part 2
Evening	Social and networking events for participants		

D Coarse Budget Draft

Coarse first budget draft assuming 80 registered attendees and 6 speakers. Events will be hosted at UBC. Catering provided by UBC Conferences and Accommodations.

Revenue		
Student registration fees	\$CAN8,000	based on 80 registered attendees
IEEE ITS	\$CAN13,000	requested, not confirmed
Padovani foundation	\$CAN13,000	estimated, not confirmed
UBC ICICS	\$CAN5,000	confirmed
PIMS (including CRG in High Dimensional Data Analysis)	\$CAN5,000	confirmed
UBC CAIDAS	\$CAN2,000	confirmed
Subtotal	**\$CAN46,000**	
Expenses		
Room rental	\$CAN2,500	on UBC campus, theatre and lobby space
Poster board rentals	\$CAN3,000	
Lecturer accommodation	\$CAN4,000	at Ponderosa, 3 nights
Lecturer airfare	\$CAN6,000	estimated at \$CAN 1,000 each
Lecturer local expenses	\$CAN400	cab etc.
Lunches+coffee breaks	\$CAN14,300	6 coffee breaks and 3 lunches
Networking/reception event	\$CAN5,000	food, drinks, location on campus
Networking/banquet event	\$CAN8,000	buffet dinner, e.g. Sage restaurant on campus
Other student event	\$CAN1,000	Games or puzzle evening
Participant souvenir	\$CAN1,200	\$CAN 20 each
Lecturer thank you gift	\$CAN600	\$CAN 100 each
Subtotal	**\$CAN 46,000**	