

Solid State Circuits

Engineering in Medicine and Biology

Role of Error Control Coding in On-Chip Communication Network: Advantages and Design Trade-offs

Dr. Partha Pratim Pande
Washington State University
Monday 31 March 300pm
Room 2020, Kaiser Building, UBC

Design technologies for silicon-based integrated systems present unprecedented advantages and challenges, the former being related to the very high device density and the latter to the signal integrity issues. According to the International Technology Roadmap for Semiconductors (ITRS) with a chip area of about 500mm², in 50nm CMOS, over a thousand microprocessor cores, or modules of comparable complexity, may be integrated on to a single chip.

The current design methodologies are not expected to provide the necessary productivity to cope with the challenges of building such big Systems-on-Chips (SoCs). Network on chip (NoC) is emerging as a revolutionary methodology to support this huge degree of integration.

A major challenge that NoC design is expected to face is related to the intrinsic unreliability of the communication infrastructure under technology limitations. As the separation between the wires is reducing rapidly, any signal transition in a wire affects more than one neighbor. This phenomenon is commonly referred to as the crosstalk effect. Crosstalk is one of the sources of transient errors. Among other transient noise sources, we can enumerate factors like electromagnetic interference, alpha particle hits, cosmic radiation, etc.

To protect the NoC architectures against all these varied sources of noise it is possible to embed self-correcting design methodology in the NoC communication fabrics. This embedded intelligence can be achieved through simple and novel joint crosstalk avoidance and multiple error correction coding schemes. By incorporating these coding schemes we not only make the communication fabric robust, but also reduce the overall energy dissipation of the system.

Speaker: Partha Pratim Pande (Member, IEEE) is an Assistant Professor in the School of

Prions and Prion Diseases: Engineers Invited!

Dr. Neil Cashman Professor, UBC
Tuesday 08 April 4:00pm – 5:00pm
CHBE Room 101, 2360 East Mall

Prions, those unique infectious particles, have posed immense socioeconomic problems in Canada over the past five years. Meeting the challenge of prion diseases will require solving the central problems of biology, diagnosis and treatment of these novel pathogens, as well as strategies to minimize the impact of new regulatory policies. Dr. Neil Cashman Professor, UBC, Medicine (Neurology) Scientific Founder and CSO, Amorfix Life Sciences

Speaker: Dr. Neil Cashman is a neurologist-neuroscientist working in neurodegeneration and neuroimmunology. He is a Professor of Medicine (Neurology) University of British Columbia where he holds a Canada Research Chair in Neurodegeneration and Protein Misfolding Diseases. He is Scientific Director of PrioNet Canada, a Canadian Network of Centres of Excellence funded by the Federal Government. He was Scientific Founder and Chief Scientific Officer to Caprion Pharmaceuticals, and currently to Amorfix Life Sciences, two Canadian biotechnology companies dedicated to his work in proteomics, diagnostics and therapeutics of disease.

Info: EMBS Chair Ezra Kwok ezra@chml.ubc.ca

LIGHT REFRESHMENTS SERVED

Electrical Engineering and Computer Science at Washington State University. His research interests focus on design and test of network-on-chip (NoC) architectures, robust and fault-tolerant multiprocessor SoC (MP-SoC) platforms. He has a BS in Electronics and Communication Engineering from Calcutta University, an MS in Computer Science from the National University of Singapore, and a Ph.D. in Electrical and Computer Engineering from the University of British Columbia.

Info: Solid State Circuits Chair, Resve Saleh res@ece.ubc.ca

Computer

Dynamic Data Management in MANET

Sanjay Madria
University of Missouri-Rolla
Distinguished Visitor Program
Thursday 10 April 530pm
UBC - ECE, 2356 Main Mall, Rm Mcleod 418

In ad hoc networks, due to frequent network partition, data accessibility is lower than that in conventional fixed networks. This problem can be solved by replicating data items on mobile hosts. However, the movement of nodes, limited storage space and frequent disconnections limit the availability. In this talk, I will discuss three dynamic replica allocation methods by taking into account the read/write patterns at mobile hosts for each data item, the status of the network connection, topology and by considering a periodic updates and integrating user profiles of mobile users' schedules. These methods allow dynamic relocation of replicas to maintain availability. I will discuss the performance evaluation of our proposed methods and show their comparison using extensive simulation experiments based on parameters such as write frequency, relocation period, data accessibility, radio communication range, limited memory, among others. This talk is partly based on forthcoming paper in IEEE Transaction on Mobile Computing.



Speaker: Sanjay Madria received his Ph.D. in Computer Science from Indian Institute of Technology, Delhi, India in 1995. He is an Associate Professor, Department of Computer Science, at University of Missouri-Rolla, USA. Earlier he was Visiting Assistant Professor in the Department of Computer Science, Purdue University, West Lafayette, USA. He has published more than 120 Journal and conference papers in the areas of Mobile databases, web data warehousing and XML, and nested transaction management and performance issues. He guest edited WWW Journal and Data and Knowledge Engineering Sp. Issues on Web data management and Data warehousing. He has co-authored a book "Web Data Management: A Warehouse Approach", published by Springer-verlag. He served as Program Co-chair for ECWEB 00&01 conferences held, UK and Germany. He is serving as PC member of various database conferences (ICDE'07, DASFAA'07 - area chair), co-chair of XSDM'06 and reviewer for many reputed database journals published by ACM, IEEE and Springer among others. His research is supported by grants from NSF, DOE, UM research board and from industry. He is an IEEE Senior Member.

Co-sponsor: IEEE Communication Society
Info: Philippe Kruchten, kruchten@ieee.org

Info: Philippe Kruchten, kruchten@ieee.org

Industry Applications

Minimizing Plant Interruption Caused by Line Disturbances Using Active Voltage Conditioners

Bob Hanna, RPM Engineering Ltd
David Ezer, Omni Power
Tuesday 01 April 1st 530 - 930 pm
BCIT, Room: SW5-1840 (beside SW3 on BCIT map; http://www.bcit.ca/map/)

Voltage anomalies, in particular voltage sags, can cause equipment loss and process upset. It is reported that in North American alone, voltage sags cost industry over U\$200 billion per annum. Electrical utilities cannot readily prevent the occurrence of voltage sags, disturbances and momentary outages, which typically last for a fraction of a second. It is usually not practical for the utility to provide correction for their distribution system or even for an individual industrial customer as in most cases; these events are caused by inclement weather conditions or animals.

Industry, which regularly invest millions in production equipment, often ignore, or greatly underestimate, the cost of their unplanned outages. Traditionally, a UPS is used to provide adequate protection for data processing centers, but this solution is impractical and uneconomical for critical processes or plant wide larger electrical equipment distributed throughout the plant.

This presentation will cover the latest Active Voltage Conditioning solutions, which keep critical equipment running, avoid process upset and provide very attractive financial payback, typically in less than 18 months. It will also describe case studies covering installation for active voltage conditioners in Petro-Chemical and other industries for low voltage and medium voltage up to 36 KV. In addition, it will provide samples of actual field measurements of electrical power disturbances at various voltage levels.

Speakers: Robert A. Hanna received the B.Sc. degree from the University of Basra, Iraq in 1971, M.Sc. Degree (with Distinction) from Queen Mary College, University of London, England in 1973 and Ph. D. degree from Imperial College of Science and Technology, University of London, England in 1977, all in electrical engineering. Following a short teaching career, in 1981 he joined Petro Canada (formerly Gulf Canada) as a central engineering specialist providing technical support to the refineries in implementing capital projects and equipment selection. In 1995, he founded RPM Engineering Ltd., a certified consulting company in Ontario, Canada specializing in Adjustable Speed Drive

Control Systems

PLC Based Governor Replacement
Dave Apps
BC Hydro
Friday 04 April - Noon
Southpoint Auditorium
BC Hydro Edmonds, 6911 Southpoint Drive

BC Hydro is in the midst of a program to replace aging hydroelectric governors throughout its fleet. To date, 6 units have had governors replaced with a PLC based standard design. This standardized approach has allowed design and installation costs to be significantly reduced. This presentation will cover common problems with aging governors, basic governor features, common governor types, new features afforded by digital equipment and the benefits of standardized design.



Speaker: Dave Apps, Principal Engineer at BC Hydro, has approximately 25 years experience at the utility, with much of his time spent in Protection and Control design and technical management. His experience includes many redevelopment and upgrade projects, as well as protection, exciter and governor designs, modifications and replacements.

Dave also has experience in telecommunications/SCADA design at both BC Hydro and Motorola. He has presented many courses and technical presentations on governors, exciters, protection and joint voltage controllers. Dave is an active member of IEEE and is currently the Chair of IEEE Standard 125 Governor working group, as well as a member of several other PES working groups. In addition he has published technical papers for CEA and for Waterpower.

Registration is not required, but is recommended so that we may keep you informed in the unlikely event of any changes. Please register via email to bbell@ieee.org.
Sponsors: CCS with Power Engineering
Info: Bryan Bell, Chair: IEEE CSS Vancouver Chapter; 604 528-1562 (w) 604 931-0727 (h)

applications, power quality studies, emergency shutdown equipment and equipment failure investigations. Dr. Hanna is registered professional engineer in the provinces of Ontario, Alberta and British Columbia, Fellow of the Institute of Electrical and Electronics Engineers (FIEEE), a Fellow of the Institution of Electrical Engineers (FIEE), UK and a Fellow of the Engineering Institute of Canada (FEIC). He was President of IEEE Canada and IEEE Director (Region 7) for 2006-2007. www.rpm-eng.com

David Ezer received the B.Sc. degree, specializing in power electronics as part of an electrical engineering degree, from the University of Cape Town, Cape Town, South Africa, in 1984. He spent three years designing ac and traction drives and UPS systems. In 1985, he joined Exide Electronics and ran the Canadian Engineering Department for nine years. In 1995, he founded Omni Power Inc., Toronto, ON, Canada, a supplier of motor control and power quality solutions to heavy industry. Omni Power is now installing a minimum of 30MVA of Power Conditioning equipment into North American industry every year. Mr. Ezer is a member of IEEE. www.omniverter.com
Sponsors: An Industry Applications/Power Engineering Joint Event. **Info:** Sergio Bertani spbertani@yahoo.com or Jahangir Khan Jahangir.khan@powertechlabs.com

Institute for Computing, Information & Cognitive Systems Distinguished Lecture Series

Modeling Material Appearance for Computer Graphics Applications
Holly Rushmeier, Yale University
Thursday 27 March 330-450pm
Room 310 Hugh Dempster Pavilion, UBC

Modeling the appearance of physical materials is an essential component in the computer generation of synthetic photorealistic imagery. Recent progress in material appearance modeling will be surveyed, with an emphasis on modeling aged and weathered materials. Two major approaches to modeling aged materials will be considered—methods that seek to capture weathered appearance using digital photography, and methods that model weathering at the microscopic level. The potential and applicability of each approach will be discussed.

Speaker: Holly Rushmeier is a professor of computer science at Yale University. She received the BS, MS, and PhD from Cornell University. Since receiving the PhD she has held positions at Georgia Tech, NIST and IBM TJ Watson Research.

Her current research focuses on scanning and modeling of shape and appearance properties, and on applications in cultural heritage. Her past projects include a project to create a digital model of Michelangelo's Florence Pieta and models of Egyptian cultural artifacts in a joint project between IBM and the Government of Egypt. Dr. Rushmeier serves on the editorial boards of ACM Transactions on Perception, Computer Graphics Forum and IEEE Computer Graphics and Applications.

She has been papers chair or co-chair for several conferences including the ACM SIGGRAPH conference and IEEE Visualization.
Info: 604.822.6894 or info@icics.ubc.ca

Power Engineering

500 kV Series Capacitor & a Shunt Reactor Protection Applications in BC Hydro/BCTC System

Frank Plumtre and Meliha Selak
BC Hydro

Wednesday 07 May Noon-1:30 pm

BC Hydro Dunsmuir Auditorium, Second Floor
333 Dunsmuir St, Vancouver

From the first installation in 1928 to the present, series capacitors have formed an important component of the AC power transmission system. Series capacitors are applied where ever there is a benefit in reducing the series impedance of the power system. Typical applications include improvement of load division in transmission lines, reduction of series impedances in HV and EHV transmission lines to improve stability margins and reduction of system losses.

The reactor as a component of the power system is used to compensate for the capacitive reactance of transmission lines and cables. This capacitance produces VAR result in high voltages. The reactor is connected usually in shunt with power system

and used as shunt inductive compensation. So, the main task of shunt compensation is voltage regulation.

This presentation will focus on the protection planning aspects of these installations, and the role protection takes in assuring the specified performance of these important elements in the power system.

Speakers: Frank Plumtre (BC Hydro) graduated from the University of Calgary with a B. Sc. in Electrical Engineering in 1975. He has over 30 years experience in the field of protective relaying and is presently a Specialist Engineer with B C Hydro. For the past approximately 20 years he has been responsible for the protection planning for the refurbishment of existing series capacitor banks, as well as new and forthcoming projects. On behalf of B C Hydro, he has also provided consulting services on several international series compensation projects. In addition to work on series compensation projects, Frank Plumtre has been one of the main architects of B C Hydro's 500 kV line protection replacement program. He is also, a key technical resource on Independent Power Producer interconnections. He is a member of the IEEE Power System Relay Committee (PSRC) and is active in several working groups. He is past chair of a working group that recently produced an IEEE guide "Protective Relay Application to Transmission-Line Series Capacitor Banks", and past chair of the Awards and Recognition Committee of the PSRC. He has written numerous documents and technical papers associated on the subjects indicated for the B C Hydro organization, IEEE and CIGRE.

AGM

Hilton Metrotown
6083 McKay Avenue, Burnaby
Crystal ballroom
Monday 12 May 2008 6:00 pm



Member or member's partner \$30
Non member \$40
Students, life members, execs \$15
Student non member \$20
To register contact
Eugen Trandafir at AGM2008@telus.net
or 604-422-4055 (day) or 604-839-5705

Updates coming soon!!

Meliha B. Selak is a Specialist Engineer in Electrical Power Systems with BC Hydro. She has an Electrical Engineering degree from the University of Sarajevo and has over 30 years of experience in various aspects of power systems engineering including utility protection, research & development, project management and consulting on international projects. Prior to joining BC Hydro in 2000, she worked as a research engineer in the



Power System Group at the University of British Columbia on Real-Time Power System Simulator in connection with EMTP. Her technical activities include power system protection and control applications, power system analysis, evaluations and interconnection studies for the various plants connecting to the power system, as well as development of protection guidelines. She authored and co-authored several technical papers and she is also a paper reviewer. She is a Registered Professional Engineer in the Province of British Columbia and is a Senior Member of IEEE. Under her leadership, Vancouver Chapter received a prestigious award IEEE Power Engineering Society "2006 Outstanding Large Chapter".

Info: For more information on upcoming events for the Vancouver Chapter of the IEEE PES, please visit our web page <http://ewh.ieee.org/reg/7/vancouver/powereng/> or contact the PES Chair, Meliha Selak, by e-mail at meliha.selak@bchydro.com or Glen Tang at glen.tang@powerex.com

Power Engineering

Assessing Water Content in Insulating Paper of Power Transformers

Brian D. Sparling
GE Canada

Thursday 03 April Noon-1:00 pm

BC Hydro Edmonds Audit'm, Southpoint Room
6911 Southpoint Drive, Burnaby

Moisture content of solid insulation is a persistent concern for a power transformer as it causes several detrimental effects on the insulation's integrity. Moisture content assessment is often derived from a single oil sample submitted to a Karl Fischer test in laboratory although it is recognized that a single oil sampling cannot reveal the moisture content in paper if the oil temperature



is unstable. Collection of data over a long period of time allows calculation of moisture content of the various components of the solid insulation system even if they are at different temperatures and characterized by different diffusion rates. Field data is presented for an application on a large power transformer along with the model used to derive the water content of insulating paper from water content in oil despite continuously varying temperatures.

Speaker: Brian D. Sparling, SMIEEE, is the Principal Applications Specialist, Transformer Monitoring & Diagnostics for GE Energy, a business owned by GE Canada. Based in Montreal, GE Energy specializes in the design and manufacturing of advanced systems and technologies applicable to on-line the monitoring



and diagnostics of oil-filled power transformers. Brian has over twenty years of experience in the field of power and distribution transformers. For the last 15 years he has been involved in all aspects of monitoring and diagnostics of power transformers. He has worked on many standards committees within the CSA and the Canadian Electricity Association, serving as the past Chairman of the Distribution Transformer Committee. Brian is also a member of the CIGRÉ A2 Transformer committee and the IEEE Transformer Committee. He is a Senior Member of IEEE.

Info: For more information contact Meliha Selak at meliha.selak@bchydro.com; or Glen Tang at glen.tang@powerex.com. After the presentation, join the speaker for a no-host luncheon in the BC Hydro Cafeteria adjacent to the auditorium.

Nominations for the IEEE Vancouver Section Executive 2008/2009

Balloting for the 2008/2009 activities year will commence on 14 April 2008 in order to complete the process for the change of officers at the Annual General Meeting on 12 May 2008. The Nominations Committee proposes the following nominations for the Section Executive for the Activities Year May 2008 - April 2009:

SECTION OFFICERS

• Chair - Eugen Trandafir • Vice-Chair - Robert Leitch • Treasurer - Mazana Armstrong
• Secretary - Kouros Goodarzi

TECHNICAL CHAPTER CHAIRS

• Aerospace & Geoscience Remote Sensing - vacant • Circuits and Systems - Ljiljana Trajkovic
• Control Systems - Ryoza Nagamune
• Computer - Philippe Kruchten • Electron Devices - Bonnie Gray • Engineering in Medicine and Biology - Ezra Kwok • Engineering Management - vacant • Joint Communication - Alon Newton • Industry Applications - vacant • Power Electronics - Rasvan Mihai • Power Engineering - Glen Tang • Product Safety and Reliability - Steven McClain • Signal Processing - Jane Wang • Solid State Circuits - Resve Saleh • Systems, Man & Cybernetics - Ozge Uncu

We need nominees for • Aerospace & Geoscience Remote Sensing • Industry Applications • Engineering Management. Members are invited to propose nominees for the open positions or additional nominees for all positions. Nominations should be forwarded to the Nominating Committee (contact information below) by 11 April 2008 and should be supported by signatures of ten members (with a grade of Fellow, Senior Member, or Member)

CALL FOR VOLUNTEERS

The IEEE Vancouver Section is seeking volunteers to take on a leadership role in helping to deliver the historical levels of high quality technical programs to our members. The main requirements of IEEE volunteer leaders are willingness to help the technical development of their peers, and membership in the IEEE technical society that they volunteer for.

In addition, the Nominating Committee seeks volunteers in the following appointed positions:
• Advertising Committee Chair • Membership Committee Chair • Life Members Affinity Group. Volunteers are also requested to join our Section strategic teams: a) Membership development Team, b) Website development Team, c) Meeting Management Team, and d) Industry Liaison Team. These TEAM positions provide the section with valuable services that help all the chapters and activity groups.

CONTACT INFORMATION

Deadline for nominations is 11 April 2008. Deadline for appointed positions is 30 April 2008. Please contact Jose R. Marti by telephone at 604-822-2364 or by email at jrms@ece.ubc.ca Nominating Committee 2008-2009: Jose R. Marti (Chair), Dejan Lenasi, Rasvan Mihai

You are all invited to IEEE Vancouver Control Systems Annual Social event
LUNCH AT

KiKu Sushi

Saturday 26 April - Noon

4900 Kingsway (604-434-6020)

It is located at the intersection of Nelson and Kingsway



I hope you will be able to join us. Please let me know via email if you plan to attend so I can reserve the right number of seats (though, if you don't register, please still feel free to come... I am sure we will be able to accommodate)

Bryan Bell Chair: IEEE CSS Vancouver Chapter
604 528-1562 (w) 604 931-0727 (h) bbell@ieee.org



IEEE PROJECTFAIR

Wednesday, April 09, 2008

Time: 12PM~5PM

Location: Kaiser 2020/2030

Join us for a day of innovative project competition.
Top engineering students present project prototypes to compete for prizes.

Interested in sponsoring awards? Please contact ieee@ece.ubc.ca



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IN CONTACT WITH..

Barry Chai

by Mazana Armstrong

Barry Chai is a fifth year student of Engineering Physics – Electrical Specialization at UBC and a volunteer with the IEEE UBC Student branch (McNaughton Chair).



Mazana: Barry, thank you for agreeing to this interview for the IEEE Vancouver Section Contact. Can you tell us a bit about yourself?

Barry: I grew up in Taiwan and I moved to Canada when I was twelve. I went through the International Baccalaureate (IB) program during high school in White Rock. I was introduced to a lot of college level courses in IB, so I had an easier time transitioning to UBC. After the first year (in engineering) I was looking at different specializations. Electrical and engineering physics were my top considerations.

You are about to graduate with your B.A.Sc. degree, can you tell us about your experience as an engineering student at UBC?

Overall I had a pretty good experience as a student here at UBC. I did go through a relatively heavy course load, mostly due to the rigor of the engineering physics program. On top of that I took a minor in commerce. It benefited me because I was exposed to a wide variety of fields in engineering. In the future I would like to work on something interdisciplinary, combining different fields to produce a useful product or a result.

Have you always known you were going to pursue engineering?

Yes. Consciously or subconsciously there was some influence from my dad who went through chemical engineering. Also in high school I was relatively stronger in math and physics compared to writing or arts. Also I am interested in developing something that works, is useful and has value.

If not engineering, what would have been your other choice?

If I wasn't going to go to engineering, at one point I was really interested in philosophy. This was stimulated by two interesting philosophy courses I took in high school.

What lies ahead of you?

For this summer I am going to help a professor with his research. At the same time I will be preparing for the grad school applications for December and also job applications. I will be deciding between going to grad school right away or working for a couple years first.

Where do you see yourself in ten years from now?

One of my goals is to do R&D and also traveling at the same time. I am hoping that ten years from now I will have a lot of expertise and experience to be a major contributor to a company. I would be really interested in working for an R&D center in some other country such as China and then spend my free time travelling around the country.

Anything interesting you would like to mention about your studies?

The most recent course I am interested in is computer vision. I was introduced to robotics, then I took internship with Toshiba Corporate R&D in Japan to work on humanoid robots. I was working more on the controls aspect but I was also introduced to a lot of interesting vision systems and the extraction of useful information from the view of cameras. The internships have always helped me in choosing my electives. Now I am taking a course on computer vision.

What was your main motivation to pursue engineering? What do you expect from your degree?

It is really about developing and building working systems that was the motivating factor for me to

go into engineering. I expect that, perhaps after grad school I will be able to work on something that I am really interested in and that keeps me stimulated everyday.

Anything else you would like to mention that you are passionate about?

My involvement with the IEEE Student Branch. It turned out to be a great activity to be involved in. I get to network with many industry professionals, get the feel what industry values are and build some connections. For personal interests I am passionate about learning different styles of martial arts.

Do you think a job in Canada will fulfill all your expectations? Are you open to go internationally?

I am open to staying in Canada or to work internationally. In the early stage of my career I would like to do some travelling and eventually come back to Canada. My parents are here and it is nice to live in the area around Vancouver.

What inspired you to join IEEE?

With IEEE, compared to other student clubs, we really get to network with a lot of industry professionals. For example in the "Think Engineering" event we held, there were people from BC Hydro, BCTC, EA ... All these companies are willing to sponsor our events and come out and talk to students. It is a great opportunity to try to bridge the gap between your student life and when you go to work for industry.

You are currently volunteering for the student branch at UBC. Can you tell us more about your experience as a student volunteer?

Our volunteering is event based. There are large events such as "Think Engineering" that take a lot of work in a certain time window. During those times everyone (in the Student Branch) has to spend a considerable amount of time devoting to the IEEE organization. Some of those tasks may collide with midterms. I think it trains you to be able to multitask. You have to be aware of a lot of details to make sure everything is pieced together. Overall it is a good experience because it complements the education and gives you the exposure of what it is like to organize and manage events.

Have you received any support from the local engineering community in terms of mentoring or other opportunities?

I had two work terms locally, one with BC Children's Hospital Brain Imaging Centre and the director I worked for was very enthusiastic in teaching me about different aspects of digital imaging. My second co-op was with Honeywell in North Vancouver. My supervisor was very helpful in introducing me to different aspects of control engineering.

(Continued on page 6, column 1)

In Contact With.. Barry Chai

(Continued from page 5)

Apart from Canada, what would be the other ideal place/country for you to work and live after graduation?

I am interested in travelling to Japan, China and also Europe. But I am thinking of going to the USA for graduate school. I came across many papers that are interesting which were published by professors in the US.

What differentiates engineering students from other students at UBC?

On average, our course load seems to be slightly heavier. Because of the nature of our discipline, as we need to learn enough to be able to implement our ideas to solve the problems.

Is there a particular message you would like to convey to our readers?

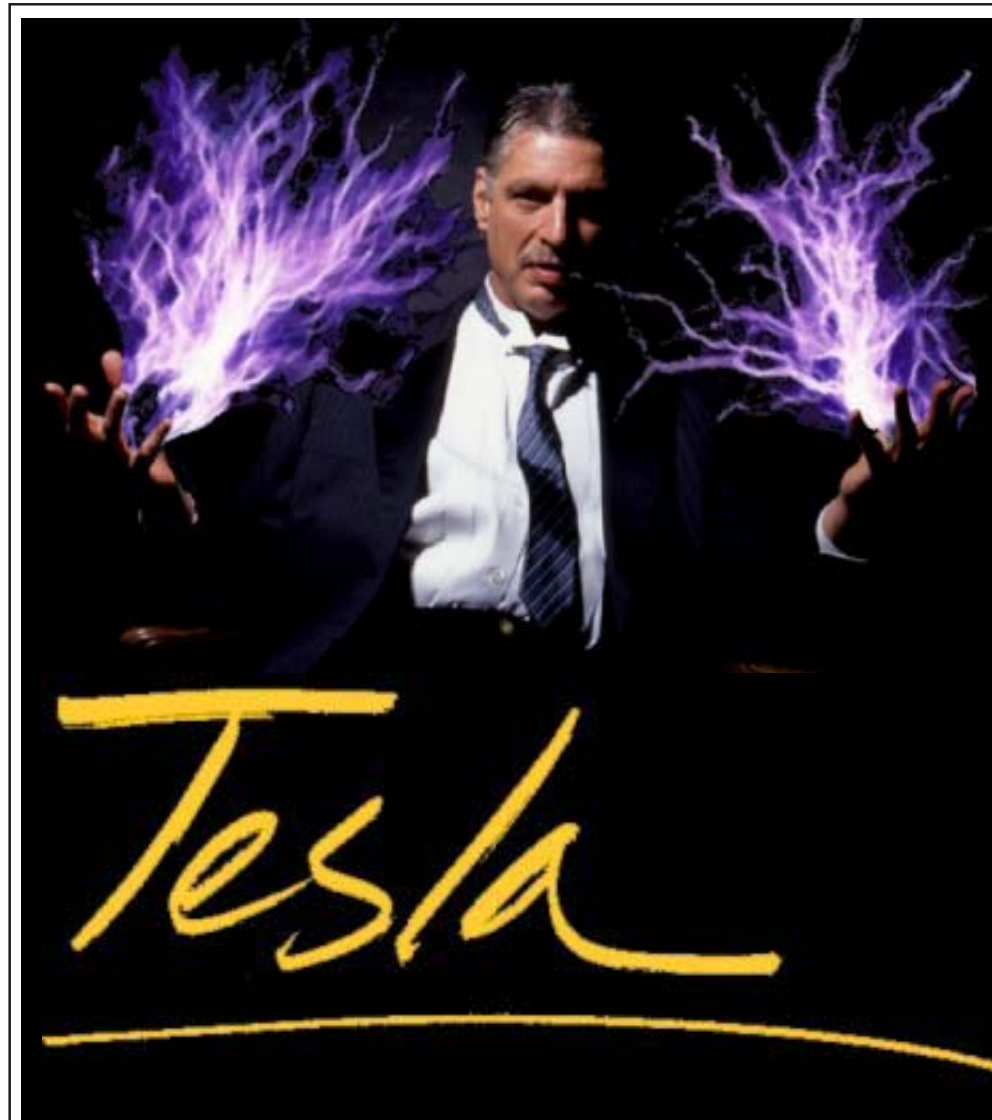
(Students should) try to get involved with events with industry, because it will give them a much better idea of which are the fields they are interested in and what are the things that are really advantageous to do to help them get started in that field.



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In the intimate setting of the one-man play TESLA - An Evening with Genius, the audience is taken on a journey through the extraordinary mind of Nikola Tesla. This heartfelt drama details the scientific, spiritual, and emotional aspects of a scientist, physicist, engineer and inventor who dedicated his life to the betterment of the human race.

In spite of opposition from corporate profiteers, Nikola Tesla, with over 100 US Patents to his credit, arguably laid the electrical foundations on which the world still stands. Actor Frank Tabbita presents a rare and spellbinding portrait of the unsung hero of the modern electronic world.

With this production, authors J. Michael Newlight and Frank Tabbita help set the historical record straight concerning the visionary who brought the world such gifts as alternating current electricity, wireless energy transmissions, radar, radio, the induction motor, robotics, remote control, neon lights - to name just a few! The play encapsulates the meteoric rise and tragic fall of this little known eccentric genius whose ambition to create a world system of wireless power was decades ahead of its time.

Tabbita's performance deftly leads the audience through the complex history of this extraordinary man's struggle to help humanity through technological invention.

April 4th & 5th, 2008

Tesla: An Evening With Genius

at the
Vancouver East Cultural Center

1895 Venables Street
Vancouver, BC, Canada

<http://www.ticketmaster.ca/artist/1167091>

or charge-by-phone 604-280-3311

\$26 adults, \$20 students/seniors

For more info about the play visit www.teslaplay.com and www.vecc.bc.ca