

# SOCIETY of MANUFACTURING ENGINEERS

## TORONTO CHAPTER 26

### NOVEMBER 2000



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

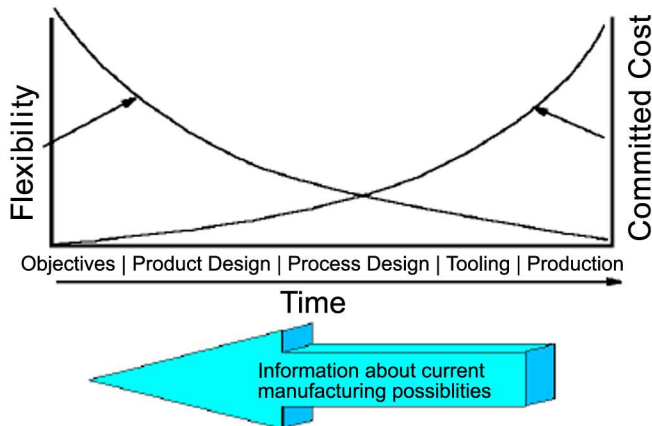
*The Potential of Mechatronics:*  
**DESIGN SYSTEMS & THEIR IMPORTANCE:**  
*CAD/CAM/CAE Simulation & Visualization*

*Duncan McLeod, DBM, and Rob Yule, Javelin Technology*

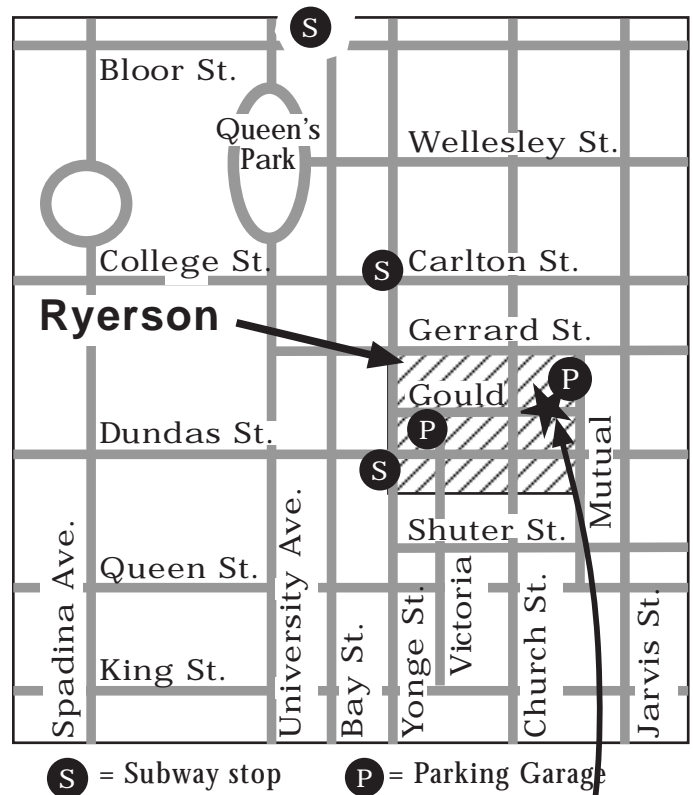
*Wednesday November 1, 2000, 6:00 pm*

*Room T216, 87 Gerrard St. East, Eric Palin Hall. Ryerson Polytechnic University*

As Robert Hope pointed out on his visual concerning flexibility vs cost in his October 11 presentation, the flow of information about current manufacturing capabilities is very important but often too late.



The November session will focus on the importance of design. We have two presentations: 1. DUNCAN MCLEOD B.Sc., PEng., MBA, CFPIM, PMP, President of DBM, will outline his company's approach to plant design. See our Web Site for details. 2. ROB YULE OF JAVELIN TECHNOLOGY will outline their approach to plant design. This will include a presentation of Solid Works and its parameter driven design capabilities. Others attending from Javelin will be John Carlan (talk about Javelin and customer successes) Joseph Vera (Cosmos/Works) and Joe Medeiros (Dynamic Designer).



*Application Form See page 4.*

The web site, address above, and monthly Bulletins from the Chapter will give details. LOCATION: Rm T216, 87 Gerrard East, Eric Palin Hall, Ryerson University. There is open air parking on the south side of Gould Street and covered parking as shown on the Ryerson map at [www.ryerson.ca/tour/campusmap.html](http://www.ryerson.ca/tour/campusmap.html)

# University of Toronto - New Student Chapter

Charlene Tung, the Chair of the growing U of T Student Chapter (now at 35) sends this report:

"The SME University of Toronto Chapter has formed recently to promote Manufacturing Engineering within the University. Our goal is to introduce Engineering students to the Manufacturing Industry, provide resources for students looking for Manufacturing related jobs, and to connect students with similar interests. We're just starting and we definitely need your input! If you've any ideas/suggestions, please feel free to email us at: [utsme@ecf.utoronto.ca](mailto:utsme@ecf.utoronto.ca) Thanks!"

## Executive Meetings

Upcoming Schedule 2000: all Wednesdays at 6:30 pm  
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 these meetings. For additional information on next meeting phone 416-467-8298 or e-mail: [heintzg@attglobal.net](mailto:heintzg@attglobal.net) or [Ken-Dante@msn.com](mailto:Ken-Dante@msn.com).

Upcoming Schedule 2001: PLEASE NOTE: All Executive meetings are Thursdays at 6:30 pm  
January 4  
February 1  
March 1  
April 5  
May 3

**Sign Ups Still Accepted!**

NOTE: Bulletin copy deadline:  
December (next) Issue November 10!  
January Issue: December 10!

For information on books and links related to Mechatronics please see our Web site <http://www.sme-toronto-26.org/>

If you need more information about this series, please call Pierre Perron at 416-944-9264 or email to [pierre\\_perron@yahoo.com](mailto:pierre_perron@yahoo.com). Please do not phone after 10 pm EDT.

# Mechatronics Topics & Schedule

3. Wednesday November 1. Design - CAD / CAM / CAE, simulation and visualization.
4. Wednesday December 6 Sensors What can be Measured, Sources of Error, Accuracy. Jim Pierson, Pierson & Associates.
5. Wednesday January 17. Plant Tour: Robotics, Acea Robots: Analysis of a robot as a Mechatronics device and building block.
6. Wednesday, February 7 Plant Tour: Motion Devices Festo Motion devices - Motors, Pistons, Actuators, and Solenoids. Chris Kalemba
7. Wednesday, March 7. Control Systems Control Systems - Controllers, Computers and Networking.
8. Wednesday, April 4. Implementation Team Work, Project Management, Goal Setting. Pierre Perron, Team building and project planning implementation Consultant.
9. Wednesday, May 9. TBA
10. Wednesday, June 6. Summary - Panel Discussion: The Future.

## To Apply:

To apply, fill out the Application Form, p 4, 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/>

## Location and Times

The course will be held at Rm T216, 87 Gerrard East, Eric Palin Hall, 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.

PLEASE CHECK OUR WEB SITE FOR LAST MINUTE CHANGES! An email will be sent to all those who have already signed up.

## Hamilton SME Chapter 42

Allan Spence, Chair of Hamilton Chapter 42, sent the following note: "I put a link on our SME Chapter 42 - Hamilton District homepage to Toronto 26 in case some of our members want to attend Toronto events. Your members are welcome to ours too. We list them online. See <http://chapters.sme.org/042/homepage.htm>." For more information, schedules, etc., please check this web site.

# EXECUTIVE LIST

Office	Name	Company	Phone	E-mail
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Treasurer	Robert Tecson	Applied Physics Specialties	416-445-1906	robtec@chalktv.com
Past Chair/Education	Peter J. Morgan	MURO North America Inc.	905-451-7667 X233	p.morgan@muro.com
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RP Liaison	Vesna Cota	Tyco Electronics Canada Ltd.	905-474-5541	vcota@amp.com
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Mechatronics Subscription	Pierre Perron	Consultant	416-944-9264	pierre_perron@yahoo.com

## MECHATRONICS COMMITTEE

Mechatronics Subscription	Pierre Perron	Consultant	416-944-9264	pierre_perron@yahoo.com
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Planning	Paul Walters	RideauTEK	905 839 7373	pawalters@sprint.ca

**Sign Up Now!**

**Mechatronics Series Content:** Check our Web site for material from past seminars. We will be adding more through out the year. But we will probably remove it next year. So if it's of interest take a copy now. Even though the machine tool industry in North America is on the decline you might check out some of the ideas that came out of the first session in terms of making a modern lathe. Links to Mechatronic program content is at <http://www.sme-toronto-26.org/pages/MechatronicsTOC.htm> (case-sensitive - watch your typing!)

## The 2nd Meeting: Management Concerns with Robert Hope

(See our Web page for complete presentations given at the first session <http://www.sme-toronto-26.org/> )

A truly outstanding session as reviewed by all I talked to. Robert's subtitle was "How to make a good idea happen in your industry." It is unfair to summarize this in-depth, three-hour presentation here. Please treat this as a teaser to get you to look at all of the material as soon as I can get it on the Web Site. Some key messages were:

Your factory is under pressure so you'd better have some plans to improve it. To improve your factory do a technology and capability audit so you know what you are looking for. Then use this focus to help you sort through all the stuff in magazines and trade shows. When justifying new projects ignore current standard costing and do not be surprised if your analysis is horribly different than the current standard. Go into all the required detail. Don't overlook any department which will be required to contribute. Business evaluation rules. See our Web site as soon as I can get it up but, as an example, if your cost of goods is 70% or greater then think very seriously about improving something in a hurry. For your factory know

the value of key measurements such as the value of saving a second of labour per part; the value of saving a second of cycle time per part; the value of decreasing material cost by 1%. The amount of money that could be spent on a machine which would reduce inventory by half.

Tips for costing: Build a cost model using a spread sheet; include all costs such as landed material cost and benefits; don't assume everything is fixed such as utilization and scrap - make them variables in your model so you can adjust them and explore how sensitive your model is to these variables. Robert outlined 6 steps to use in evaluating your current idea. Your presentation to management should include an analogy they can relate to so they can ask questions and become part of the solution.

Thanks Bob. Great presentation.

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/>



## Speakers: November 1, 2000

### DUNCAN MCLEOD, President of DBM

“New technology is always exciting, but excitement alone cannot guarantee that you realize the benefits you had hoped for. ModelWorks begins by quantifying the business benefits, it then creates a model of the future so that customer stakeholders can better visualize the solution. Synergy is built amongst the stakeholders while working out issues on the model. Eventually, everyone understands how the new process or system will deliver the anticipated benefits and is on-board for a successful implementation.

Duncan brings his unique enthusiasm for engineering and manufacturing processes to every project. He is President and owner of DBM Systems Inc., a Mechanical Engineer, has a Masters Degree in Business and is a Fellow of APICS. With dozens of successful projects under his belt, Duncan's focus on the automotive industry brings a unique and valuable asset to help automotive suppliers improve their ability to manage the entire product life cycle.”

### ROB YULE, Javelin Technologies

“Brief discussion of Javelin and services we provide. Demo of SolidWorks design software emphasizing the "part is the master" philosophy and the benefits of parametric modeling and associativity between parts, assemblies, and drawings. Demo of CircuitWorks to import PCB designs into SolidWorks, a common problem to those in the electromechanical design world. Demo of PDM/Works Product Data Management software to keep revision control of all your Engineering documentation, a growing problem for many companies. Demo of Cosmos/Works finite element analysis software which allows the design engineer to simulate the stresses in a system.. Demo Of Dynamic Designer or Simply Motion kinematic software. This allows the user to simulate very realistically the motions involved in a mechanical system. Brief slide or two on other SolidWorks partner products that exist - eg. EMbassy/Works cable harness software. Presentation of various Javelin customers in the Electro-Mechanical industry (e.g ATS, AFA, Christie Digital) that have achieved excellent productivity increases by adopting and exploiting SolidWorks tools.”

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.



## 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: \$ \_\_\_\_\_

\*Fee is prorated for late signups - for example, remaining nine sessions: members \$360, Non members \$510, Students \$72. The price for guests for one evening is 65\$.

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