



**Institute of Industrial Engineers
Chapter 47
NEWSLETTER
Greater Detroit Area
Michigan**

Mission:
The Mission of the Detroit Chapter is to promote the advancement of Industrial Engineering by providing professional development information and resources to our customers.

Volume 48, No. 3

Sep-Oct, 2004

Visit us on the web [http:// www.iiedetroit.org](http://www.iiedetroit.org)

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- WSU Student Chapter President
Gary Altman

September 2004
**Improving Productivity By Using
Predictive Tools In Simulation Modeling**
Article on page 3. Map on page 6.
Student and Senior Chapter IIE Joint Meeting



Cost: Free pop and pizza get-together
Location: The Oakland Center (Student Union) conference room
Time/Date/Conference Room: TBD in late August when school opens
Updates will be on www.iiedetroit.org and via the member e-mail.
Register with IIE at 313-438-0205

Thursday, October 22, 2004
Lean Six Sigma Symposium



See Insert. Map on insert and page 6.

+++ Mark your calendars now for the Lean Six Sigma Symposium - October 22. +++
This was highly attended last year, and we expect it to be quite popular this year.

Symposium Scope:

- Healthcare, Service & Manufacturing Industry
- Performance Improvement with emphasis on Productivity, Lean Concepts and Six Sigma Techniques
- Presentations, Workshops and Awareness Seminars

The symposium is targeted towards:

- Productivity, Lean Operations and Six Sigma Professionals
- Healthcare Practitioners and Facilities/Operations Personnel
- Manufacturing & Service Industry Professionals
- Performance Improvement Consultants, Trainers, Academics and Students
- Industrial Engineers, Process Improvement Engineers and others

For more details, and to keep up to date on the activities of the chapter, see the website at www.iiedetroit.org.

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Region IV Vice-President's Message Regionally Speaking . . . about IIE

by Vito Wasniewski

I would like to thank the Detroit Chapter Board for giving me an opportunity to provide a brief message about Region IV to the Detroit Chapter. First I would like to introduce myself – I am the Region IV Vice President of IIE. I have been an IIE member since being a student over 20 years ago – and continue to find value and pride in maintaining my membership and serving our profession.



As Regional VP, my role is to support Student and Professional chapters in maintaining and improving chapter operations. I attempt to resolve problems that chapters are having, and assist smaller or struggling chapters with unique issues that they are dealing with. My geographical responsibility includes: Michigan, Ohio, Indiana, and Kentucky. As far as the Detroit Chapter – all indicators that I track indicate the chapter is healthy and performing at an excellent level that serves its members and the profession.

When I took on the Regional VP role last year – I made it a personal goal to improve contact and service to individual chapter boards. In that vein – I made the following objectives at the regional level:

- 1) to contact each chapter president (student and professional)
- 2) to hold regular meetings with chapter presidents
- 3) to visit 30% of the professional chapters
- 4) Improve communications to chapters by creating a website or newsletter
- 5) Identify and hold a regional activity (outside of the Regional conference in February)

At this point I have completed objectives #1, 2 and 5. I am planning on creating a website which should assist with getting all chapters in the region to communicate with one another and share experiences - objective #4.

As far as Objective #5 - We had great feedback from student chapters from an outing at Put-in-Bay, Ohio on July 30th - with a hot dog and hamburger cook-out at the park by the boat docks. When the website is up - I will post pictures. With events like this we are trying to develop more inter-chapter relationships - this is just a small start - but it helps all of us build relationships that can help our careers and professional growth.

If you ever have any questions about my role – or just want to provide comments about IIE or your chapter – feel free to drop me a line at the above contact points.

Please have a safe, happy, and productive summer!

With Kindest Regards, *Vito Wasniewski*

Chapter Activity Report

by Bijay Nayak

The year-to-date 2004 snapshots are:

1. Board Meetings: Held 6 E-Board Meetings.
2. Chapter Programs: Organized several programs such as Best Technical Award Presentation for the Student Chapters. **Margie Krakauer** was awarded \$100 for the best technical paper; IIE & SAVE Joint Chapter Meeting on Lean Manufacturing; IIE & APICS Joint Meeting; American Axle & Manufacturing Plant Tour; Ford Rouge Plant tour.
3. Newsletters: Published 2 Newsletters full of exciting programs and chapter news.
4. Symposium: Planning & organizing Lean Six Sigma Symposium 2004 on October 22, 2004.
5. Chapter Support: **Greg Andrysiak** was awarded Distinguished Service Award and IIE Detroit Chapter was awarded Partner of the Year Award at ESD Gold Award Banquet; Board Members attended ESD Affiliate Council Dinner Meeting; **Vito Wasniewski** participated in Western Michigan University Golf Outing.
6. Institute Support: **Dr. Jayant Trewn, Vito Wasniewski & Dr. Munna Kachhal** attended IIE National Conference 2004 and received Gold Award for IIE Greater Detroit Chapter; **Dr Jayant Trewn** presented a technical paper on "A Treatise on Process Variation that affects Patient Flow in Hospitals" at Society for Health Systems Conference; IIE Greater Detroit Chapter hosted IIE Board of Trustees for 2006 IIE National Conference at Detroit.
7. Community Affairs: Chapter Officers participated in the "ESD Revitalization of the Riverfront Project" Meeting.
8. Student Chapter: Wayne State University Student Chapter was busy organizing activities such as IIE Detroit Chapter Welcome Message was included in BSIE Handbook; Volunteered to work at Gleaner's Food Bank, Detroit.
9. Others: **Dr. Bijay Nayak** was elected as Vice President – Manufacturing at SAVE International; **Dr Jayant Trewn** published a book on Multivariate Statistical Methods in Quality Management; **Dr. Patrick Hillberg** received his PhD. Degree from Oakland University.

Future activities in the CAR:

Vito Wasniewski to present Technical Paper at APICS National Conference, October 2004.

Bijay Nayak to present Technical Paper at SAVE International Conference, July 2004.

Bijay Nayak to present SPM at "Manufacturing Forum" of SAVE International, July 2004.

If you have any news items related to member promotions, activities, awards, publications, or projects, training or workshops conducted, please forward it to Dr. Bijay Nayak, Executive VP & Chapter Development at Phone: 313-882-7442, Fax : 313-882-7443, E-mail: bnayak@msn.com to include in the Chapter Activity Report.

Up Coming Events in 2004

September	Student Night, UM-AA
October	Productivity Symposium
November	Joint IIE/SWE Meeting
December	Holiday Dinner and Inauguration

Improving Productivity By Using Predictive Tools In Simulation Modeling September 2004

Join student chapter and Detroit Chapter IE's in a pizza & pop get together.

Time, date and location will be finalized at the start of the school season (late August) on www.iiedetroit.org, and via the member e-mail.

Dr. Patrick A Hillberg Ph.D. will be presenting his doctoral thesis in improving productivity by using predictive tools in simulation modeling.

Cost: Free pop and pizza

Location: The Oakland Center (Student Union) conference room

Time/Date/Conference Room: TBD in late August when school opens

Register with IIE at 313-438-0205

About the Presenter

Patrick A. Hillberg, Ph.D.

Patrick Hillberg has over 20 years of industry experience in the field of robotics, machine vision, and supply chain management. In his early career he designed machine vision and robotic applications and was part of the development team which developed FANUC Robotics vision-guided robotics product. More recently, Pat completed a Ph.D. in System's Engineering from Oakland University, where his dissertation investigated the development of decision support tools using simulation modeling and analytical predictive tools. He is currently Sr. Engineer - Performance Measurement for Vector SCM, a Supply Chain Management company.



Pat received his Bachelor's degree in Computer Science from Michigan Technological University, and his Master's degree in Industrial & Systems Engineering from the University of Michigan-Dearborn. In 2001 he received the DaimlerChrysler Doctoral Fellowship to complete a Ph.D. in Systems Engineering at Oakland University.

DISSERTATION ABSTRACT: IMPROVING MANUFACTURING PRODUCTIVITY THROUGH OPPORTUNISTIC PREVENTIVE MAINTENANCE VIA SIMULATION AND ANALYTICAL MODELING

by Patrick Allen Hillberg Oakland University 2004

The Theory of Constraints states that productivity is lost when constraint resources are Blocked, Starved, or Faulted, and that such situations arise due to variability within the manufacturing system.

In a largely automated system, the predominant source of variability is due to machine down time, and the Theory of Constraints calls for preventive maintenance to reduce the occurrence of machine faults. However, it does not identify when this preventive maintenance should occur. This most obviously becomes a problem when the manufacturing system is expected to run every hour of every day.

This dissertation presents an approach towards opportunistic preventive maintenance, in which gaps in part flow are identified and maintenance is performed within these gaps. To accomplish this, a means is described in which manufacturing system data is automatically collected and provided to a discrete event simulation model, and data from the model is used to develop predictive tools. Three predictive methods are compared; statistical regression, neural networks, and case-based reasoning. In the final chapter, throughput improvements are found through implementation of the predictive.

HOW ARE WE DOING? HOW ARE YOU DOING?

There are three key benefits that motivate people to stay involved with your IIE chapter.

1. They want personal/professional development.

This includes the training programs that you offer, as well as the skills members learn while being active in your chapter.

2. They want to contribute to some greater good.

This may be maintaining the integrity of the industrial engineering profession, working on intensive community service projects, taking part in developing greater professional activity in your area, etc. The key is to design an opportunity for contribution that is relevant to your membership.

3. They want to be part of your community.

People want to feel like they belong to a circle of friends who care about them.

Please E-mail your suggestions to: newsletter@iiedetroit.org

Membership Report

TOTAL MEMBERS = 250 as of 8/3/2004

NEW MEMBERS

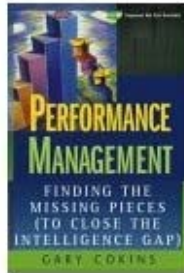
Baccus, Glenna R.	Theisen, Nicole M.
Jordan, William C.	Wang, Wencai
Burke, Jennifer	Yee, Shang-Tae
Colletti, Lisa	Bhupatiraju, Murali

TRANSFERS INTO THIS CHAPTER

Omur, Alp	MacDonald, D. Darren
Sprague, William R.	Beno, Rudolf
Dean, Lawrence B.	Gramlich, Emilie A.
Murty, Vidyasagar	

Membership Activities

Gary Cokens, Detroit IIE member, has a press release for his new book from John Wiley and Sons, Inc. The name of the book is "Performance Management: Finding the Missing Pieces (to Close the Intelligence Gap)" (SAS Institute Inc.) by Gary Cokens.



The book can be viewed at:

http://www.amazon.com/exec/obidos/tg/detail/-/0471576905/qid=1071841979/sr=1-2/ref=sr_1_2/104-5532876-8837536?v=glance&s=books

Victor Lloyd, Detroit IIE member and Officer, is enjoying a great community service experience.

"We have built 18 of the 20 apartment buildings in Detroit for the rebuilding of our old neighborhood. The project is called the Brainard Street Project in the Cass Corridor. It is a totally awesome experience to be a part of putting life back into my old neighborhood.

We will have a total of 120 new apartments once the project is finished. We already have over 300 applicants competing for the apartments. The two bedroom units are going for \$650/month and the three bedroom units are going for \$775."

Photographs taken at the 2004 National Convention. (The IIE Annual Conference and Exhibition was held in Houston, TX, May 15-19, 2004.)



IIE Leadership at the Presidents reception at the Annual Conference in Houston, from l to r, **Vito Wasniewski**, Region VI VP; **Jerry Weinstein**, Ph.D., president of IIE (works at Whirlpool in Benton Harbor, MI); and Detroit Chapter President, **Jayant Trewn**.



Detroit Chapter President, **Jayant Trewn** (on right) receiving 2003 Gold award at 2004 National Convention. IIE Annual Conference and Exhibition held in Houston, TX, on behalf of the Detroit Chapter.

Is Detroit going to be the site for the 2009 IIE National Convention? Chapter Officers have work in progress. Stay tuned.



IIEs **Tej Jhamb**, **Kristen Cavander** & **Jayant Trewn** were some of the local engineers inducted into "The Order of the Engineer" on February 23, 2004. The ceremony was conducted in conjunction with the ESD Gold Awards Banquet.

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You Paid Your Dues...
Now Enjoy the Benefits! All Member Societies of the ESD Affiliate Council Offer These Terrific Insurance Programs!

Auto and Homeowners Insurance

For ESD Members and ESD Affiliate Societies
Underwritten by Citizens Insurance Company
 • 18% ESD Group Discount for Auto Insurance*
 • 18% ESD Group Discount for Homeowners Insurance*
 • Over 14,000 policies are now insured in this program
 * These discounted rates are available July 1, 2002 through June 30, 2003

Health Insurance and Prescription Drugs

For Members
Underwritten by Blue Cross/Blue Shield of Michigan
 • Attractive menu of medical and dental plans
 • Available for groups of 2 to 99 employees
 • No pre-existing condition clauses or medical underwriting for groups of 2 or more.

Dental Insurance

For Individual Members
Underwritten by Michigan Dental Plans
 • No waiting periods
 • Multiple options from which to choose
 • \$1,000 calendar year maximum

Workers' Compensation Insurance

Underwritten by Citizens Insurance Company
 • Available to members who own *engineering or architectural firms*
 • Average workers' compensation dividend history over the past five years is 41.7%

Business Owner's Policy

Underwritten by Citizens Insurance Company
 • Features Expanded Property Coverage and Customized Endorsements
 • Features Liability Limits of \$2,000,000 to \$4,000,000

Classic/Antique Car Insurance

Underwritten by Hagerty Classic Insurance
 • Agreed Value Coverage (full value paid upon a total loss)
 • Only one liability charge per policy, not per vehicle

Call Hartland Insurance Group for further information on any of these excellent ESD Affiliate Council-Endorsed Insurance Programs.

(800) 682-6881
www.hartlandinsurancegroup.com

Career Development

If any Chapter member would like to post a job opening or situation wanted, please contact: Greg Andrysiak at (248) 442-8607, greg.andrysiak@trw.com. Please see our website at iiedetroit.org for the latest job openings or situations wanted.

Professional Engineer Licensing Exam

Are you (or is a colleague you know) interested in obtaining a Professional Engineering Licence in the State of Michigan?

For info on the State exams:
 Visit <http://www.els-examreg.org>

The deadline for FE (Part I) applicants and a PE (Part II) re-applicants is September 7, 2004.

For more info on ESD'S PE (Part II) Review Courses:
 Visit http://www.esd.org/pe_course_Fall.htm

For more info on ESD'S FE (Part I) Review Courses:
 Visit http://www.esd.org/fe_course_Fall.htm

+++ Looking for top-notch employees? +++

Begin your search at IIE's new online Career Center, which offers all the features you need to find qualified employees. No matter what your staffing needs or budget, we have a recruitment tool for you.

Contact IIE Sales Department to purchase unlimited postings and resume searches for a year. Call Jack Eller at 770-349-1109, or Tom Miller at 770-449-0461 ext.127.

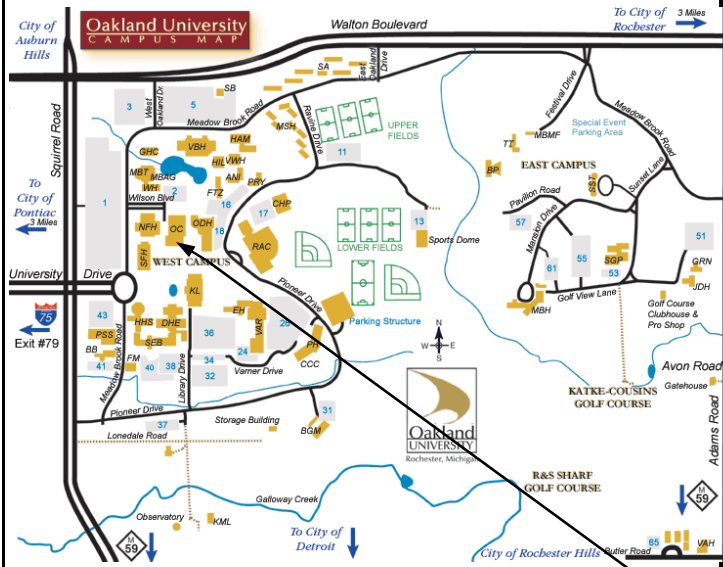
Are you looking for an outstanding job? We have your needs covered, too. Go to www.iienet.org/careercenter and see all the services IIE's new Career Center has to offer you!

Help Wanted

Location: Charelston, SC
 Company: Behr
 Additional facts: ME or Industrial Engineering degree, MBA a plus, 10 years experience, prefer 5 years of Industrial Engineering experience. Need to be out of the auto or truck industry. Strong plant layout, JIT, Time study MT. Time study is critical. Lean mfg, strong communication skills and supervisory background of substantial business. Compensation range: 78,000 to 85,000.
<http://jobsearch.monster.com/getjob.asp?JobID=22328089>

September 2004 Improving Productivity - Predictive Tools In Simulation

Thursday, October 22, 2004 Lean Six Sigma Symposium



Oakland University Student Union, called the Oakland Center
 2200 N. Squirrel Road, Rochester, MI 48309--4401
Directions to OU: Oakland University is located in southeastern Michigan between Flint and Detroit. Our 1,441-acre campus actually extends into two cities - Auburn Hills and Rochester Hills, between Adams Road and Squirrel Road, just south of Walton Boulevard. Take I-75 to exit 79 and go east on University Drive to the main entrance of campus. Or, take M-59 to the Squirrel Road exit and go north to the main entrance of campus at the corner of University Drive.

Beaumont Hospital, Beaumont University
 3601 West 13 Mile, Royal Oak, Michigan, 48073

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 c/o Ron Brzuch
 7247 Almaden Court
 Canton, MI 48187

DATED MATERIAL