President’s Message: MSE Happenings

Brian Schultz, PE, President

Another summer is upon us, another June MSE Newsletter is here, and that means another changing of the guard for our board is soon to follow as well. As our board prepares to welcome a new member, say goodbye to our current Past President, and those remaining transition to new roles and responsibilities, it starts me thinking on the subject of “change”.

“Change” is somewhat of a buzzword in most industries today whether we are discussing business reorganizations, new regulations, or new technology. In many ways change is often the normal expectation or process, like in the example of our board: not to change the position of our members on the board each year would actually be a “change”. I will try to refrain from any irrelevant HR related comments on the subject in this article, but I do want to mention some things that should be obvious to us as engineers and open up the discussion for what our responsibilities in this area are, if there are any.

First, we should all realize that in almost any workplace you can imagine, and especially in engineering, we need to have skills developed to critique and assess proposed change, to adapt to change, and to lead change. Not only do technological advancements change the materials and construction practices we use in the engineering world, but they also change the environments we work in and the relationships we maintain amongst our fellow employees and our clients. These advancements can create what sometimes feels like a continuous circle of change.

Secondly, I believe it is obvious that change can be beneficial and it can be harmful, both in how we change organizationally and with regard to technology. We are beginning to see more and more press on the anticipation of what technology will look like 15 years from now at its current rate of development. This uncertainty is beginning to make some knowledgeable people quite nervous and anxious as you can read about in the cover article “Designing the Future” in PE Magazine’s May 2015 issue. In the article, NSPE asks, “Do PE’s have an ethical responsibility to think ahead to help prevent harmful effects of technology?”

The question posed by NSPE is really a basic moral question that would be relevant to any engineer, scientist, or inventor at any period in history. We are all familiar, or should be, with the responsibilities we accept as PE’s with regard to protecting the safety, health, and welfare of the public. As we design and build as engineers, we are very much stewards of the land and the communities we serve with the intentions and actual effects of our projects. I believe the article brings up a conversation worth having on the extent to which an engineer should be expected to assess the effects of his project on society both in the immediate future and in the long-term future. As a starting point in the conversation, I think the article’s quote of Carl Mitcham from “The True Grand Challenge for Engineering: Self-Knowledge” helps point us in the right direction: “It is not enough to do things right, ‘We, engineers and nonengineers alike, need to consider what are the right things to do.’”

Thank you all very much for the honor of serving as your President of MSE over the last year and please welcome and encourage Cory Hasiak as he takes over the reins. Lastly, we want to give a big thank you to Georgia Brensdal for her faithful service on the board and her continued service in representing MSE at both the regional and national levels. Georgia has definitely gone above and beyond the normal expectations for our society and deserves our gratitude!

June, 2015

“As a starting point in the conversation, I think the article’s quote of Carl Mitcham from “The True Grand Challenge for Engineering: Self-Knowledge” helps point us in the right direction: “It is not enough to do things right, ‘We, engineers and nonengineers alike, need to consider what are the right things to do.’”

Inside This Issue
MT MATHCOUNTS at National ……….. 2
Gold Medal Awarded at Montana State and Montana Tech ……………… 3
NSPE Questions Virginia Court’s Decision on Liability ……………… 4
MathCounts Coordinator Needed ……….. 5
2014-2015 State Officers ……………… 5
2015 JEC Update ……………… 5
Montana MATHCOUNTS at National!

Dan Munson, PE, MATHCOUNTS State & Billings Chapter Coordinator

Four top scoring individuals from Montana competed at the National MATHCOUNTS Competition on May 8th in Boston along with the top 224 middle school math students in the nation. It was an experience of a lifetime for our team, and they were happy to represent Montana at the National event.

The 2015 Montana National MATHCOUNTS Team included Evan Kohler from Kalispell Middle School, Peter Hall from Billings Lewis & Clark Middle School, Oliver Chinn from Missoula Washington School, Conrad Lee from Bozeman Lee Homeschool along with Missoula Washington School math coach Jon Graham.

The team took written tests on Friday morning, witnessed the fast paced CountDown Round with the competition’s finalists in the afternoon, and was treated to an evening at the Boston Museum of Science that night. On Saturday, the team voted on the best video submittal to the Math Video Challenge, and then headed out to explore Boston’s Freedom Trail. The team visited many historical sites, had lunch at Quincy’s Market, and then made a quick tour of Harvard and MIT campuses. On Saturday night, the team dressed up to attend the Awards Banquet. The whole team was impressed by the caliber of talent and intelligence of our middle school students in America. National MATHCOUNTS was an eye opener for the team, and they expressed their gratitude for being able to experience it.

In addition to the team, David Patterson was honored with the Montana MATHCOUNTS Champion of the Year Award. Dave is a Mathematics Professor at the University of Montana who has not only volunteered his help to run Chapter and State competitions, but he has also coached MATHCOUNTS at Rattlesnake and Washington Middle Schools in Missoula, hosted Saturday MATHCOUNTS Workshops for local Missoula Schools, and introduced a 2-credit course “Coaching MATHCOUNTS” at the University of Montana aimed at equipping future math teachers with skills to help middle school students excel at mathematics. In recognition of his outstanding contribution to the Montana MATHCOUNTS program, he was sent to take in the National MATHCOUNTS Competition in Boston as well.

The Montana Society of Engineers sincerely thanks all volunteers and sponsors for supporting MATHCOUNTS throughout the year. Without your time, sacrifices, and donations, we could not make MATHCOUNTS the meaningful experience it is for so many Montana middle school students.

Additional information on MATHCOUNTS is available at www.mathcounts.org.

2015 State MATHCOUNTS Winners: Back Row: David Paterson (MC Champion), Dan Munson (State Coordinator and Coach Jon Graham). Front Row: Evan Kohler from Kalispell Middle School, Peter Hall from Lewis & Clark Middle School (Billings), Oliver Chinn from Missoula Washington School, along with Conrad Lee from Bozeman Lee Homeschool (Bozeman).
Gold Medals Awarded at Montana State University and Montana Tech

Stephen Smith, PE, MSE Past President

Each year for nearly 100 years, the MSE has worked with the Montana State University (MSU) College of Engineering to provide the Gold Medal Award to an outstanding graduating engineering senior. Each spring the College of Engineering requests that departments submit one nomination from each engineering discipline. A college selection committee, comprised of faculty, staff, and students, reviews all of the nominations submitted and selects three finalists. Members of the Montana Society of Engineers then interview the finalists to select the winner.

The criteria used to select outstanding seniors are:
- Distinguished academic record,
- Involvement in extracurricular activities,
- Leadership in extracurricular activities,
- Commitment to the practical use of the sciences in the execution of engineering work,
- Promise of service to their profession with integrity, devotion to high standards, and a sense of obligation to humanity.

This April 9th, Rich Hovey, Cammy Dooley, and Stephen Smith had the privilege of interviewing three outstanding candidates: John Yakawich (Chemical and Biological Engineering), Yasin Chaudhry (Civil Engineering), and Nathan Fritz (Mechanical Engineering). With all the depressing news about the state of U.S. education, it was rewarding to see that the best of our best are truly great. Experiencing the intelligence and accomplishments of these graduating engineers was humbling. Not only were these young people excellent engineering students, but skills also included foreign languages, music, sports, mentoring, research, and leadership. In talking with these new engineers, we are convinced that our profession and the world will be better for their involvement.

We agreed that Yasin Chaudhry most exemplified the selection criteria. She plans to spend this summer working as an intern with Morrison Maierle before returning to obtain her Masters in Structural Engineering. She held leadership roles and traveled to Kenya with Engineers Without Borders. She rounded her technical education with the Honors Program to Engineering and excellence assure her a productive career for which we will be proud of our Gold Award recipient. Yasin’s award was announced by Dean Brett Gunnink at the College of Engineering Recognition Ceremony on May 8. Congratulations Yasin!

Teresa Seymour, MTech, Enrollment Services Office

Early in March a memo goes out to the Engineering and Science Faculty asking for nomination of qualified engineering students selected on the following basis:
- Integrity: As measured by his/her reputation for honest and fair dealing among his/her associates and professors.
- Scholarship: As evidenced by his/her academic record.
- Professional Engineering Promise: As demonstrated by his/her aptitude, interest and experience in engineering work and by his/her ability to commend respect and partial evidence of professional engineering promise.

The final list submitted by the faculty consisted of four engineering students. These finalists were interviewed by Montana Society of Engineers represented by Brian Sullivan, Casey Johnson and Bill Ferko. Each interview is about 20 minutes long and this year’s decision was a tough one.

Kelly Benton (BS & MS in Environmental Engineering with a minor in Mathematics) with a 3.96 GPA has already interned with Marathon Oil Corporation, assisted Instructor Hilary Risser in teaching College Algebra, assisted in Undergraduate Research Projects and volunteered with the 2013 Montana Economic Development Summit in 2013. Bill Farko will attended the commencement and sit on the stage to give the Kelly Benton the award. Congratulations Kelly!

Are you an MSE member that would like to get involved but only has a limited amount of time to share? Helping to interview these accomplished students takes but an few hours of an afternoon in early spring. Please contact the MSE Office is you would be willing to help.

NSPE offers discounted membership dues to recent college graduates of ABET-accredited schools and/or programs. If qualified, recent graduates will join NSPE at a discounted rate up to 80% of full dues, depending upon year of graduation. Please contact NSPE Member Services - See more at: http://www.nspe.org/membership/type-membership/graduated-dues-program#sthash.jIXnhaH.dpuf
NSPE Questions Virginia Court’s Decision on Liability

NSPE

In an effort to prevent professional engineers from being placed at serious legal risk, NSPE has filed a “friend of the court” brief (http://bit.ly/18ChsM) before the Virginia Supreme Court in support of an appeal of a lower court decision that, if affirmed, would require a professional engineer to independently test and verify the accuracy of a product manufacturer’s representation to satisfy the professional standard of care.

The case arose in connection with the installation and collapse of a rain tank storm water management system in 2011. NSPE’s brief argues that the trial court improperly shifted the risk of liability for product defects from those who manufacture and sell products to those who deploy them in engineering designs. Professional engineers face a high but legitimate burden to ensure that the products they specify in their plans are appropriate for use, but the lower court ruling would, in effect, require the engineer to independently test and verify all materials rather than rely on the specifications warranted by the manufacturer. This is an unrealistic and inappropriate shifting of the burden and liability from the manufacturer to the engineer who reasonably relied upon the manufacturer’s representations. The brief notes that this risk allocation threatens to increase the cost of professional engineering services and discourages the use of newer innovative products and designs.

The brief also disputes other issues in the appeal. For example, the trial court ruled that the statute of limitations for design defect claims against engineers is paused when there is a continuing relationship between the PE and the owner. NSPE contends that this ruling undermines the basic procedural protections afforded to design professionals.Earlier court decisions, NSPE notes, have determined that the statute of limitations begins to run as soon as plans are presented by the design professional and accepted by the owner, even if the design professional and owner have a continuing relationship.

The trial court, according to NSPE, also failed to enforce the contractor’s obligations that are clearly defined in the contract documents and instead imposed liability on the professional engineer. By doing so, NSPE argues, the trial court undermines the commercial expectations of the parties and frustrates public policy interests that encourage commercial parties to assign risks and duties clearly, specifically and appropriately through standard contract forms.

NSPE President Harve Hnatiuk, P.E., F.NSPE, commented: “As licensed professionals, PEs are held to and exercise high levels of accountability to protect the public health, safety, and welfare. This includes exercising high standards of care in selecting the materials they use in their designs and the integrity of the plans they seal. However, this court ruling would make the PE accountable for defects or failure of products to perform to standards warranted by the manufacturer, for delays in the client’s use of finished plans that are beyond the engineer’s influence or control, and obviate the use of the very contractual instruments that were designed to maximize transparency and accountability. This would undermine, rather than enhance, the professional engineer’s ability to honor his or her duties to the public.”

“NSPE’s intervention in this court proceeding is just the latest step in the Society’s 80-year history of actively advancing, promoting, and defending the meaning and efficacy of the professional engineer license in protecting the public that relies upon it for assurance that their welfare is served,” he added. Also joining the brief were the national and local affiliates of the American Council of Engineering Companies and the American Society of Civil Engineers.

Read the brief at http://bit.ly/18ChsM

MATHCOUNTS Coordinator Needed!

We are seeking a volunteer in the Western Montana (Missoula) Chapter of MATHCOUNTS to help coordinate the local chapter competition and related activities. The Chapter Coordinator will work closely with the middle schools in the region to communicate information about MATHCOUNTS and the Chapter Competition, as well as facilitate the competition which is always held in the month of February. This chapter has a well developed process already in place, but needs a Coordinator to oversee the program. The Chapter Coordinator will be supported by the State Coordinator and Executive Secretary. Please contact Dan Munson at 406-655-2540 to discuss your availability and interest. Thanks for considering this opportunity to make a difference in the lives of our middle school children.
From MSE Office

The year is flying by. Work loads are up for most firms — engineers are busy. MSE has just finished up the 2015 Legislative Session—with some wins (new PE Licensing Statute is in place) and some losses (the Infrastructure Funding bill did not make it). The 2014/2015 Montana MATHCOUNTS Session has concluded—thanks to all the engineers around the state that volunteer their time and efforts. The 2015 Joint Engineers Conference schedule has a full slate of presenters and very few Vendors spaces to sell. Elections for the new MSE Board closes on June 19 — get you ballot in today if you have not done so!!

MSE member Jean Riley helped with STEM conference early this year and shared the following link in the Helena paper: http://helenair.com/news/local/education/empowering-teachers-conference-aims-to-foster-the-next-generations-of/article_46d66161-442e-5248-ac3b-636a93541c2.html. In order for there to be enough engineers for our future, all MSE members must be busy encouraging today’s youth through STEM projects, Montana MATHCOUNTS and encouraging new grads to get licensed.

Joint Engineers Conference:
www.mtengineers.org

2015 JEC Update!

Thanks to the efforts of Cory Hasiak, MSE has a strong track for this year’s upcoming JEC. On Wednesday, the first session at 1:00 pm will be Attorney Matt McLean (Construction Liability & Litigation) followed by Lobbyist Jennifer & Darryl James (2015 Legislative Session Review). First thing on Thursday morning, MSE will lead off with Krystal Stewart for two sessions (Small Business Taxes) and (Accounting Basics/Quickbooks). That afternoon, will begin with Marcia Karr in two sessions (Reasons for Combined Heat and Power) & (Site Specific Combined Heat and Power Assessments). For Friday, Dev Warren will present 3-sessions on leadership. The final presentation will be by Stephen T. Smith (Environmental Life Cycle Assessments—Basics, Issues and Greenwashing).

2014-2015 MSE Board

Brian Schultz, President
brian.schultz@northwestern.com

Cory Hasiak, President Elect
chasiak@simplicityced.com

Edward P. Weber, Vice President
edward.weber@hdrinc.com

Cammy Dooley, Secretary/Treasurer
cammy.dooley@northwestern.com

Georgia Brensdal, Past President
mtmoosemom@aol.com

Connie Dempster, Executive Secretary
MSE Office
PO Box 20996
Billings, MT 59014-0996
406-259-7300
mse@assoc-mgt.com

Deadline for the Next Issue of this Newsletter is September 10, 2015
Submit articles and advertising to mse@assoc-mgt.com

The PE Magazine link is http://www.nspe.org/PEmagazine/index.html
Please bookmark and share this link with your colleagues — it is packed full of PE news.