



DETROIT METRO P.E.N.

MICHIGAN SOCIETY OF PROFESSIONAL ENGINEERS

A newsletter published by the Detroit Metro Chapter of MSPE

January 2007

www.mspe-detroit.org

President

Patricia Novak, P.E.
Lakeshore Engineering Services,
Inc.
313-875-4115

President-Elect & P.E.N. Editor

Mahmoud E. El-Gamal, Ph.D., P.E.
PSI, Inc.
734-453-7900

Past President, Nominations & Awards

Pamela Lemme, P.E.
248-808-9649

Treasurer

Henry Shah, EIT
FutureNet Group, Inc.
313-544-7117

Secretary & Director (08)

Mustapha Hamood, P.E.
Spalding DeDecker Associates, Inc.
313-967-4700

Director ('07) & Membership

George Karidis, P.E.
SmithGroup
313-442-8120

Director ('07)

Perry Mehta, EIT
FutureNet Group, Inc.
313-544-7117

Director ('08)

Neal Gehring, P.E.
NTH Consultants, LTD.
313-237-3900

Director ('08), ESD Affiliate, & Programs

Eric S. Tucker, P.E.
Tucker, Young, Jackson & Tull, Inc.
313-963-0612

Director ('07) & Scholarship

Andrew Richmond
Tucker, Young, Jackson, Tull, Inc.
313-963-0612

Director (09) & Education

Carol Miller, Ph.D., P.E.
Wayne State University
313-577-3789

Director (09) & MathCounts

Nancy McClain, P.E.
The Mannik & Smith Group
(734) 397-3100

Director (09) & MathCounts

Pari Nayak, Ph.D., P.E.
Gala and Associates
248-642-8610

Web Page Editor

Michael J. Vinarcik, P.E.
Ford Motor Co.,
313-337-8377

Holiday Party Co-Chair

Katherine Banicki
Testing Engineers & Consultants,
Inc.
248-588-6200

Message from the President

January 31, 2007

Dear Members, Metro Detroit Chapter, MSPE:

We co-hosted a great tour earlier this month with the Society of American Military Engineers at TACOM in Warren. Mr. Randal C. Gaereminck, Associate Director, Engineering Business Group, Tank-Automotive Research and Development Command, gave a summary on the activities taking place at TACOM, specifically the R&D operations at TARDEC. This group is actively developing products to help support our troops in Iraq.

Our annual MathCounts competition will be held at the University of Michigan-Dearborn on Saturday, February 17, 2007. A total of 27 schools have registered, our largest group to date! Volunteers are needed for scoring the papers. If interested in volunteering, please contact Pari Nayak at (248) 642-8610 or Nancy McClain at (734) 397-3100.

Engineer's Week is February 18-25, 2007. Look for the special Engineering insert in the Detroit News on February 15, 2007. We will also be honoring our Student Engineer of the Year, Young Engineer of the Year, and Engineer of the Year at ESD's Gold Award Banquet on February 22, 2007.

We're currently in the process of planning a Legislative Meeting for February and a tour of Visteon Village for March. Details to follow in the next PEN!

Sincerely,
Patricia Novak, P.E.
President, Metro Detroit Chapter

Other Upcoming MSPE Activities

ACEC/MSPE Engineering/Surveying Excellence Awards is Saturday, February 24, 2007 at the Soaring Eagle Casino and Resort in Mt. Pleasant. The block of rooms at the Soaring Eagle Hotel is lifted on February 3, 2007. Rooms are going fast, so if you plan on attending the banquet and staying overnight, please get your room reservation in before the 3rd of February.

STATE LEGISLATIVE DAY is March 20, 2007 in Lansing. We need participation from everyone. Legislators are looking forward to meeting with their constituents. Make your voice heard!

MSPE/ACEC Annual Conference, June 7-9, 2007 at Boyne Mountain Grand Lodge in Boyne Falls, MI.

Sample MathCounts Problems

This problem was written on January 22, 2007 which can be written as 1/22/07. When the 3-integer parts (1, 22, and 7) of that date are added their sum is a positive integer with 8 factors. What date in January 2007, when written in that form, will the sum of its 3-integer parts have the greatest number of factors?

Ice storms can cause considerable damage to trees. Accumulations of ice can increase the branch weight by 30 times or more causing the branch to break. A tree branch that is 1 centimeter in diameter and 1 meter in length has accumulated ice during a storm. (Assume the volume of water is the same as the volume of ice and the branch is a perfect cylinder.) What is the weight in kilograms of the ice that accumulated on this branch if the new diameter of the branch with ice on it is 6 centimeters along the entire branch? The weight of 1 cubic centimeter of water is 1 gram. Express your answer as a decimal to the nearest tenth.

Icebergs are formed when part of a freshwater glacier falls into the sea. The density of the iceberg is less than the density of the sea water so the iceberg floats. Typically 90% of the iceberg is underwater. Assume 90% of the volume of an iceberg is under water. The visible part above sea level of a dome-shaped iceberg is modeled by a hemisphere whose diameter is 5 meters. What is the total volume of the iceberg in cubic meters? Express your answer to the nearest whole number.

Solutions are on Page 5

Upcoming ESD Activities

ESD's Future of Alternative Dispute Resolution: Construction Practitioners Resolving Construction Disputes

February 1, 2007, 7:00 am- 11:45 am
Tapestry Hall, Southfield

When a dispute cannot be settled outside of the legal system, it is important to know what your legal options are and how to stay in control of the dispute. Alternative Dispute Resolution (ADR) is a viable alternative to the court system. It enables you to resolve disputes more efficiently and SAVE money and time. In order to protect your best interests, you need to become knowledgeable and be involved in the Alternative Dispute Resolution process.

For more information contact Leslie Smith at 248-353-0735, ext. 4152, or lsmith@esd.org

3-D BUILDING INFORMATION MODELING: THE FUTURE OF CONSTRUCTION DESIGN

February 7, 2007, 6:00 pm

Learn how 3-D- enabled lean design/build is changing the construction and design industry. Come find out how this technology affects the entire construction supply chain and delivers projects faster, better, safer and with reduced costs.

To register http://ww2.esd.org/EVENTS/2007-02_3d.htm

The ESD 2007 Engineering and Technology Job Fair is coming on Tuesday, February 13, 2007, in the Atrium of the Southfield Town Center. This job fair is unique because it is specifically targeted to technology and engineering positions, for all engineering disciplines.

If you are an engineer looking for a position, this is a must attend event. Most of the exhibiting companies are hoping to fill positions that day! A complete list of exhibiting companies can be found at http://ww2.esd.org/EVENTS/2007-02_JobFair.htm Come prepared with copies of your resume and a big smile and you may leave with a job!

If you are a company with positions available, you will be pleasantly surprised with the quality of the applicants you will be meeting at the fair. This is an excellent source to fill your seasonal or intern positions. For less than the price of an ad, you will meet many qualified applicants face-to-face and receive a resume CD after the show.

To register, go to http://ww2.esd.org/EVENTS/2007-02_JobFair.htm

For more information, contact Shelly Smith at 248-353-0735, ext. 4112, or ssmith@esd.org, or Ramona Spencer at 248-353-0735, ext. 4114, or rspencer@esd.org

ESD Sponsored Event: Michigan Facilities Expo

March 28 & 29, 2007, 9:00 am to 3:00 pm
Rock Financial Showplace, Novi

Michigan Facilities Expo is a comprehensive regional event that offers solutions for ENGINEERING, management and operations. The Expo provides significant educational content, custom-tailored to deliver answers to everyday business challenges.

You should attend if you are a Chief Engineer, Electrical & HVAC Engineer, Facility Engineer & Manager, Maintenance Engineer & Manager, Operations Manager, Plant Engineer or Safety/Environmental Engineer because you will have the opportunity to view the latest technology, products and services, visit the new Smart Buildings Pavilion, participate in hands-on equipment demos, attend seminars and NETWORK.

The Expo serves a full spectrum of facilities including AUTOMOBILE AND COMPONENT MANUFACTURING, Commercial, Distribution and Warehousing, Government, INDUSTRIAL AND MANUFACTURING, TELECOMMUNICATIONS and Transportation including Airlines and Airport Operations.

For more information or to register, go to
<[<http://www.facilitiesexpo.com/fex/femi/index.poj?sessionId=5jdSj0KKU2WDyQQS5Mlz7A\(CggOkhPg\)>](http://www.facilitiesexpo.com/fex/femi/index.poj?sessionId=5jdSj0KKU2WDyQQS5Mlz7A(CggOkhPg))>

MathCounts Solutions

The least possible sum is from January 1, 2007, (1/1/07) $1 + 1 + 7 = 9$. The greatest possible sum is from January 31, 2007, (1/31/07) $1 + 31 + 7 = 39$. Check the number of factors for each integer from 9 through 39. The positive integer in that range with the greatest number of factors is 36. The date is January 28, 2007, (1/28/07).

The volume of the ice and branch minus the volume of the branch equals the volume of the ice. $((3\text{cm})^2 \times \pi \times 100\text{cm}) - ((0.5\text{cm})^2 \times \pi \times 100\text{cm}) = 875 \times \pi = 2748.89\text{cm}^3$. $(2748.89\text{cm}^3) \times (1\text{gm}/\text{cm}^3) \times (1\text{kg}/1000\text{gm}) = 2.7 \text{ kg}$.

The visible part of the iceberg is a hemisphere and has 10% of the volume of the iceberg. Let V represent the volume of the iceberg. $((\frac{4}{3} \times \pi \times (2.5\text{m})^3) \div 3) \div 2 = 0.1 \times V$. $V = 327.25 \text{ m}^3$. The total volume of the iceberg is 327 m^3 .

<u>DETROIT METRO CHAPTER CALENDAR (2006-2007)</u>	
<u>FEBRUARY</u>	
Chapter Meeting/Program - Legislative	TBD
Board Meeting	2/8/07
MathCounts Competition – U of M Dearborn	2/17/07
ESD Gold Awards Banquet – Dearborn Inn	2/20/07
ACEC/MSPE Excellence Awards Banquet - Mt. Pleasant	2/24/07
<u>MARCH</u>	
Chapter Meeting/Program – Visteon Village	TBD
Board Meeting	3/21/07
<u>APRIL</u>	
Chapter Meeting/Program	TBD
Board Meeting	4/18/07
<u>MAY</u>	
Chapter Meeting/Program	TBD
Board Meeting	5/16/07
<u>JUNE</u>	
Annual Meeting @ Grosse Pointe Yacht Club	6/15/07
Board Meeting	6/20/07

Thank you to our P.E.N. Sponsors



Walbridge Aldinger Company
Since 1916

General Contractors / Program Managers
Construction Managers / Design-Builders

613 Abbott Street - Detroit, Michigan 48226
(313) 963-8000 FAX (313) 963-8150 EOE/M/F/V/H
Registered to ISO9001 www.walbridge.com




BEI
associates, inc.

Architects • Engineers

- Industrial / Manufacturing
- Commercial / Institutional
- Energy & Process Systems
- Public Works
- Design / Build

www.beiassociates.com
info@beiassociates.com • 313.963.2300
601 W. Fort Street • Detroit, MI 48226



ALBERT KAHN ASSOCIATES, INC.
ARCHITECTURE • ENGINEERING • PLANNING

Albert Kahn Building 7430 Second Ave.
Detroit, MI 48202-2798
Phone: 313-202-7000 Web: www.albertkahn.com

FOUNDED IN 1895



Lakeshore Group
LEASHPRO ENGINEERING SERVICES, INC.

8 (a), HUBZone

General Contractor
Construction • Environmental

OFFICES:
Chicago, IL
Rock Island, IL
St. Louis, MO
Louisville, KY
Saltwater, OR
Dover, NJ
Rutington, VT

Corporate Office:
7310 Woodward Ave., Suite 500 • Detroit, MI 48202
Tel: 313.875.4115 • Fax: 313.875.2732
Email: info@LakeshoreEng.com
www.Lakeshoreeng.com

SPONSORS OF P.E.N.



NTH Consultants, Ltd.
Infrastructure Engineering & Environmental Services

Geotechnical Engineering
Environmental Compliance
Facilities Rehabilitation

Offices in Michigan, Pennsylvania and Ohio
www.nthconsultants.com



Testing Engineers & Consultants, Inc.

1343 Rochester Road
PO Box 249
Troy, Michigan 48099-0249
(248) 588-6200 or (313) TESTING
Fax: (248) 588-6232
E-mail: tec@tectest.com
www.testingengineers.com

Engineering
Environmental
Geotechnical
Construction Services
Applied Technology



Wade-Trim
Your Infrastructure Partner

800.482.2864
www.wadetrim.com

Michigan Offices

Ann Arbor	(734) 994-3210
Auburn Hills	(248) 373-1970
Kalamazoo	(269) 327-7095
Lansing	(517) 394-5700
Plymouth	(734) 453-7900
Saginaw	(989) 755-6777

Engineering Services

- Geotechnical
- Environmental
- Construction Material Testing
- Roof Consulting
- Pavement Consulting:

psi Information
To Build On
Engineering • Consulting • Testing
One Company, One Call

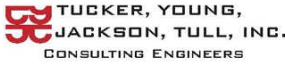


FutureNet Group, Inc.
ENVIRONMENTAL • ENGINEERING • CONSTRUCTION • TECHNOLOGY


12801 Auburn Street
Detroit, Michigan 48223
Tel: (313) 544-7117
Fax: (313) 544-7111
Cell: (313) 215-1207
Email: perry@futurenetgroup.com
Website: www.futurenetgroup.com

Perry Mehta
President

US SBA 8(a) • HUBZone • DBE • MBE • GSA Schedule Holder
Turn Key Solution Provider
Environmental • Engineering • Construction • Technology



**TUCKER, YOUNG,
JACKSON, TULL, INC.**
CONSULTING ENGINEERS



✓ Water ✓ Wastewater
✓ Infrastructure
✓ Environmental Management

565 E. Larned, Suite 300, Detroit, MI 48226
(313) 963-0612, FAX (313) 963-2156
Web Site: www.tjyt.com



To reserve your overnight accommodations or modify an existing reservation, please complete this form and fax or mail it by **February 3, 2007. (PHONE RESERVATIONS WILL NOT BE ACCEPTED)** to: **Soaring Eagle Casino and Resort, 6800 Soaring Eagle Boulevard, Mt. Pleasant, MI 48858, Attention: Room Reservations, FAX # (989) 775-5686.** Please print your information clearly. You may also reserve accommodations at www.soaringeaglecasino.com, On-Line Reservations, Group Code: **96W46M** For prompt confirmation, please completely fill out form.

ACEC/M & MSPE

Arrive: Saturday, February 24, 2007 - Depart: Sunday, February 25, 2007

Name of guest(s) occupying the room: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Phone: Daytime () _____ Fax #: () _____

Arrival Date: _____ Departure Date: _____

Player's Club Number _____ E-Mail Address: _____

Please list the room type you would prefer (Please mark 1st and 2nd choice)

Smoking and Non-Smoking rooms are available, however, we cannot guarantee which type you will receive. We will do our best to accommodate all of your requests. ****Rates quoted are per night.****

- _____ (\$149.00) First Class Room – 1 King Bed
 - _____ (\$149.00) First Class Room – 2 Queen Beds
 - _____ (\$159.00) Deluxe Fireplace (3 available)
 - _____ (\$179.00) Deluxe Jacuzzi (2 available)
- There will be a \$10.00 per person charge nightly for the third and fourth person in a room over the age of 6.

All rates are subject to increase as a result of any applicable Tribal tax.

With the following requests:

_____ Smoking _____ Non-Smoking _____ Barrier Free Room _____ Hearing Accessible Room

How many adults in room? _____ How many children? _____ Ages _____

All reservations must be guaranteed with a deposit; either a check or credit card for one night's lodging along with this form. If you are using a credit card, your card will be charged for the deposit at the time this reservation is made.

Credit Card Number: _____

(Diners Club)

Expiration Date: _____ Type of Card (MC/Visa/Amer Exp): _____

Bill Credit Card for all nights? _____ Yes _____ No, 1st night only

Name of Cardholder: _____

Signature: _____

You will receive a confirmation letter within 7-10 business days at the address listed above. If you would like your confirmation letter faxed to you instead, please list the appropriate fax number and check the box next to it. You should receive your faxed confirmation letter within 72 hours.

Please make sure your reservation request reaches the Resort by the date listed above to apply for a room that is held by the Group Block. After the date listed above, or should the Group Block be filled, rooms will be reserved based on availability. Group rates cannot be guaranteed. Reservations cancelled by 6:00 p.m., 3 days prior to arrival, will receive a full refund.

Check-In time is after 4:00 p.m.

Check-Out time is 11:00 a.m.

***Please, One (1) room reservation per Group Reservation Request Form