



# A U R U M

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## From the Editor

Hello

Aurum and I are both back after missing for 3 years – in time to celebrate IEEE's 125<sup>th</sup> anniversary!

The last issue published was in summer of 2006. Later that year I changed jobs, moved cities and became chair of IEEE Canada's Website Committee that manages IEEE Canada's websites including [ieeeca.ca](http://ieeeca.ca). This combination of events made it difficult to devote time as editor of this publication and I resigned. Unfortunately, at the same time IEEE Canada GOLD also went into hibernation with little activity in 2007 and 2008.

The new Canada GOLD Chair Dan Coode, who has breathed new life back into GOLD, asked me if I could revive Aurum. So, here I am with the first and existing issue of 2009! We've decided to start with 2 issues this year with the next issue being in late fall sometime.

At IEEE Canada's spring regional meeting in May in St. John's, Newfoundland budget was approved for a GOLD Congress to be held in Toronto in September. This is very exciting news for us as it will be an excellent opportunity to energize existing and train new GOLD leadership. We're very excited and hope to see you all there.

Talk to you in the fall. I hope you enjoy activities planned this year for the 125<sup>th</sup> anniversary.

**Ahsan Upal**  
**Publisher. Aurum**

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## About Aurum

"Aurum" is Latin word for "gold" and is where the periodic symbol Au originates. The Aurum newsletter is published quarterly each year, with the next issue being in November 2009. The next deadline for submissions is October 19, 2009.

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## Address from IEEE Canada GOLD Coordinator

Dan Coode, IEEE Canada Gold Coordinator

My name is Dan Coode and I am your regional GOLD coordinator this year, responsible for communicating the IEEE GOLD message to you and seeing that we are meeting your needs. I herald from Saskatoon, where I work in Business Development for a communications Engineering company (SED Systems). I have experience with the University of Saskatchewan student branch that I chaired and helped start an academic conference. Since graduation I have worked with the North Saskatchewan Section where I started the local GOLD affinity group. I have also held a couple positions on the NSS section.

GOLD or Graduates Of the Last Decade has been formed as an automatic grade of membership to identify the unique needs of recent graduates. The membership benefits that a senior Engineer needs in his career are not the same as someone who just graduated. We look to transition our student members to industry by providing a community of industry peers.

As GOLD Coordinator for IEEE Canada, I have the privilege of informing you what's happening with IEEE GOLD worldwide. There are always events happening around the world and I encourage you to contact local GOLD affinity groups when you're travelling personally or professionally. It's a great chance to meet professionals from other parts of the world. At an organizational level, we are revisiting the mission, vision, goals and objectives of GOLD as well as creating GOLD manuals that will be available to assist volunteers in anything from running events and getting funding to completing reports and where to find them.

This year is a special year for the IEEE, it is our 125<sup>th</sup> anniversary. As such I hope that this year will remind us of our history and achievements, renewing our enthusiasm and vigour for the IEEE. Moving forward, I look forward to a new era for GOLD, being recognized as an important part of the IEEE life cycle.

We are eager to hear from you; what can we do to help you and provide you more benefit as a member? If you don't have a local GOLD affinity group, are you interested in helping set one up? Have you attended local GOLD affinity group activities? Are you interested in getting more out of the IEEE by volunteering? Be sure to get in touch with me or your local GOLD affinity group chair.

## IEEE Canada GOLD Workshop 2009

Dan Coode, IEEE Canada Gold Coordinator

IEEE Canada GOLD is having a workshop on September 18<sup>th</sup>, 2009 in Toronto. This is a chance for GOLD volunteers to learn more about the IEEE and GOLD, learn what resources are available to them and most importantly network with peers across the region. We are fortunate to have the Vice-President of the IEEE MGA Committee, Joe Lillie present to join us for the day (also IEEE president candidate). The IEEE Canada Executive Committee will be having meetings in conjunction with the workshop, giving an excellent chance to meet and network with those directing IEEE Canada. Funding is available to attend, please contact me for more information if you're interested in joining us. Dan Coode ([dan.coode@ieee.org](mailto:dan.coode@ieee.org))

# Northern Canada Gold Activities

Patrick Baltazart P.Eng. Northern Canada Gold Chair

## Activities Held in 2008:

### 1- 2008 GOLD “meet and greet” events: 3 events

The intent was to help GOLD and any other IEEE member to “causally meet and network over a drink”. Three events were organized in Edmonton, the turnover was not as high as expected, but the participants provided the following positive feedback:

- new graduates could interact with senior members and get their points of view to understand challenges of their industry
- new graduates could receive advice on how to avoid common mistakes made by E.I.T.s
- all members could exchange opinions and points of view about the type of project they are dealing with on a daily basis
- possibility for all members to discuss the technology involved in the project they are working on

### 2- Synchrotron tour

In June 2008, a joint event was organized with members of IEEE Northern Canada Section and members of the IEEE Northern Saskatchewan Section went to the Canadian Light (Saskatoon Synchrotron Facility) to take part in a tour of this interesting laboratory.

Staff from the facility (Mark DeJong) took the entire IEEE group on a tour to present the facility, its technology and the experimental, industrial and medical applications of it. Extensive explanations were provided by Mark and his staff:

- History of the facility and first experiments: From the first experiments with linear electron particle beam accelerators to the present ring, the light emitted by the facility has been used as an incredibly powerful source of light able to emit wave length ranging from infrared, visible, ultra violet to X-rays
- Various developments were made over the years to extend the size of the facility and increase the power of the light source. An interesting fact was presented to the participants: The evolution of X-rays applications, electronics and computers contributed to increase in power of the synchrotron. In return, the ever increasing sharpness of the images made with the synchrotron light contributed to improve every one of these technologies!
- The industries and sciences which can take advantage of such a powerful light source:
  - Medical exams (X-ray)
  - Biological experiments (all wave length)
  - Oil and Gas (micro analysis of pipeline alloy - X ray)
  - Micro ship industry: using the light as a carving tool to go to even smaller scale and using the light to see these even more smaller scale (all wave lengths)

Virtually, all industries/experiment requiring powerful light sources in various wavelengths can

benefit from this fabulous facility of advanced particle accelerator.

The tour was also an excellent opportunity for our IEEE Edmonton members to network with IEEE Saskatoon members. A causal evening event was held in a local restaurant the evening preceding the tour.

### 3- Arc Flash presentation

In mid 2008, a joint event was organized with WIE at the Edmonton German Canadian Cultural center.

A 1 hour presentation was done to present to electrical and non electrical people the dangers related to occurrence of electric arcs following operator mistakes or failure of power distribution system. 5 fundamental aspects were discussed:

- What an Arc Flash event really is: the definition and the physic behind the phenomena
- What are the common dangerous misconceptions
- What are the effect of these violent event on the human body
- What can engineers do to prevent/mitigate these events
- What can workers use to be protected

The intent was to raise the awareness of the participants and attempt to answer to fundamental questions concerning this topic. Participants seemed to appreciate the content and the information delivered. An open question and answer session followed the presentation and all participants were actively involved in exchange of ideas and opinions on the topic.

### **Planned Activities in 2009:**

Presently, I am attempting to contact EPCOR to receive the authorization for organizing a site visit of the Genesee's IGCC Cogen system. Coal is the first combustible used in Alberta to generate power. The interesting facts of Genesee are the following:

- The plant uses a process to convert coal form the nearby open mine into a gaseous form
- This gas is then burned into a turbine
- At the exhaust of the turbine, a post combustion process increase the temperature of the gas even more
- This heat source is used in a boiler to generate steam. That steam is then used to power a steam turbine
- Both gas turbine and steam turbine are the prime mover of powerful generators which provide energy to Alberta's power grid

I would like to do another few "Meet and Greet events", but this time, I am trying to work on inviting suppliers (e.g.: EATON, TYCO Raychem...) to present technologies and attract more participants. I would also like to organize another presentation on High Voltage technology that Mr. Mak Hakim of Sinai Engineering did last fall.

You can get me at [Patrick.Baltazart@stantec.com](mailto:Patrick.Baltazart@stantec.com) for more info about upcoming events.

# Toronto GOLD Career Event in Canada

Vahab Kamranpoor, Toronto Gold Industrial Relations

The IEEE GOLD group held their 2nd event of the year which was catered to all the new engineering grads but some non-grads attended as well.

The event was held at Ryerson University and focused on getting the new grads familiar with the real life work and also gave them the opportunity to network and ask questions. There was a presentation by Bud Derakhshand of Career Match whom spoke about engineering jobs in general, resumes, the do's and don'ts when applying for a new job and the current recession. The students in my opinion found this useful as all their questions were being answered by Bud. The other two speakers were; Marcel Moto (Secretary of IEEE Toronto section) and Wai Tung (Vice Chair, Toronto Section, V Chair of ECE at University of Toronto). They gave a general presentation about IEEE, their role and why students should join.

I would like to take this opportunity to thank all the students who participated as well as our guest speakers and our GOLD team. We hope to see you all at our next event which will be announced in the near future so stay tuned and check the site for updates. Here are some pictures from the event.



## GOLD Around the World Video!

IEEE Graduates of the Last Decade (GOLD) created a unique virtual event – a series of short video clips that makes it appear as if IEEE's 125th Anniversary mark is being passed from person to person, and from place to place. The project's purpose is to raise awareness of IEEE and to carry IEEE achievements and ideas throughout the world. For that we need your help!

All members are invited to participate. To learn how to participate please visit this website and follow the steps:

<http://www.goldaroundtheworld.com/>



## IEEE Launches Interactive Web Site to Highlight Members' Humanitarian Projects

GOLDRush

IEEE has announced the new Humanitarian Technology Network (HTN) – a platform that enables IEEE members to connect and collaborate with others doing similar humanitarian work, while gaining visibility and recognition for their efforts. In addition to sharing details of their project(s), IEEE members may also post their needs for advice, funding or assistance from others.

The ability to post articles in the HTN is one of the benefits of IEEE membership. Anyone can browse or view the HTN content, including humanitarians, Non-Governmental Organizations (NGOs), and others who may wish to partner with or fund member humanitarian efforts.

The HTN is built on the same technology as the IEEE Global History Network launched in 2008. The platform accommodates multi-media descriptions - including text, photographs, diagrams, audio, video, as well as PowerPoint slide presentations.

The network is now open for IEEE member contributions. Visit [www.ieeehtn.org](http://www.ieeehtn.org) to make your humanitarian contributions more visible.

## IEEE in Second Life

GOLDRush

Second Life® is an online 3-D virtual world within which residents are able to establish identities (avatars), explore, create and communicate. Referred to as "inworld" by its residents, this interactive environment lends itself well to social net-working, collaboration and learning.

IEEE has created in Second Life® a virtual infrastructure and presence to support its staff, volunteer and member needs. This presence is spread across two islands and serves as a gateway for people to explore and participate in the activities of the IEEE. Opportunities to help develop the IEEE islands are open to IEEE staff, volunteer and member groups. To view the IEEE in the Virtual World visit <http://www.ieee.org/go/secondlife>.

If you'd like to participate, please contact the IEEE Second Life Team. Send an email to [secondlife@ieee.org](mailto:secondlife@ieee.org)