



**INTERVIEW WITH
PETER VAN BEEK
U WATERLOO**



**REPORT ON
CANADIAN AI'2016**



**NEWS ABOUT
CANADIAN AI'2017**



**CAIAC AWARD
RECIPIENTS,
UPCOMING EVENTS,
AND MORE!**

The Herald



Welcome to the fourth
edition of the CAIAC Herald!

Bienvenue à la quatrième
édition du CAIAC Herald!

The CAIAC Herald - Vol 4

The purpose of this publication is to keep you informed of the new developments at CAIAC and in the Canadian AI community. In addition, each edition features an interview with an eminent member of our community. In this issue, our guest of honour is Peter van Beek of the University of Waterloo.

For more information about
the Canadian Artificial
Intelligence Association,
please visit our Website at:
www.caiac.ca

Interview with Peter van Beek

Entrevue avec Peter van Beek

CAIAC

What is, in your opinion, the most important development in Artificial Intelligence that took place in recent years or is in the process of taking place?

PvB

Perhaps not surprisingly, I view machine learning as the most important development in recent years, with deep learning and neural networks being among the most exciting current approaches.

CAIAC

Why do you believe it is a significant development and what is its scope. Could you compare its projected impact to the impact that earlier advances in AI have had?

PvB

Many important research advances and applications resulted (and continue to result) from work in, for example, knowledge-based and probabilistic systems. However, for tasks such as language and vision the progress wasn't as fast as hoped. Machine learning changed that and the deep learning approach, where the approach itself is designed to learn the right features or attributes for solving the problem, appears to be leading to further significant achievements. Of course, the field of AI has been through cycles of hope followed by despair before, but there is no denying the significant AI systems from handwriting recognition to autonomous driving that have been deployed or that are nearing deployment.



Peter van Beek's research interests in artificial intelligence: constraint programming, combinatorial optimization, and applied machine learning.

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How do you believe that this new development will change our everyday lives?

PvB

A well-publicized study out of Oxford estimates that almost 50 percent of total U.S. (and Canadian) employment is at risk of being automated over the next decade or two, and much of this employment is at risk due to advances in artificial intelligence, including machine learning. On the other hand, technologies such as autonomous driverless cars and trucks have the potential to save thousands of lives annually. The effects of advances in AI, both positive and negative, promise to be profound.

CAIAC

What part has Canada played or is currently playing in this new development?

PvB

As is well known, Canada has had a strong presence in AI research from the earliest days. When I present neural networks, I'm fond of telling my AI class the up-and-down history of that field and that three of its most prominent researchers — Joshua Bengio, Geoffrey Hinton, and Yann LeCun — have a strong Canadian connection. Their collective story is inspiring as it shows the value of persistence in research.

Canadian AI'2016 Report

Rapport sur la conference du Canadian AI 2016

By Richard Khoury and Christopher Drummond

source: Proceedings of 29th Canadian Conference on Artificial Intelligence

The 29th Canadian Conference on Artificial Intelligence (AI 2016) built on a long sequence of successful conferences, bringing together Canadian and international researchers, presenting and discussing original research. The conference was held in Victoria, British Columbia, Canada, from May 31 to June 3, 2016, and was collocated with the 42nd Graphics Interface Conference (GI 2016), and the 13th Conference on Computer and Robot Vision (CRV 2016).

AI 2016 attracted 97 submissions from Canada and internationally. Each submission was reviewed in double-blind mode by at least two Program Committee members for the conference and the proceedings 12 long papers and 27 short papers were accepted, i.e., 12.4 % and 27.8 % of the total number of submissions, respectively. Regular papers were allocated 12 pages in the proceedings, while short papers were allocated 6 pages.

The conference program was enriched by three keynote speakers and three tutorials, all selected from Canadian universities. The keynote speakers were B. John Oommen (Carleton University), Michael Bowling (University of Alberta), and Froduald Kabanza (Université de

Sherbrooke). The tutorials were organized by Atefeh Farzindar and Diana Inkpen (respectively, NLP Technologies Inc. and University of Ottawa), Nathalie Japkowicz (University of Ottawa), and Ted Kirkpatrick and Oliver Schulte (both Simon Fraser University).

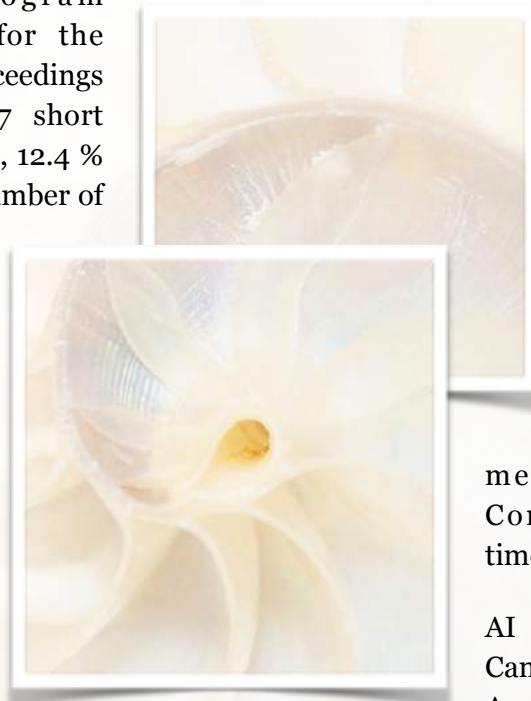
We want to extend our warm thanks to all the individuals who contributed to the success of the conference: Brian Wyvill and Melanie Tory (both University of Victoria), the general chairs of the three collocated conferences, Artificial Intelligence, Graphics

Interface, and Computer and Robot Vision (AI/GI/CRV); Ji Li (University of Victoria), the local arrangements chair for AI/GI/CRV; Gabriel Murray (University of the Fraser Valley) and Lars Kotthoff (University of British Columbia), the chairs of the Graduate Student Symposium; and the

members of the Program Committee, who provided timely and helpful reviews.

AI 2016 was sponsored by the Canadian Artificial Intelligence Association (CAIAC). Cory Butz (University of Regina), the

president of CAIAC, and the CAIAC Executive Committee, provided essential advice and guidance based on their experience from previous Canadian AI conferences.



CAIAC Award Recipients Récipiendaires des recompenses du CAIAC

source: caiac.ca

Dr. Danny Silver received the Distinguished Service Award. This award is presented to an individual to recognize his or her outstanding service to CAIAC and to the Canadian Artificial Intelligence community. Dr. Danny Silver is a Past-President of CAIAC (2009-2013) and since 1993 has worked on machine learning and data mining projects in the private and public sector providing situation analysis and problem definition, project management and guidance, and data mining services. He is currently Director of the Acadia Institute for Data Analytics.

Tyler Lu, from the University of Toronto, won the Best Ph.D. Dissertation Award for his thesis "Group Decision Making with Partial Preferences." His supervisor was Dr. Craig Boutilier.

Kurt Routley, from Simon Fraser University, won the Best Master's Thesis Award for his work "A Markov Game Model for Valuing Player Actions in Ice Hockey." His supervisor was Dr. Oliver Schulte.

Eisa Alanazi, University of Regina, and Chris Cameron, University of British Columbia, were each awarded a travel grant of \$500 to present their papers at the International Joint Conference on Artificial Intelligence (IJCAI).

Congratulations to all winners!

News about Canadian AI'2017 Information sur le Canadian AI'2017

source: caiac.ca

The 30th Canadian Conference on Artificial Intelligence (AI 2017) will be held in Edmonton, Alberta, from May 16th to May 19th 2017. As was done in the past, this event is collocated with the Canadian Graphics Interface (GI 2017) and the Computer and Robot Vision (CRV 2017) conferences. These three events (AI/GI/CRV 2017) will bring together hundreds of academic researchers, industrials and graduate students from Canada and elsewhere to discuss and confront research results and to showcase innovation in intelligent systems and advanced information and communications technology. Invited speakers confirmed to date are Hugo Larochelle (Twitter) and Adnan Darwiche (UCLA).

We welcome novel papers on all aspects of Artificial and its applications. The proceedings will be published in Springer's Lecture Notes in Artificial Intelligence series. Selected papers will be invited to a special issue of the prestigious Computational Intelligence journal. All submissions will go through a double-blind review process. Submitted papers must be formatted using the Springer LNCS style and not exceed 12 pages for long papers or 6 pages for short papers.

Additional information on Canadian AI 2017 can be found on CAIAC website.



Graduate Student Symposium 2017

sources: caiac.ca

The 2017 Canadian Conference AI Graduate Student Symposium (GSS 2017) will be organized by Dr. Danny Silver (Acadia University), and Dr. Colin Bellinger (University of Alberta), and Dr. Shiva Sharma (University of Ottawa). The symposium invites graduate students to submit extended abstracts of their thesis for possible inclusion in GSS 2017. Authors of accepted submissions will be asked to give an oral presentation.

The Symposium provides an opportunity for

students to discuss and explore their research interests and career objectives with their peers and with a panel of established researchers in Artificial Intelligence, helping to develop a supportive community of scholars and a spirit of collaborative research.

May 16th, 2017 will be an exciting day for young researchers. Tutorials will also be offered the same day. Moreover, GSS 2017 participants are encourage to attend the main conference.

New at CAIAC? Quoi de Neuf a CAIAC?

sources: caiac.ca

2017 is an election year. Please consider serving. The current Canadian Artificial Intelligence Association (CAIAC) Executive Committee is:



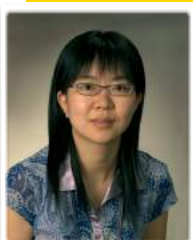
President Cory Butz

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Past President Nathalie Japkowicz

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Our purpose is to organize and sponsor a number of events. In particular, we are responsible for the Canadian AI Conference, the Graduate Symposium, Dissertations and Master's Thesis awards, the Lifetime Achievement Award, and the Distinguished Service Award. We also plan new activities and services for the AI community in Canada. We operate by holding monthly (or more frequent, when needed) Skype meetings to set up events and discuss new projects. The role of the president and vice president is to oversee the proper operation of the organization. The treasurer manages CAIAC's finances and the secretary records all internal and external communications and manages the website. If you have ideas about how to improve the services provided by CAIAC, please do not hesitate to contact us at the e-mail addresses provided above. We welcome your comments and suggestions!

Community Announcements

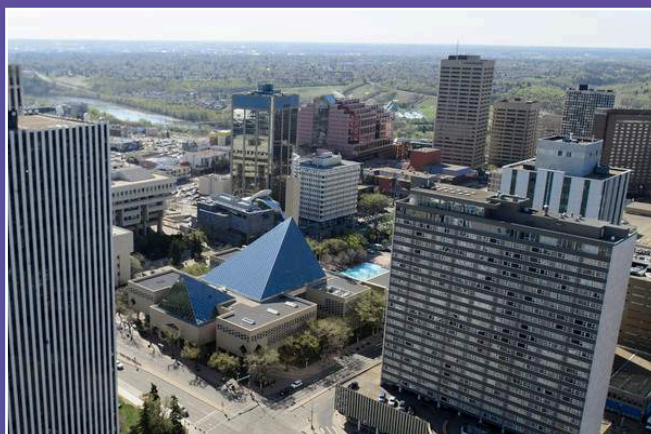
source: youthscience.ca

At the Canada-Wide Science Fair 2016, CAIAC awarded Mr. Brent Charron, St. Mary Elementary School (Maidstone, ON), the Canadian Artificial Intelligence Association Award for his project, entitled the The Graphene Enhanced Solar Window Insulating Furnace Technology (S.W.I.F.T.) Unit. The S.W.I.F.T. Unit was developed to insulate windows against heat loss, generate electricity and heat rooms. The S.W.I.F.T. Unit is an inexpensive method of heating rooms lacking equator facing windows and therefore not heated through passive heating. Mechanical and electrical enhancements, such as the use of thermovoltaic cells and graphene-coated sheets, have been used to improve the S.W.I.F.T. Unit.



The Canada-Wide Science Fair 2017 will be held at the University of Regina from May 14th to May 20th, 2017. CAIAC will continue to support the next generation of innovators.

Upcoming Events Événements à venir



- ▶ Canadian AI Conference in Edmonton, Alberta, May 16-19, 2017
- ▶ Best Ph.D. Dissertation Award
- ▶ Best Master's Thesis Award
- ▶ Distinguished Service Award nomination
- ▶ Lifetime Achievement Award nomination
- ▶ CAIAC Executive Elections 2017-2019

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