2010 International Conference on Active Media Technology 2010 International Conference on Brain Informatics

Final Program



York University, Toronto, Canada

http://www.wici-lab.org/amtbi10/

Co-organized by:

Web Intelligence Consortium (WIC)
IEEE Task Force on Brain Informatics (IEEE TF-BI)



Conference Sponsors

Co-organized by





Co-sponsored by









University of Regina Canada

Conference Program

Table of Contents

Conference Sponsors	
Message from the Conference and Program Chairs	
AMT'10/BI'10 Program AT A GLANCE	
AMT'10/BI'10 Program	
AMT'10/BI'10 Invited Talks.	
Organizing Committee	

Message from the Conference and Program Chairs

We are pleased to give you a warm welcome to the 2010 International Joint Conference on Active Media Technology and Brain Informatics (AMT 2010 and BI 2010). On behalf of the AMT 2010 and BI 2010 Conference Committees, we would like to thank you for your participation and we do hope that you will enjoy the conference technical and social programs.

The AMT 2010 and BI 2010 conferences are organized by Web Intelligence Consortium (WIC) and IEEE Computational Intelligence Society Task Force on Brain Informatics (IEEE TF-BI).

Over the past years, Active Media Technology (AMT) and its applications have engulfed our daily lives, enhancing connectivity and interactivity in ways never imaginable; today's examples include Facebook, Twitter, and Google Latitude. At the same time, AMT applications have redefined how business is being conducted by empowering consumer engagement and participation (e.g., ParkatmyHouse.com). Advertisers are tapping into social networks to create new business opportunities (e.g., social media marketing). Intelligent electric grids are enabling better energy-efficient distribution and storage, while fighting climate change (e.g., ecotricity.com and eco-metering).

AMT 2010 marked the sixth of the AMT series since its debut conference at Hong Kong Baptist University in 2001 (followed by AMT 2004 in Chongqing, China, AMT 2005 in Kagawa, Japan, and AMT 2006 in Brisbane, Australia, 2009 In Beijing, China). All these have once again confirmed our vision back in 2001 to capture and document the evolution unfolding in our digital era. AMT 2010 continued to be a shared forum for researchers and practitioners from diverse fields, such as computer science, information technology, artificial intelligence, Web intelligence, cognitive science, conversational informatics, media engineering, economics, data mining, data and knowledge engineering, intelligent agent technology, human computer interaction, complex systems and systems science. It offered new insights into the main research challenges and development of AMT by revealing the interplay between the studies of human informatics and the research of informatics on the Web/Internet, mobile and wireless centric intelligent information processing systems.

Brain Informatics (BI) has emerged as an interdisciplinary research field that focuses on studying the mechanisms underlying the human information processing system (HIPS). It investigates the essential functions of the brain, ranging from perception to thinking, and encompassing such areas as multiperception, attention, memory, language, computation, heuristic search, reasoning, planning, decision-making, problem-solving, learning, discovery, and creativity. The goal of BI is to develop and demonstrate a systematic approach to achieving an integrated understanding of both macroscopic and microscopic level working principles of the brain, by means of experimental, computational, and cognitive neuroscience studies, as well as utilizing advanced Web Intelligence (WI) centric information technologies. BI represents a potentially revolutionary shift in the way that research is undertaken. It attempts to capture new forms of collaborative and interdisciplinary work. In this vision, new kinds of BI methods and global research communities will emerge, through infrastructure on the wisdom Web and knowledge grids that enables high speed and distributed, large-scale analysis and computations, and radically new ways of sharing data/knowledge.

BI 2009 was the first conference specifically dedicated to the interdisciplinary research in Brain Informatics. It provided an international forum to bring together researchers and practitioners from diverse fields, such as computer science, information technology, artificial intelligence, Web intelligence, cognitive science, neuroscience, medical science, life science, economics, data mining, data science and knowledge science, intelligent agent technology, human computer interaction, complex systems, and systems science, to present the state-of-the-art in the development of Brain Informatics, to explore the main research problems in BI that lie in the interplay between the studies of human brain and the research of informatics. On the one hand, one models and characterizes the functions of the human brain based on the notions of information processing systems. WI centric information technologies are applied to support brain science studies. For instance, the wisdom Web, knowledge grids, and cloud computing enable high-speed, large-scale analysis, simulation, and computation as well as new ways of sharing research data and scientific discoveries. On the other hand, informatics-enabled brain studies, e.g., based on fMRI, EEG, and MEG, significantly broaden the spectrum of theories and models of brain sciences and offer new insights into the development of human-level intelligence towards brain-inspired wisdom Web computing.

We wish to express our gratitude to all members of the Conference Committee for their instrumental and unfailing support. AMT 2010 and BI 2010 has a very exciting program with a number of features, ranging from keynote talks, special sessions, technical sessions, posters, workshop, and social programs. All of this work would not have been possible without the generous dedication of the Program Committee members and the external reviewers in reviewing the papers submitted to AMT 2010 and BI 2010, of our keynote speakers, Ben Shneiderman from University of Maryland, Vinod Goel from York University, Yingxu Wang from University of Calgary, Jianhua Ma from Hosei University. AMT 2010 and BI 2010 could not have taken

Conference Program

place without the great team effort of the Local Organizing Committee and the support of the International WIC Institute, and York University.

Our special thanks go to Tetsuya Yoshida and Yue Xu for organizing a special session on text analysis and utilization, and to Hanmin Jung, Li Chen and Sung-Pil Choi for organizing a special session on technology intelligence. We are grateful to the chairs and members of the organizing committee for their significant contribution to the organization of the conference. In particular, we would like to acknowledge the generous help received from Ning Zhong, Jimmy Huang, Vivian Hu, Jessie Zhao, Jun Miao, Ellis Lau and Heather Bai. Our appreciation also goes to Juzhen Dong for her excellent technical support of the AMT 2010 conference management system and its web sites. Last but not the least, we thank Alfred Hofmann and Anna Kramer of Springer for their help in coordinating the publication of this special volume in an emerging and interdisciplinary research area. We appreciate the support and sponsorship from York University and the University of Regina.

Sheila Petty and Runhe Huang
AMT 2010 Conference General Chairs
Aijun An and Pawan Lingras
AMT 2010 Program Chairs

Tomaso Poggio and Jiming Liu
BI 2010 Conference General Chairs

Yiyu Yao and Ron Sun
BI 2010 Program Chairs

AMT'10/BI'10 Program AT A GLANCE

On-	site Regis	tration August 28-29, 08:15-18:00 [L	obby]										
	09:10-9:30 Conference Opening [TEL 0001]												
	09:30-10:	30 Keynote Talk [TEL 0001] Chair:	Aijun An										
010	Te	chnology-Mediated Social Participat	ion: Deep Science and Extreme Technolog	y, Ben Shneiderman									
	10:30-10:50 Coffee break												
	10:50-11:50 Keynote Talk [TEL 0001] Chair: Pawan Lingras												
	Fractionating the Rational Brain, Vinod Goel 11:50 - 13:20 Lunch												
	11:30 - 13	BI Session - B1	AMT Session - A1	AMT Session - A2									
	13:20	[TEL 0005]	[TEL 0006]	[TEL 0007]									
	-	Brain Data Analysis and Data Brain I	Special session on Text Analysis and Utilization (TAU)	Data Mining, Ontology Mining and Web Reasoning									
Saturday gust 28, 2	14:50	Chair:	Chairs: Tetsuya Yoshida and Yue Xu	Chair:									
Saturday August 28, 2010	14:50-15:00 Short break												
Ā	15:00	BI Session - B2 [TEL 0005]	AMT Session - A3 [TEL 0006]	AMT Session - A4 [TEL 0007]									
	_	Brain Data Analysis and Data Brain	Entertainment and Social Applications of	AMT for Semantic Web and Web 2.0									
	16:30	II Chair:	Active Media Chair:	Chair:									
	16:30-16::	50 Coffee break											
	16:50	BI Session - B3	AMT Session - A5	AMT Session - A6									
	10.50	[TEL 0005] Neuronal Modeling and Brain	[TEL 0006] Special session on Technology Intelligence	[TEL 0007] Web Based Social Networks									
	18:20	Modeling Chair:	Chair: Hanmin Jung	Chair:									
		10-21:00 Conference Reception [Lobby]											
		30 Keynote Talk [TEL 0001] Chair:	liming Liu										
			l Mathematical Means for Brain Informat	tics, Yingxu Wang									
	10:30-10:	50 Coffee Break											
		10:50-11:50 Keynote Talk [TEL 0001] Chair: Sheila Petty											
		Active Smart u-Things and Cyber Individuals, Jianhua Ma											
	11:50 - 13	:20 Lunch BI Session - B4	AMT Session - A7	AMT Session - A8									
y 2010	13:20	[TEL 0005]	[TEL 0006]	[TEL 0007]									
	-	WICI Perspectives on Brain Informatics I	Adaptive Web Systems and Information Retrieval	Active Computer Systems and Intelligent Interfaces									
Sunday August 29,,	14:50	Chair: Ning Zhong	Chair: Yue Xu	Chair:									
Aug	14:50-15:	10 Coffee Break											
		BI Session - B5 [TEL 0005]	AMT Session - A9 [TEL 0006]	AMT Session - A10 [TEL 0007] (Two sessions)									
	15:10	WICI Perspectives on Brain Informatics II	Evaluation of Active Media and AMT Based Systems	Multi-Agent Systems Chair:									
	-	Chair: Ning Zhong	Chair:	Semantic Computing for Active									
	16:40			Media and AMT Based Systems Chair:									
				Chair.									
	18:00 - 21:00 Conference Banquet												
Monday August 30, 2010	09:00	BI Session - B6 [TEL 0005]	BI Session - B7 [TEL 0006]	AMT Session - A11 [TEL 0007]									
	-	Cognition-inspired Applications I	Cognitive Computing and Learning	Web Mining, Wisdom Web and Web									
	11:00	Chair:	Chair:	<i>Intelligence</i> Chair:									
onday t 30,	11:00-11:2	11:00-11:20 Coffee Break											
M	11.20	BI Session - B8	BI Session - B9	AMT Session - A12									
A	11:20	[TEL 0005] Cognition-inspired Applications II	[TEL 0006] Cognitive Modeling and Information	[TEL 0007] Machine Learning and Human- Centered Robotics									
	13:20	Chair:	Processing Chair:										
	13.20		Chuir.	Chair:									

AMT'10/BI'10 Program

Saturday, August 28, 2010

On-site Registration

Time: August 28-29, 08:15-18:00

Location: Lobby

Conference Opening (09:10-09:30)

Location: TEL 0001

Welcome:

Program Introduction:

Keynote Talk (August 28, 09:30 - 10:30)

Chair: Aijun An Location: TEL 0001

Title: Technology-Mediated Social Participation: Deep Science and Extreme Technology

Speaker: Ben Shneiderman

Coffee break (10:30 - 10:50)

Keynote Talk (August 28, 10:50 - 11:50)

Chair: Pawan Lingras Location: TEL 0001

Title: Fractionating the Rational Brain

Speaker: Vinod Goel

Lunch (11:50 - 13:20)

BI Session - B1 (August 28, 13:20 - 14:50)
Brain Data Analysis and Data Brain I

Chair:

Location: TEL 0005

- ◆ The Effect of the Normalization Strategy on Voxel-Based Analysis of DTI Images: A Pattern Recognition Based Assessment, Gloria Diaz, Gonzalo Pajares, Eduardo Romero, Juan Alvarez-Linera, Eva Lopez, Juan Antonio Hernandez-Tamames and Norberto Malpica (B240)
- Single Trial Classification of EEG and Peripheral Physiological Signals for Recognition of Emotions Induced by Music Videos, Sander Koelstra, Ashkan Yazdani, Mohammad Soleymani, Christian Muhl, Jong-Seok Lee, Anton Nijholt, Thierry Pun, Touradj Ebrahimi and Ioannis Patras (B227)
- Brain Signal Recognition and Conversion Towards Symbiosis with Ambulatory Humanoids, Yasuo Matsuyama, Keita Noguchi, Takashi Hatakeyama, Nimiko Ochiai and Tatsuro Hori (B207)
- Recurrence Plots for Identifying Memory Components in Single-trial EEGs, Nasibeh Talebi and Ali Motie Nasrabadi (B213)

AMT Session - A1 (August 28, 13:20 - 14:50)

Special session on Text Analysis and Utilization (TAU)

Chairs: Tetsuya Yoshida

Location: TEL 0006

- Performance Evaluation of Constraints in Graph-based Semi-Supervised Clustering, Tetsuya Yoshida
- ◆ Recommendation of Little Known Good Travel Destinations using Word-of-mouth Information on the Web, Kuzou Ohara, Yu Fujimoto, and Tomofumi Shiina
- Exploring Social Annotation Tags to Enhance Information Retrieval Performance, Zheng Ye, Xiangji Jimmy Huang, Song Jin, and Hongfei Lin

AMT Session - A2 (August 28, 13:20 - 14:50)

Data Mining, Ontology Mining and Web Reasoning

Chair:

Location: TEL 0007

- Multiagent based Large Data Clustering Scheme for Data Mining Applications, T. Ravindra Babu, M. Narasimha Murty and S.V. Subrahmanya
- Fractal Based Video Shot Cut/Fade Detection and Classification, Zeinab Zeinalpour-Tabrizi, Amir Farid Aminian-Modarres, Mahmood Fathy, and Mohammad Reza Jahed-Motlagh
- A Semantic Web Services Discovery Algorithm Based on QoS Ontology, Baocai Yin, Huirong Yang, Pengbin Fu, and Xiaobo Chen

Short break (14:50 - 15:00)

BI Session - B2 (August 28, 15:00 - 16:30)

Brain Data Analysis and Data Brain II

Chair:

Location: TEL 0005

- Feature Rating by Random Subspaces for Functional Brain Mapping, Diego Sona and Paolo Avesani (B235)
- Improving Individual Identification in Security Check with an EEG based Biometric Solution, Qinlin Zhao, Hong Peng, Bin Hu, Quanying Liu, Li Liu, Yanbing Qi and Lanlan Li (B219)
- A Study of Mozart Effect on Arousal, Mood, and Attentional Blink, Chen Xie, Lun Zhao, Duoqian Miao, Deng Wang, Zhihua Wei and Hongyun Zhang (B228)

AMT Session - A3 (August 28, 15:00 - 16:30)

Entertainment and Social Applications of Active Media

Chair:

Location: TEL 0006

- The Influence of Ubiquity on Screen-Based Interfaces, Sheila Petty and Luigi Benedicenti
- Perception of Parameter Variations in Linear Fractal Images, Daryl H. Hepting and Leila Latifi
- Music Information Retrieval with Temporal Features and Timbre, Angelina A. Tzacheva and Keith J. Bell
- Assessing End-user Programming for a Graphics Development Environment, Lizao Fang and Daryl H. Hepting
- Visual Image Browsing and Exploration (Vibe): User Evaluations of Image Search Tasks, Grant Strong, Orland Hoeber, and Minglun Gong

AMT Session - A4 (August 28, 15:00 - 16:30)

AMT for Semantic Web and Web 2.0

Chair:

Location: TEL 0006

- A Spatio-temporal Framework for Related Topic Search in Micro-blogging, Shuangyong Song, Qiudan Li, and Nan Zheng
- Exploiting Semantic Hierarchies for Flickr Group, Dongyuan Lu and Qiudan Li
- Understanding a Celebrity with His Salient Events, Shuangyong Song, Qiudan Li, and Nan Zheng
- User Interests: Denition, Vocabulary, and Utilization in Unifying Search and Reasoning, Yi Zeng, Yan Wang, Zhisheng Huang, Danica Damljanovic, Ning Zhong, Cong Wang

Coffee break (16:30 - 16:50)

BI Session - B3 (August 28, 16:50 - 18:20)

Neuronal Modeling and Brain Modeling

Chair:

Location: TEL 0005

- ◆ Segmentation of 3D Brain Structures Using the Bayesian Generalized Fast Marching Method, Mohamed Baghdadi, Nacera Benamrane and Lakhdar Sais (B239)
- Domain-Specific Modeling as a Pragmatic Approach to Neuronal Model Descriptions, Ralf Ansorg and Lars Schwabe (B211)
- Guessing What's on Your Mind: Using the N400 in Brain Computer Interfaces, Marijn van Vliet, Christian Muhl, Boris Reuderink and Mannes Poel (B215)
- A Brain Data Integration Model Based on Multiple Ontology and Semantic Similarity, Li Xue, Yun Xiong and Yangyong Zhu (B214)

AMT Session - A5 (August 28, 16:50 - 18:20)

Special session on Technology Intelligence

Chair: Hanmin Jung Location: TEL 0007

- Extracting Concerns and Reports on Crimes in Blogs, Yusuke Abe, Takehito Utsuro, Yasuhide Kawada, Tomohiro Fukuhara, Noriko Kando, Masaharu Yoshioka, Hiroshi Nakagawa, Yoji Kiyota, and Masatoshi Tsuchiya
- Ontology Matching Method for Efficient Metadata Integration, Pyung Kim, Dongmin Seo, Mikyoung Lee, Seungwoo Lee, Hanmin Jung, and Won-Kyung Sung
- Extracting protein sub-cellular localizations from literature, Hong-Woo Chun, Jin-Dong Kim, Yun-Soo Choi, and Won-Kyung Sung
- ◆ Natural Language Query Processing for Life Science Knowledge, Jin-Dong Kim, Yasunori Yamamoto, Atsuko Yamaguchi, Mitsuteru Nakao, Kenta Oouchida, Hong-Woo Chun, and Toshihisa Takagi

AMT Session - A6 (August 28, 16:50 - 18:20)

Web Based Social Networks

- Contextual Recommendation of Social Updates, a Tag-based Framework, Adrien Joly, Pierre Maret, and Johann Daigremont
- Semantic Web Portal: A Platform for Better Browsing and Visualizing Semantic Data, Ying Ding, Yuyin Sun, Bin Chen, Katy Borner, Li Ding, David Wild, Melanie Wu, Dominic DiFranzo, Alvaro Graves Fuenzalida, Daifeng Li, Stasa Milojevic, ShanShan Chen, Madhuvanthi Sankaranarayanan, Ioan Toma
- NicoScene: Video Scene Search by Keywords based on Social Annotation, Tahara Tahara, Atsushi Tago, Hiroyuki Nakagawa, and Akihiko Ohsuga
- Social Relation Based Search Refinement: Let Your Friends Help You!, Xu Ren, Yi Zeng, Yulin Qin, Ning Zhong,
 Zhisheng Huang, Yan Wang, Cong Wang

Conference Reception (19:00 - 21:00)

Sunday, August 29, 2010

Keynote Talk (August 29, 09:30 - 10:30)

Chair: Jiming Liu Location: TEL 0001

Title: Cognitive Informatics and Denotational Mathematical Means for Brain Informatics

Speaker: Yingxu Wang

Coffee break (10:30 - 10:50)

Keynote Talk (August 28, 10:50 - 11:50)

Chair: Sheila Petty Location: TEL 0001

Title: Active Smart u-Things and Cyber Individuals

Speaker: Jianhua Ma

Lunch (11:50 - 13:20)

BI Session - B4 (August 29, 13:20 - 14:50)

WICI Perspectives on Brain Informatics I

Chair: Ning Zhong Location: TEL 0005

- Interaction Between Visual Attention and Goal Control for Speeding up Human Heuristic Search, Rifeng Wang, Jie Xiang and Ning Zhong (B222)
- The Role of the Parahippocampal Cortex in Memory Encoding and Retrieval: An fMRI Study, Mi Li, Shengfu Lu, Jiaojiao Li and Ning Zhong (B217)
- Brain Activation and Deactivation in Human Inductive Reasoning: An fMRI Study, Peipeng Liang, Yang Mei, Xiuqin Jia, Yanhui Yang, Shengfu Lu, Ning Zhong and Kuncheng Li (B248)
- Clustering of fMRI Data Using Affinity Propagation, Dazhong Liu, Wanxuan Lu, and Ning Zhong (B218)

AMT Session - A7 (August 29, August 29, 13:20 - 14:50)

Adaptive Web Systems and Information Retrieval

Chair: Yue Xu Location: TEL 0006

- Folksonomy-Based Ontological User Interest Profile Modeling and Its Application in Personalized Search, Xiaogang Han, Zhiqi Shen, Chunyan Miao, and Xudong Luo
- Visualizing Threaded Conversation Networks: Mining Message Boards and Email Lists for Actionable Insights, Derek L.
 Hansen, Ben Shneiderman, and Marc Smith
- A Hybrid Chinese Information Retrieval Model, Zhihan Li, Yue Xu, and Shlomo Geva
- Term Frequency Quantization for Compressing an Inverted Index, Lei Zheng and Ingemar J. Cox

AMT Session - A8 (August 29, August 29, 13:20 - 14:50)

Active Computer Systems and Intelligent Interfaces

Chair:

Location: TEL 0007

- Interactive Visualization System for DES, Mohamed S, Asseisah, Hatem M, Bahig, and Sameh S, Daoud
- Intelligent Implicit Interface for Wearable Items Suggestion, Aasim Khan, Muhammad Aslam, and A. M. Martinez-Enriquez
- Implementation of an Intelligent Product Recommender System in an e-Store, Seyed Ali Bahrainian, Seyed Mohammad Bahrainian, Meytham Salarinasab, and Andreas Dengel
- Enhanced Intra Coding of H.264/AVC Advanced Video Coding Standard with Adaptive Number of Modes, Mohammed Golam Sarwer and Q. M. Jonathan Wu

Coffee break (14:50 - 15:10)

BI Session - B5 (August 29, 15:10 - 16:40)

WICI Perspectives on Brain Informatics II

Chair: Ning Zhong Location: TEL 0005

- Towards Systematic Human Brain Data Management Using a Data-Brain Based GLS-BI System, Jianhui Chen, Ning Zhong and Runhe Huang (B230)
- The Role of Posterior Parietal Cortex in Problem Representation, Jie Xiang, Yulin Qin, Junjie Chen, Haiyan Zhou, Kuncheng Li and Ning Zhong (B238)
- Basic Level Advantage and Its Switching during Information Retrieval: An fMRI Study, Haiyan Zhou, Jieyu Liu, Wei Jing, Yulin Qin, Shengfu Lu, Yiyu Yao and Ning Zhong (B256)

AMT Session - A9 (August 29, 15:10 - 16:40)

Evaluation of Active Media and AMT Based Systems

Chair:

Location: TEL 0006

- Investigating Perceptions of a Location-Based Annotation System, Huynh Nhu Hop Quach, Khasfariyati Razikin, Dion Hoe-Lian Goh, Thi Nhu Quynh Kim, Tan Phat Pham, Yin-Leng Theng, Ee-Peng Lim, Chew Hung Chang, Kalyani Chatterjea, and Aixin Sun
- Apollon13: A Training System for Emergency Situations in a Piano Performance, Yuki Yokoyama and Kazushi Nishimoto
- Modeling User Knowledge from Queries: Introducing a Metric for Knowledge, Frans van der Sluis and Egon L. van den Broek

AMT Session - A10 (August 29, 15:10 - 16:40) (Note: There are two short sessions in this time slot)

Multi-Agent Systems

Chair:

Location: TEL 0007

- Building Users Profiles from Clustering Resources in Collaborative Tagging Systems, Maya Rupert and Salima Hassas
- Some Optimizations in Maximal Clique based Distributed Coalition Formation for Collaborative Multi-Agent Systems, Predrag T. Tosic and Naveen K. R. Ginne

Continued in the same room

Semantic Computing for Active Media and AMT Based Systems

Chair:

Location: TEL 0007

- Enhancing Content-Based Image Retrieval Using Machine Learning Techniques, Qinmin Vivian Hu, Zheng Ye, and Xiangji Jimmy Huang
- Computer-Assisted Interviewing with Active Questionnaires, Seon-Ah Jang, Jae-Gun Yang, and Jae-Hak J. Bae

Conference Banquet (18:00 - 21:00)

Location:

Monday, August 30, 2010

BI Session - B6 (August 30, 09:00 - 11:00)

Cognition-inspired Applications

Chair:

Location: TEL 0005

- Modelling Caregiving Interactions During Stress, Azizi Ab Aziz, Jan Treur, and C. Natalie van der Wal (B254)
- A Time Series Based Method for Analyzing and Predicting Personalized Medical Data, Vivian Hu, Jimmy Huang, William Melek and C. Joseph Kurian (B251)
- ◆ Language Analytics for Assessing Brain Health: Cognitive Impairment, Depression and Pre-Symptomatic Alzheimer's Disease, William L. Jarrold, Bart Peintner, Eric Yeh, Ruth Krasnow, Harold S. Javitz and Gary D. Swan (B246)
- Data Fusion and Feature Selection for Alzheimer's Diagnosis, Blake Lemoine, Sara Rayburn and Ryan Benton (B242)
- ◆ A Cognitive Architecture Based on Neuroscience for the Control of Virtual 3D Human Creatures, Felipe Rodriguez, Francisco Galvan, Felix Ramos, Erick Castellanos, Gregorio Garcia and Pablo Covarrubias (B237)

BI Session - B7 (August 30, 09:00 - 11:00)

Cognitive Computing and Learning

Chair:

Location: TEL 0005

- An Adaptive Model for Dynamics of Desiring and Feeling based on Hebbian Learning, Tibor Bosse, Mark Hoogendoorn, Zulfiqar A. Memon, Jan Treur and Muhammad Umair (B216)
- Rank-Score Characteristics (RSC) Function and Cognitive Diversity, D. Frank Hsu, Bruce S. Kristal and Christina Schweikert (B247)
- ◆ Cognitive Effort for Multi-agent Systems, Luca Longo and Stephen Barrett (B205)
- Concept Learning in Text Comprehension, Manas Hardas and Javed Khan (B221)
- ◆ Comparing EEG/ERP-like and fMRI-like Techniques for Reading Machine Thoughts, Fabio Massimo Zanzotto and Danilo Croce (B209)

AMT Session - A11 (August 30, 09:00 - 11:00)

Web Mining, Wisdom Web and Web Intelligence

Chair:

Location: TEL 0007

- An Empirical Approach for Opinion Detection using Significant Sentences, Anil Kumar K.M and Suresha
- Automatically Extracting Web Data Records, Dheerendranath Mundluru, Vijay V. Raghavan, and Zonghuan Wu
- Web User Browse Behavior Characteristic Analysis Based on a BC Tree, Dingrong Yuan and Shichao Zhang
- Clustering Web Users Based on Browsing Behavior, Tingshao Zhu
- Privacy Preserving in Personalized Mobile Marketing, Yuqing Sun and Guangjun Ji

Coffee break (11:00 - 11:20)

BI Session - B8 (August 30, 11:20 - 13:20)

Cognition-inspired Applications II

Chair:

Location: TEL 0006

- Computational Modeling and Analysis of Therapeutical Interventions for Depression, Fiemke Both, Mark Hoogendoorn, Michel C.A. Klein and Jan Treur (B232)
- The Effect of Sequence Complexity on the Construction of Protein-Protein Interaction Networks, Mehdi Kargar and Aijun An (B252)
- Towards Inexpensive BCI Control for Wheelchair Navigation in the Enabled Environment: A Hardware Survey, Kenyon Stamps and Yskanda Hamam (B234)
- Investigation on Human Characteristics of Japanese Katakana Recognition by Active Touch, Suguru Yokotani, Jiajia Yang and Jinglong Wu (B249)
- Modelling the Emergence of Group Decisions Based on Mirroring and Somatic Marking, (B231)

BI Session - B9 (August 30, 11:20 - 13:20)

Cognitive Modeling and Information Processing

Chair:

Location: TEL 0006

- Behavioural Abstraction of Agent Models Addressing Mutual Interaction of Cognitive and Affective Processes, Alexei Sharpanskykh and Jan Treur (B250)
- How Does Repetition of Signals Increase Precision of Numerical Judgment? Eike Benjamin Kroll, Jorg Rieger and Bodo Vogt (B224)
- Sparse Regression Models of Pain Perception, Irina Rish, Guillermo A. Cecchi, Marwan N. Baliki and A. Vania Apkarian (B220)
- A Qualitative Approach of Learning in Parkinson's Disease, Delphine Penny-Leguy and Josiane Caron-Pargue (B233)

AMT Session - A12 (August 30, 11:20 - 13:20)

Machine Learning and Human-Centered Robotics

Chair:

Location: TEL 0007

- K-Means Clustering as a Speciation Mechanism within an Individual-Based Evolving Predator-Prey Ecosystem Simulation, Adam Aspinall and Robin Gras
- Improving Reinforcement Learning Agents Using Genetic Algorithms, Akram Beigi, Hamid Parvin, Nasser Mozayani, and Behrouz Minaei
- Robust and Efficient Change Detection Algorithm, Fei Yu, Michael Chukwu, and Q. M. Jonathan Wu

AMT'10/BI'10 Invited Talks

Title: Technology-Mediated Social Participation: Deep Science and Extreme Technology

PROFESSOR BEN SHNEIDERMAN

University of Maryland, USA http://www.cs.umd.edu/hcil/

Abstract

The dramatic success of social media such as Facebook, Twitter, YouTube, Flickr, blogs, and traditional discussion groups empowers individuals to become active in local and global communities. With modest redesign, these technologies can be harnessed to support national priorities such as healthcare/wellness, disaster response, community safety, energy sustainability, etc. This talk describes a research agenda for these topics that develops deep science questions and extreme technology challenges.

Biography

BEN SHNEIDERMAN (http://www.cs.umd.edu/~ben) is a Professor in the Department of Computer Science and Founding Director (1983-2000) of the Human-Computer Interaction Laboratory (http://www.cs.umd.edu/hcil/) at the University of Maryland. He was elected as a Fellow of the Association for Computing (ACM) in 1997, a Fellow of the American Association for the Advancement of Science (AAAS) in 2001, and a Member of the National Academy of Engineering in 2010. He received the ACM SIGCHI Lifetime Achievement Award in 2001.

Ben is the co-author with Catherine Plaisant of "Designing the User Interface: Strategies for Effective Human-Computer Interaction" (5th ed., 2010) http://www.awl.com/DTUI/. With Stu Card and Jock Mackinlay, he co-authored "Readings in Information Visualization: Using Vision to Think" (1999). With Ben Bederson he co-authored "The Craft of Information Visualization" (2003). His book "Leonardo's Laptop" appeared in October 2002 (MIT Press) and won the IEEE book award for Distinguished Literary Contribution. His latest co-authored book, "Analyzing Social Media Networks with NodeXL" (www.codeplex.com/nodexl) was published in August 2010.

Title: Fractionating the Rational Brain

PROFESSOR VINOD GOEL

York University, Canada http://www.yorku.ca/vgoel

Abstract

Considerable progress has been made over the past decade in our understanding of the neural basis of logical reasoning. Unsurprisingly these data are telling us that the brain is organized in ways not anticipated by cognitive theory. In particular, they're forcing us to confront the possibility that there may be no unitary reasoning system in the brain (be it mental models or mental logic). Rather, the evidence points to a fractionated system that is dynamically configured in response to certain task and environmental cues. I will review three lines of demarcation including (a) systems for heuristic and formal processes (with evidence for some degree of content specificity in the heuristic system), (b) conflict detection/resolution systems, and (c) systems for dealing with certain and uncertain inferences; and then offer a tentative account of how the systems might interact to facilitate logical reasoning. Sensitivity to data generated by neuroimaging and patient methodologies will move us beyond the sterility of mental models vs. mental logic debate and further the development of cognitive theories of reasoning.

Biography

Vinod Goel studied architectural design and computer science as an undergraduate. He received his PhD in Cognitive Science from UC-Berkeley, followed by postdoctoral training in cognitive neuroscience at the NIH, USA and Institute of Neurology/UCL, UK. He is currently a Professor of Cognitive Neuroscience at York University, Canada, and the University of Hull, UK. His research uses brain imaging (fMRI) and lesion analyses techniques to study the cognitive, computational, and neural basis of rational thought processes ranging from logical inference to design problem-solving. This work has resulted in numerous, highly cited publications and has been recognized by a number of awards, including the McDonnell-Pew Program in Cognitive Neuroscience Award.

Title: Cognitive Informatics and Denotational Mathematical Means for Brain Informatics

PROFESSOR YINGXU WANG

University of Calgary, Canada http://enel.ucalgary.ca/People/wangyx/

Abstract

The contemporary wonder of sciences and engineering has recently refocused on the beginning point of them: how the brain processes internal and external information autonomously and cognitively rather than imperatively as those of conventional computers. Cognitive Computing (CC) is an emerging paradigm of intelligent computing methodologies and systems that implements computational intelligence by autonomous inferences and perceptions mimicking the mechanisms of the brain. CC is emerged and developed based on the transdisciplinary research in cognitive informatics and abstract intelligence. Cognitive Informatics (CI) [Wang 2002] is a transdisciplinary enquiry of computer science, information science, cognitive science, brain science, and intelligence science that investigates into the internal information processing mechanisms and processes of the brain and natural intelligence, as well as their engineering applications. The theoretical framework of cognitive informatics covers the Layered Reference Model of the Brain (LRMB), the Object-Attribute-Relation (OAR) model of information representation in the brain, the cognitive informatics model of the brain, and neuroinformatics. Recent studies on LRMB in cognitive informatics reveal an entire set of cognitive functions of the brain and their cognitive process models, which explain the functional mechanisms and cognitive processes of the natural intelligence with 43 cognitive processes at seven layers known as the sensation, memory, perception, action, meta-cognitive, meta-inference, and higher cognitive layers from the bottom up. Abstract Intelligence (aI) [Wang, 2008] and Denotational Mathematics (DM) [Wang, 2000, 2009] play an important role in cognitive informatics, brain informatics, and cognitive computing. αI is a universal mathematical form of intelligence that transfers information into actions and behaviors; while DM is a category of expressive mathematical structures that deals with high-level mathematical entities beyond numbers and sets, such as abstract objects, complex relations, perceptual information, abstract concepts, knowledge, intelligent behaviors, behavioral processes, and systems. The latest advances in CI and CC have led to a systematic solution for explaining brain informatics and the future generation of intelligent computers. A wide range of applications of CI, αI, CC, and DM have been recognized in brain informatics toward the implementation of highly intelligent systems such as world-wide wisdom (WWW+), cognitive knowledge search engines, autonomous learning machines, and cognitive robots.

Biography

Dr. Yingxu Wang is professor of cognitive computing and software engineering, Director of International Institute of Cognitive Informatics and cognitive computing (IICICC), and Director of Theoretical and Empirical Software Engineering Research Center (TESERC) at the University of Calgary, Canada. He is a Fellow of WIF, a P.Eng of Canada, a Senior Member of IEEE and ACM, and a member of ISO/IEC JTC1 and the Canadian Advisory Committee (CAC) for ISO. He received a PhD in Software Engineering from the Nottingham Trent University, UK, in 1997, and a BSc in Electrical Engineering from Shanghai Tiedao University in 1983. He has industrial experience since 1972 and has been a full professor since 1994. He was a visiting professor in the Computing Laboratory at Oxford University in 1995, Dept. of Computer Science at Stanford University in 2008, and the Berkeley Initiative in Soft Computing (BISC) Lab at University of California, Berkeley in 2008, respectively. He is the founder and steering committee chair of the annual IEEE International Conference on Cognitive Informatics (ICCI). He is founding Editor-in-Chief of International Journal of Cognitive Informatics and Natural Intelligence (IJCINI), founding Editor-in-Chief of International Journal of Software Science and Computational Intelligence (IJSSCI), Associate Editors of IEEE Transactions on System, Man, and Cybernetics (Part A), Journal of Advanced Mathematics and Applications (JAMA), and International Journal of Applied Metaheuristic Computing (IJAMC), as well as Editor-in-Chief of CRC Book Series in Software Engineering. Prof. Wang is the initiator of a number of cutting-edge research fields or subject areas such as cognitive informatics, abstract intelligence, cognitive computing, cognitive computers, denotational mathematics (i.e., concept algebra, system algebra, real-time process algebra, granular algebra, visual semantic algebra, and inference algebra), software science (i.e., theoretical software engineering and mathematical laws of software engineering), coordinative work organization theory, deductive semantics, LRMB, the reference model of autonomous agent systems, cognitive complexity of software, and built-in tests (BITs). He has published over 110 peer reviewed journal papers, 200+ peer reviewed full conference papers, and 12 books in cognitive informatics, software engineering, and computational intelligence. He is the recipient of dozens international awards on academic leadership, research achievements, best papers, and teaching in the last 36 years.

Title: Active Smart u-Things and Cyber Individuals

PROFESSOR JIANHUA MA

Hosei University, Japan http://cis.k.hosei.ac.jp/~jianhua/

Abstract

Due to the continuing miniaturization of chips and availability of wired/wireless communications, many kinds/forms of devices can be integrated into physical objects and ambient environments. The u-things, as opposed to pure digital e-things existing on computers/Web/Internet, are ordinary physical things with attached, embedded or blended computers, networks, and/or some other devices such as sensors, actors, e-tags and so on. Active smart u-things are ones that can, more or less, sense, compute, communicate, and may take some actions according to their goals, situated contexts, users' needs, etc. Active smart u-things can be with different levels of intelligence from low to high, and in various intelligent forms, e.g., aware, context-aware, interactive, reactive, proactive, assistive, adaptive, automated, autonomic, sentient, perceptual, organic, life-like, cognitive, thinking, etc. Active smart u-things may cover innumerable types of physical things in the real world. They can be roughly classified into three categories. i.e., smart object, smart space and smart system, according to their appearances and functions. The grand challenge is how to enable these smart u-things to offer desired services to all people in right time, right place and right means with ubisafe guarantee. Furthermore, the essential and existence of human in cyber-physical combined spaces should be re-examined. The Cyber Individual, with a short term †Cyber-I', is a real individual's counterpart in cyberspace. Cyber-I can be seen as a comprehensive description of a real individual including one's physical status, physiological states, psychological behaviors, personal features, social relations, history experiences, etc. Such kind of individual description and modeling is fundamental to offer personalized services to different users according to their needs and situations.

Biography

Jianhua Ma is a Professor at the Faculty of Computer and Information Sciences of Hosei University since 2000. Previously, he had 15 years' teaching/research experience at NUDT, Xidian University and the University of Aizu (Japan). His research from 1983 to 2003 covered wireless communications, data encryption, speech processing, multimedia QoS, 1-to-m HC hyper-interface, graphics ASIC, e-learning and virtual university, CSCW, multi-agents, Internet audio/video, mobile web service, P2P network, etc. Since 2003 he has been devoted to what he called Smart World/Hyperworld pervaded with smart physical u-things, characterized with Ubiquitous Intelligence (u-Intelligence, UI) for u-Services with UbiSafe guarantee. Dr. Ma has published over 200 papers in journals and proceedings, and edited over 10 books. He is a Co-Editor-in-Chief of JUCI, JMM, JoATC, JPCC and IJUNESST. He is on the editorial boards of IJCPOL, IJDET, IJWMC, IJSH, IJSIA, IJDTA, IJCIT and IJAS, and has edited over 15 journal special issues as a Guest Editor. He organized the 6th Int'l Conf. on Distributed Multimedia Systems (DMS'99) as a PC Co-Chair, the 1st Int'l Conf. on Cyber Worlds (CW'02) as one of founders and PC Co-Chairs, the 18th IEEE Int'l Conf. on Advanced Information Networks and Applications (AINA'04) as a General Co-Chair, and the 1st IEEE Int'l Conf. on Social Computing (SocialCom'09) as an Advisory Chair. He is a founder of Int'l Conf. on Ubiquitous Intelligence and Computing (UIC), Int'l Conf. on Autonomic and Trusted Computing (ATC), and IEEE/ACM Conf. on Cyber, Physical and Social Computing (CPSCom). He is a Chair of IEEE CIS Task Force on Autonomic and Trusted Computing, and a co-founder of IEEE Task Force on Ubiquitous Intelligence and Computing.

Organizing Committee

AMT'10 Conference Organization Conference General Chairs:

Sheila Petty University of Regina, Canada Runhe Huang Hosei University, Japan

Program Chairs

Pawan Lingras Saint Mary's University, Halifax, Canada Aijun An York University, Toronto, Canada

Organizing Chair:

Jimmy Huang York University, Toronto, Canada

Publicity Chairs:

Jian Yang International WIC Institute/BJUT, China Daniel Tao Queensland University of Technology, Australia

BI'10 Conference Organization Conference General Chairs:

Tomaso Poggio Massachusetts Institute of Technology, USA Jiming Liu Hong Kong Baptist University, HK

Program Chairs:

Yiyu Yao University of Regina, Canada Ron Sun Rensselaer Polytechnic Institute, USA

Organizing Chair:

Jimmy Huang York University, Toronto, Canada

Publicity Chairs:

Jian Yang International WIC Institute/BJUT, China Daniel Tao Queensland University of Technology, Australia

IEEE-CIS-TFBI Chair:

Ning Zhong, Maebashi Institute of Technology, Japan

WIC Co-Chairs & Directors:

Ning Zhong, Maebashi Institute of Technology, Japan Jiming Liu, Hong Kong Baptist University, Hong Kong

WIC Advisory Board:

Edward A. Feigenbaum, Stanford University, USA Setsuo Ohsuga, University of Tokyo, Japan Benjamin Wah, University of Illinois, Urbana-Champaign, USA Philip Yu, University of Illinois, Chicago, USA L.A. Zadeh, University of California Berkeley, USA

WIC Technical Committee

Jeffrey Bradshaw, UWF/Institute for Human and Machine Cognition, USA

Nick Cercone, York University, Canada

Dieter Fensel, University of Innsbruck, Austria

Georg Gottlob, Oxford University, UK

Lakhmi Jain, University of South Australia, Australia

Jianchang Mao, Yahoo! Inc., USA

Pierre Morizet-Mahoudeaux Compiegne, University of Technology,

France

Hiroshi Motoda Osaka, University, Japan

Toyoaki Nishida, Kyoto University, Japan

Andrzej Skowron, Warsaw University, Poland

Jinglong Wu, Okayama University, Japan

Xindong Wu, University of Vermont, USA

Yiyu Yao, University of Regina, Canada

Conference Program

AMT'10 and BI'10 Program Committee Members

AMT'10 Program Committee Members

Bill Andreopoulos Technische Universitat Dresden, Germany

Pradeep Atrey University of Winnipeg, Canada Virendra Bhavsar University of New Brunswick, Canada

Jiannong Cao Hong Kong Polytechnic University, Hong Kong

Sharat Chandran Indian Institute of Technology, Bombay, India

Li Chen Hong Kong Baptist University, Hong Kong

Sung-Pil Choi Korea Institute of Science and Technology Information, Korea

Chin-Wan Chung Korea Advanced Institute of Science and Technology (KAIST), Korea

Tharam Dillon Curtin University of Technology, Australia

Abdulmotaleb El Saddik University of Ottawa, Canada

Alexander Felfernig Graz University of Technology, Austria

William Grosky University of Michigan, USA

Daryl Hepting University of Regina, Canada

Jiajin Huang Beijing University of Technology, China

Wolfgang Huerst Utrecht University, Netherlands

Joemon Jose University of Glasgow, UK

Hanmin Jung Korea Institute of Science and Technology Information, Korea

Brigitte Kerherve Universite du Quebec a Montreal, Canada

Yang Liu Shandong University, China

Yijuan Lu Texas State University, USA

Brien Maguire University of Regina, Canada

Wenji Mao Institute of Automation, Chinese Academy of

Sciences, China

Wee Keong Ng Nanyang Technological University, Singapore

Yoshihiro Okada Kyushu University, Japan

Eugene Santos University of Conneticut, USA

Dominik Slezak University of Warsaw & Infobright Inc., Poland

Xijin Tang Institute of Systems Science, Academy of Mathematics

and Systems Science, Chinese Academy of Sciences, China

Hiroyuki Tarumi Kagawa University, Japan

Ruizhi Wang Tongji University, China

Yue Xu Queensland University of Technology, Australia

Rong Yan Facebook, U.S.A.

Jian Yang International WIC Institute, Beijing University of Technology, China

Tetsuya Yoshida Hokkaido University, Japan

Mengjie Zhang Victoria University of Wellington, New Zealand

Shichao Zhang University of Technology, Australia

Zili Zhang Southwest University, China

William Zhu University of Electronic Science and Technology of China, China

John R. Anderson Carnegie Mellon University, USA

Chang Cai Research Institute, National Rehabilitation Center for Persons with Disabilities, Japan

Xiaocong Fan The Pennsylvania State University, USA

Mohand-Said Hacid Universite Claude Bernard Lyon 1, France

D. Frank Hsu Fordham University, USA

Kazuyuki Imamura Maebashi Institute of Technology, Japan

Kuncheng Li Xuanwu Hospital, China

Peipeng Liang Beijing University of Technology, China

Pawan Lingras Saint Mary's University, Canada

Duoqian Miao Department of Computer Science and Technology, Tongji University, China

Mariofanna Milanova University of Arkansas at Little Rock, USA

Sankar Kumar Pal Indian Statistical Institute, India

Frank Ritter Penn State University, USA

Hideyuki Sawada Kagawa University, Japan

Lael Schooler Max Planck Institute for Human Development, Germany

Tomoaki Shirao Gunma University Graduate School of Medicine, Japan

Andrzej Skowron Warsaw University, Poland

Dominik Slezak University of Warsaw & Infobright Inc., Poland

Diego Sona Fondazione Bruno Kessler, Italy

Piotr S. Szczepaniak Technical University of Lodz, Poland

Shusaku Tsumoto Dept. of Medical Informatics, Shimane University, Japan

Frank van der Velde Leiden University, The Netherlands

Guoyin Wang Chongqing University of Posts and

Telecommunications, China

Jinglong Wu Kagawa University, Japan

Jian Yang International WIC Institute, Beijing University of Technology, China

Yiyu Yao Dept. of Computer Science, University of Regina, S4S 0A2, Canada

Fabio Massimo Zanzotto University of Rome "Tor Vergata", Italy

Bo Zhang Tsinghua University, China

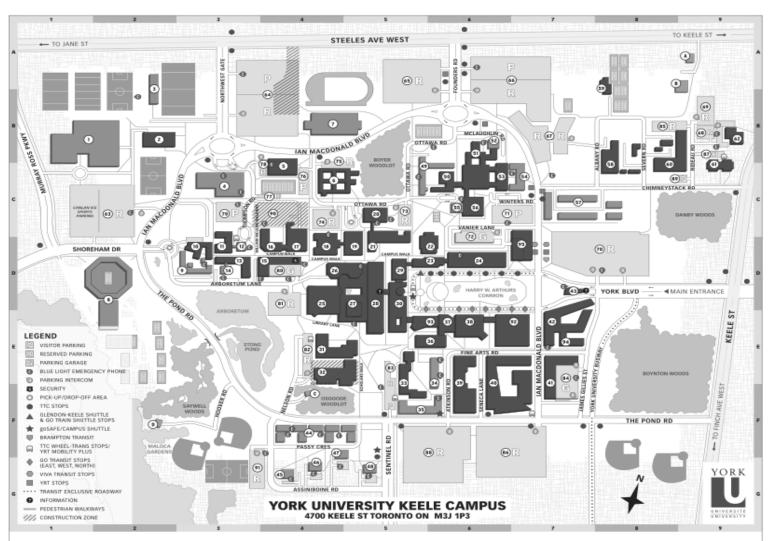
Yanqing Zhang Georgia State University, USA

Ning Zhong International WIC Institute, Beijing University of Technology; Maebashi Institute of Technology, China

Haiyan Zhou International WIC Institute, Beijing University of Technology, China

Yangyong Zhu Fudan University, China

Map of Conference Venue



CAMPUS DIRECTORY

■ ACADEMIC, ADMINISTRATIVE &				Scott Library	SCL	D4		PARKING GARAGES - VISITORS			VISUAL PERFORMANCE AR	TS FAC	ILITIES	
	COMMERCIAL BUILDINGS				Scott Religious Centre, CSQ	SRC	D5		Arboretum Lane Parking Garage ARB	D4	92	Art Gallery of York University	ACE	E7
	190 Albarry Road	ALB	A8	40	Seneca @ York,	SAY	E7		Student Services Parking Garage SSP	E7	37	Burton Auditorium	BU	E6
	Accolade East	ACE	E7		Stephen E. Quinlan Building**			72	York Lanes Parking Garage YLP	D6	92	Gales Gallery	ACW	E6
93	Accolade West	ACW	E6		Seymour Schulich Building	SSB	E7				38	Joseph G. Green Studio Theatre	CFT	E6
95	Archives of Ontario*	AD	D7	2	Sherman Health Science	SHR	B2		PARKING LOTS – VISITORS		92	McLean Performance Studio	ACE	E7
33	Atkinson	ATK	E5		Research Centre			83	Atkinson Lat	E5	92	Price Family Cinema	ACE	E7
29	Behavioural Science	BSB	DS		Steacie Science & Engineering Library		D4	66	Founders Road East Lot	A6	92	Sandra Faire & Ivan Fecan Theatre	ACE	E7
41	Bennett Centre for	BCS	E7		Stedman Lecture Halls	SLH	D6	64	Northwest Gate Lot	B4	92	Tribute Communities Recital Hall	ACE	E7
	Student Services, Admissions				Stong College	SC	D3	79	Thompson Road Lot	C4				
	Bookstore, York Lanes	YL.	D6		Student Centre	STC	D6	71	Vanier Lot	C7		SPORT & RECREATION FAC	ILITIES	
	Calumet College	CC	D3		Tait McKenzie Centre	TM	C3	76	West Office Building East Lot	C4	- 1	Canlan Ice Sports*	ICE	B1
	Central Square	CSQ	D5		Technology Enhanced Learning	TEL	E6	89	Physical Resources Building South Visitor Lot	C9	4	Tait McKenzie Centre	TM	C3
	Central Utilities Building	CUB	B8		Vanier College	VC	C6		Kinsmen Lot	B9	- 8	Tennis Canada - Rexall Centre*	TC	D2
38	Centre for Film & Theatre	CFT	E6		Vari Hall	VH	D5				7	Track & Field Centre*	TEC	B4
16	Chemistry	CB	D4		West Office Building	WOB	C4		PARKING LOTS - RESERVED			York Stadium	STA	A2
62	Computer Methods Building**	CMB	B9		William Small Centre	WSC	D4	67	Albany Road Lot	B7	_	TOTAL DISSESSED III	211-1	
19	Computer Science & Engineering	CSE	D5		Winters College	WC	C6		Atkinson Let	E5	-	HISTORICAL HOUSE		
26	Curtis Lecture Halls	CLH	D/S		York Lanes	YL.	D6		East Office Building Lot	B4		Hart House	HH	F4
- 6	East Office Building	EOB	C4	95	York Research Tower	YRT	D7		Founders Road East Lot	A6		Hoover House	HOH	F2
94	Executive Learning Centre	ELC	E7						Founders Road West Lot	A5		Stong Barn	SB	A9
21	Farguharson Life Sciences	FRO	D5		RESIDENCES & APARTMENT	'S			Library Lot	D4		Stong House	SH	A9
50	Founders College	FC	C6	48	320 Assiniboine Road	AS2	G5		Lumbers Lot	C5	_	Storig riouse	301	
31	Health, Nursing &	HNE	E4	47	340 Assiniboine Road	AS4	F4		Nelson Road Lot	E4		Shared use		
	Environmental Studies			46	360 Assiniboine Road	AS6	G4		Northwest Gate Lot	84		Nan-York facility		
36	Joan & Martin Goldfarb	CFA	E5	45	380 Assiniboine Road	AS8	G4		Passy Crespent Lot	63		Harriote locally		
	Centre for Fine Arts			34	Atkinson Residence	AR	E6		Physical Resources Building North Lot	D7				
61	Kinsmen	K	C9	12	Bethune Residence	BR:	D3		Physical Resources Lot	B9				
90	Life Sciences Building	LS	C4	9	Calumet Residence	CR	D3		Rideau Road Lot	B9				
43	Lorna R. Marsden Honour Court &	HC	D7	49	Founders Residence	FR	C5		Sentinel Boad Lot	F6				
	Welcome Centre			57	Harry Sherman Crowe	HCC	C7		Shoreham Drive Lot					
	Lumbers	LUM	C5		Housing Co-op**		1			C2				
	McLaughlin College	MC	B6	44	Passy Gardens, 2-18 Passy Cres.	PASSY	F4		Steacie Lot	C4				
	Norman Bethune College	BC	D3		The Pond Road Residence	PON	F5		Tait McKenzie Lot	C3				
	Observatory, Petrie	PSE	D4	14	Stong Residence	SR	D3		The Pond Road East Lot	F7				
	Osgoode Hall Law School	OSG	E4	52	Tatham Hall	TH	B6		Vanier Lot	C7				
	Petrie Science & Engineering	PSE	D4	55	Vanier Residence	VR:	C6		West Office Building West Lot	C4				
60	Physical Resources Building	PRB	B9		Winters Residence	WB	C7	70	York Boulevard Lot	B8				
28	Ross Building	R	D5											
													HIRA	E 30 2010

JUNE 30, 201