

SOCIETY of MANUFACTURING ENGINEERS

TORONTO CHAPTER 26

SEPTEMBER 2000



Web Site: <http://www.sme-toronto-26.org>

The Potential of Mechatronics: Introduction to the Series

Wednesday September 20, 2000, 6:00 pm
Ryerson Polytechnical University

Sign Up Now!

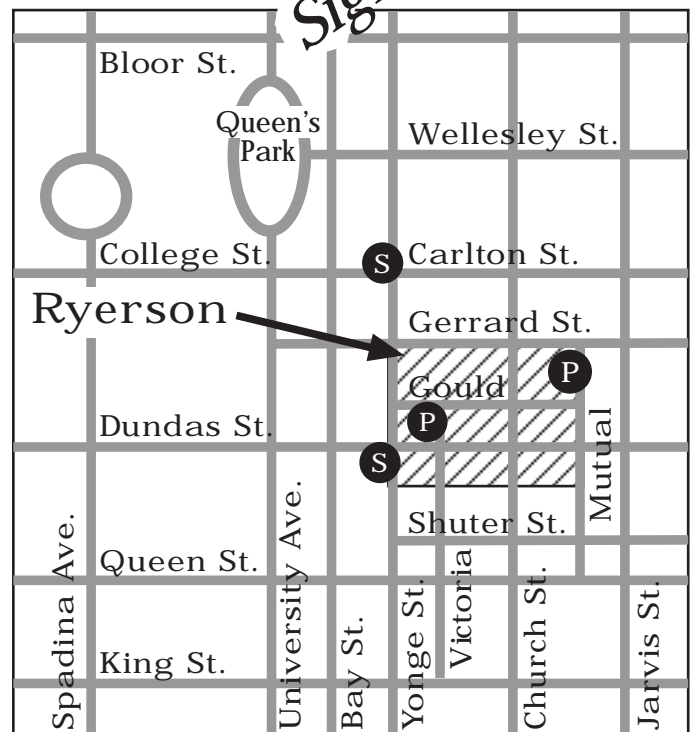
Our first session will set high expectations and generate excitement for this program!

6pm to 7pm: Registration and supper (Sandwiches and a beverage). Receive course binder

7pm: Introduction and... We will answer the question: what is Mechatronics and its potential?. Why you are here and what you expect to get out of this series. Course outlines will be introduced plus details of credentials of speakers. Speakers present will be introduced. There will be a review of which sessions will be held at other sites and why plus expected outcomes for the sessions, a model of technology development and its implications for forecasting the future of mechatronic systems, interactive case study, and a review of expectations

For Building and room number please check the web site www.sme-toronto-26.org or phone Pierre Perron at 416-944-9264.

A more detailed map with building names and locations can be found on the Ryerson web site at: www.ryerson.ca/tour/campusmap.html



S = Subway stop **P** = Parking Garage

Application Form See page 4.

If you need more information about this series please call Pierre Perron at 416-944-9264 or email pierre_perron@yahoo.com Please do not phone after 10 pm EDT.

Course sessions will be held at Ryerson Polytechnical University unless the scheduled activity is a plant visit. The web site, address above, and monthly Bulletins from the Chapter will give details.

On-line article about SME's education efforts

SME Headquarters has forwarded a link to www.office.com which is a website providing news and information for industry. This issue contains an interview with Randy D. Maiers, Director, SME Education Foundation, that talks about SME's grant and scholarship programs.

The URL for this interview is below. Please note that www.office.com runs a section that is engineering based rather than tied to just business news.

The article URL is:

<http://www.office.com/search/office.com/article?ARTICLE=19304>

(Note: when you enter this address in your browser, make sure that it is all on one line with no spaces.)

Executive Meetings

Upcoming Schedule: all Wednesdays at 6:30 pm
September 6 October 18
November 8 December 13

At:

AFV Multimedia
233 Evans Avenue
Phone: 416-239-2811

Interested parties are welcome and encouraged to join executive members at executive meetings. For additional information on next meeting phone 416-467-8298 or e-mail: heintzg@attglobal.net or Ken-Dante@msn.com.

Mechatronics Committee

Note Meeting: Wednesday September 13, 2000
7:00 pm at 28 Killdeer Cres, phone 416-467-8298

NOTE: Bulletin copy deadline:
October (next) Issue September 10!!

To Apply:

To apply, fill out the Application Form, p4, and mail to: Pierre Perron, 80 St. Clair Ave. E, Apt 1706, Toronto, Ont., M4T 1N6, with your cheque. More information at the SME website at <http://www.sme-toronto-26.org/>

Mechatronics Topics & Schedule

Wednesday September 20. Introduction. Goals, Structure and Outcomes, Examples, Understanding Change.

Wednesday October 11. Plant Tour Physical Illustration of All Aspects of Mechatronics. Bob Farhni, Baldor Motor and Drives.

Wednesday November 1. Design Design - CAD / CAM / CAE, simulation and visualization.

Wednesday December 6 Sensors What can be Measured, Sources of Error, Accuracy. Jim Pierson, Pierson & Associates.

Wednesday January 17. Robotics Analysis of a robot as a Mechatronics device and building block.

Wednesday, February 7 Motion Devices Motion devices - Motors, Pistons, Actuators, and Solenoids. Chris Kalembo, Festo.

Wednesday, March 7. Control Systems Control Systems - Controllers, Computers and Networking.

Wednesday, April 4. Implementation Team Work, Project Management, Goal Setting. Pierre Perron, Team building and project planning implementation Consultant.

Wednesday, May 9. Applications Examples - Costs, Business Case, Justification, Management Concerns. Robert Hope, R. B. Hope Industrial Ltd.

Wednesday, June 6. Summary Summary - Panel Discussion: The Future.

Sign Up Now!

Location and Times

The course will be held at Ryerson University in downtown Toronto. A light supper will be offered at 6:00 pm and the session will start at 7:00 pm. We will usually finish by 10:00 pm. Of course plant tours will have different timing.

Cost

The price includes a light supper, course binder, and whatever printed material is supplied by the speakers.

\$450 for SME members, \$550 for nonmember (includes SME membership). Student members*: nominal cost of \$95 for the entire course.

* Membership enquiries please phone 416-402-3146.

EXECUTIVE LIST

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Planning	Paul Walters	RideauTEK	905 839 7378	pawalters@sprint.ca

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SME's Goals and Mechatronics: Message from the Chair

SME is different from other engineering societies in that our focus is understanding how things are made. We help our members and sponsors through:

- Courses, seminars, lectures
- Plant tours
- Publications, books, papers, CD's, DVD's, etc.

We want our members to be successful. Success is continual progress towards predetermined personal goals. If our members are to set goals effectively they must be aware of what is possible.

In the early 70's chapter 26 focussed on Numerical Control; in the mid 80's on CIM (computer Integrated Manufacturing). Two years ago we focussed on Rapid Prototyping. Last year we concentrated on plant tours.

Our program for this year is focussed on Mechatronics which is the fusion of four rapidly evolving technologies:

- Controls and Control Systems
- Motion systems
- Sensors
- Design systems

But that is not what pays for it. Understanding these elements just tells you what is possible from the perspective of these technologies. It is the application that pays for it. In a previous article I mentioned the Pirelli plant in Milan which makes better, longer lasting tires for 30% of the previous cost. That pays for the plant required. That is the application of mechatronics.

The focus of our mechatronics course is on the benefits which can be achieved by using these technologies together. As you will see from the seminar outline we cover the enabling technologies so you will know these systems are possible but the focus is on the benefits; the economic drivers.

By the way, if there is a success story you would like us to cover, a plant you think we should visit, or an idea we ought to explore please email me.

George Heintzman
heintzg@attglobal.net

Many Thanks to our BULLETIN PUBLICATION and WEB SITE SPONSORS:



Information and links at: <http://www.sme-toronto-26.org/>



MECHATRONICS SERIES 2000-2001

Philosophy behind this course:

"A profit potential exists when you understand what is easy today and was impossible a few years ago." Robert Hope - Member SME Chapter 26.
SME's goal is to assist our members and sponsors to be in a position to exploit available technology in a timely fashion. However, Mechatronics potential comes from the fusion of a group of technologies. Therefore the best way to explore the potential of Mechatronics is by reviewing successful Mechatronic projects. This will be done with a series of case studies and plant tours. Four rapidly evolving underlying technologies are key to understanding Mechatronics. For this reason 4 evenings will be

devoted to exploring the changes in these specific fundamental areas. A brief look at these technologies today vs. 30 years ago drives this point home. Their cost is plummeting: their capability and control is sky rocketing.

Outcomes

The participant will understand the potential of Mechatronics. They will be in a better position to set objectives for Mechatronic projects. They will be able to buy and manage Mechatronic projects. They will be able to assess proposals for Mechatronic systems and will be better team members on Mechatronic projects.

Detach the form below and send with cheque or money order made out to SME Toronto Chapter 26 Mechatronics, to:
Pierre Perron, 80 St. Clair Avenue East, Apt 1706, Toronto, Ontario, M4T 1N6
* Membership enquiries please phone 416-402-3146.

Sign Up Now!



REGISTRATION FORM - MECHATRONICS SERIES 2000-2001

Please keep a copy for your records. Please photocopy for additional registrations.

DATE: _____
NAME: _____
TITLE: _____
COMPANY: _____
ADDRESS: _____
CITY: _____
PHONE, HOME: _____ OFFICE: _____
FAX: _____ E-MAIL: _____
 SME Member \$450 Non-member \$550 * Student Members \$95 Amount Enclosed: \$ _____

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