

Montana Society of Engineers

A state society of the National Society of Professional Engineers



Founded 1887

President's Message:

Crystal Kuntz, PE, President

As it is time once again for some random thoughts from the President - I am reminded of just one of the 105 reasons that I am not a journalist. What a job - deadlines everyday to try to come up with something new and interesting to say about a news-worthy topic.... I have nothing....

As my mind wanders I recall an interview I watched recently with a woman born in 1908. Wow. She has seen over 100 years of progress in the world including the



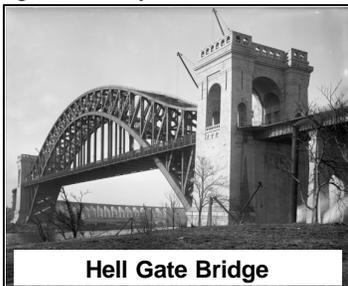
Panama Canal Lock

advent of many things in which engineers played a significant role. The year she was born, the futile attempts at digging a canal at sea

level across the isthmus of Panama had been abandoned and construction begun in earnest of the lock system that is still an engineering marvel today - what a crazy idea! The gyrocompass was invented allowing seamen to navigate even on rough waters, cellophane was patented and the US Army Signal Corps accepted a bid by the Wright brothers to build flying machines.

Her grade-school days saw the completion of the Hell Gate Bridge over the East River to give Pennsylvania Railroad trains access to New

England. Designed by engineer Gustav Lindenthal, it was the longest steel



Hell Gate Bridge

arch bridge built at the time. In her teenage years the first U.S. diesel electric locomotive went into service at the Central Railroad of New Jersey and engineer William Bushnell Stout, 42, built the first all-metal U.S. airplane for the navy.

By the time she was my age, the Alaska Highway had just been completed and Duck Tape had been invented. Nope, not a typo - - Duck Tape was invented for use by military personnel who coined the phrase because water would roll off the surface of the tape. Later, the term was changed to Duct Tape due to its prolific use to seal duct work. In 1942, nuclear power was discovered and the first nuclear reactor was built in Chicago though it wouldn't be used to generate electricity until 1954. She saw the first solo trans-Atlantic flight in 1927, first man on the moon in 1969, the proliferation of the internet and cellular telephones.

History is wrought with the innovative ideas of the technically-minded. For centuries, engineers have worked tirelessly to improve the human condition



Obninsk APS-1, first nuclear power plant in the world. (Obninsk, USSR)

on multiple levels and the results have been remarkable. As her parents watched her grow - I'm sure they could never have imagined that someday she could fly from New York to Paris in 3 hours, make a wireless phone call or find her way via satellite with GPS directions. Engineering - - it's a pretty good place to be - - (much better than journalism) - -

March, 2011

“Engineering - - it’s a pretty good place to be - - (much better than journalism) - - ”

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Student “MATHLETES” Compete in State MATHCOUNTS Competition

Dan Munson, PE, MathCounts State & Billings Chapter Coordinator

Teams of 6th, 7th, and 8th grade student Mathletes[®] from middle schools all across Montana competed in the State MATHCOUNTS contest on Wednesday, March 9th at MSU in Bozeman. A total of 24 middle schools across the state comprised of 76 students participated. The top four individual Mathletes[®], and the coach of the winning team, won an all-expense paid trip to the MATHCOUNTS National Competition in Washington D.C..

Amy Chou from Bozeman Sacajawea Middle School, Daniel Smith from Missoula Washington Middle School, Arthur Befumo from Five Valleys Homeschool in Missoula, and Isabella Whitworth from Billings Lewis & Clark School won the top honors at the State Competition this year. These four students, along with Five Valleys Homeschool math coach Amzi Jeffs, will represent Montana as our official state team at the National MATHCOUNTS Competition in Washington D.C. on May 6th.

The top teams this year were Five Valleys Homeschool, Billings Lewis & Clark, Helena CR Anderson, Missoula Washington, and Bozeman Sacajawea Middle Schools.

Teachers and students had been preparing for the competition since last September. The students trained within their schools before starting the formal competition. The first level of the competition began in January and early February when over 750 student Mathletes[®] competed within their school to become a member of the "school team". From there, 394 students from 54 middle schools competed at the regional level in February. Winners at the regional level received prizes and advanced to the State competition. The winners of this State Competition advance to Washington D.C. on May 6th to represent Montana in the National MATHCOUNTS Competition and compete for individual and team national titles against other top middle school math students representing the 50 states, the District of Columbia, U.S. Territories and schools from the Department of Defense and State Department.

MATHCOUNTS is a combination math coaching and competition program. Students are tested on such topics as probability, statistics, linear algebra, and polynomials. The competition consists of written tests and a fast-paced oral match.

The purpose of the MATHCOUNTS program is to motivate junior high school students in mathematics and interest them in technology related careers. It is designed to create interest and enthusiasm in mathematics by creating an environment similar to athletic programs, including intensive training,

competition, teamwork and recognition. Widely recognized as an effective middle school mathematics coaching and competition program, MATHCOUNTS is celebrating its 28th Anniversary.

The MATHCOUNTS program is organized by the National Society of Professional Engineers on a national level. Locally, MATHCOUNTS is organized by the Montana Society of Engineers, with local volunteer effort being provided by area engineers, students, and professionals.

Nationally since September, over 500,000 Mathletes have been using materials provided by the MATHCOUNTS Foundation to sharpen their math skills, with the help of their “coaches.”

More than six million students have participated in the MATHCOUNTS program since its inception in 1983. Over 17,000 MATHCOUNTS volunteers from the business and education communities annually organize and conduct the program in communities nationwide.

Just how hard is this math? Try the Problem of the Week on the MATHCOUNTS Web site, www.MATHCOUNTS.org, and click on the site’s “Go Figure!” math challenge to really push your skills.

2010-2011 Montana MathCounts Corporate Sponsors

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2011 Montana State MATHCOUNTS Winners: Amy Cho, Isabella Whitworth, Arthur Befumo, and Daniel Smith

“This competition undoubtedly featured some of the brightest middle school students in our state!” —Dan Munson, State Coordinator



2011 Joint Engineers Conference News!

Crystal Kuntz, PE, President & Chair of JEC

It's that time again, the annual sport of JEC nagging is about to commence. The fast-approaching deadline for receipt of Speaker Proposals for the 2011 Joint Engineers Conference is upon us. Yes, really-truly!! March 31, 2011 – all speaker proposals for the upcoming JEC are due to be entered online. Various proposals are continuously arriving online and we have some great ideas in the making.

Again this year some successful elements of the past will remain. Societies will be invited to meet during the lunch break on Friday during the conference if they so choose and this year society representatives to the JEC have the ability to schedule their own meeting time on line at the JEC web site. Also, we are again hoping to offer an off-site technical tour as a part of the conference. This seems to be a hit and we hope to improve upon the concept each year with interesting sights in and around Helena. If you have a suggestion for the 2011 tour – please let me know!

Another item to note includes the Engineering Honors Banquet. This banquet is held each year during the JEC to honor those who have contributed greatly to the engineering society. This year's banquet will be held on Wednesday evening, November 2, 2011 during the JEC. If your group or society would like to present any awards or recognize their members during this event we encourage you to participate. Please contact Doug Brekke (dlb@5400.tv) or myself (crystal.kuntz@eciblgs.com) and we will ensure that you are added to the banquet program. This evening is a great opportunity for your small group or company to honor those that have contributed greatly without all the planning and expense of a separate event – so take advantage!

In short, things are coming along nicely for the upcoming 2011 conference – thanks to the hard work and dedication of all the committee members from each of the societies. Your efforts are greatly appreciated.

The Warning Signs of Career Disaster

Submitted by Deborah Walker—Certified Career Management Coach

Many of us have recurring dreams. Mine is that I'm driving down the freeway and can't read the road signs until I've missed an important exit. Fortunately, it's just a dream. But many people have trouble reading signs—not road signs, but career warning signs. A career warning sign is any change that indicates possible career disaster. While warning signs may vary according to employment situations, there are three basic warning signs to look for.

Warning Sign #1: Sales are down in your company. While not everyone in an organization is involved with sales, all jobs are affected by sales levels. When revenues decrease, profits are held steady by cutting costs, which often means cutting jobs. Protect yourself by paying attention to your company's sales.

While not all employees are privy to sales numbers, there are ways of finding pertinent financial information. Public companies must publish financial statements. And employees of non-public companies can also read the signs of declining sales, like:

- Work load decline
- Boss suddenly concerned about small costs, like pens and copy paper
- Sales manager was fired or sales department reorganized

Alert employees are sensitive to such indicators. They keep their resume updated at all times and cultivate a growing professional network for potential future job leads.

Warning Sign #2: Management changes. Any management change has the potential to damage your corporate position. Be watchful during:

- Mergers and acquisitions
 - Successive short-term management (e.g., three bosses in two years)
 - Retirement or replacement of senior management
- Wise employees listen closely to new-management rhetoric. Is he making dramatic promises? Does he have a reputation as a job cutter? The first announcement of new management is the time to prepare your resume and cautiously explore outside options.

Warning Sign #3: You've lost favor with your boss. While "gut feelings" are often the first warning, some objective indicators are:

- A less-than-exemplary performance review
- No performance-based salary increase
- Smaller than expected year-end bonus
- Your input is not requested at planning meetings
- Your suggestions are ignored

If you sense your position on the corporate totem pole is falling, trust your gut. When jobs are at stake, yours will be one of the first sacrificed. Prepare your new career plan.

These warning signs may seem obvious, but they are often ignored by those who fear change. Rather than take action, they lean on false hope that loyalty to the employer will pay off in the end. Those who practice career management never confuse company loyalty with aversion to change. When career warning signs appear on the horizon, read the signs clearly so that you're ready for the next exit with a strong resume, career plan, and interview skills.

Deborah Walker, Certified Career Management Coach
Read more career tips and see sample resumes at:
www.AlphaAdvantage.com
email: Deb@Alphaadvantage.com

“The fast-approaching deadline for receipt of Speaker Proposals for the 2011 Joint Engineers Conference is upon us.”

Key JEC Dates:

- January 1 – March 31, 2011 = JEC open for Session Proposals
- April 1 – April 30, 2011 = JEC Committee Evaluation of Session Proposals
- May 1, 2011 = 2011 JEC Agenda Published
- September 1, 2011 = Registration for JEC 2011 Opens

“When career warning signs appear on the horizon, read the signs clearly so that you're ready for the next exit with a strong resume, career plan, and interview skills.”

Professional Engineers Hall of Fame: Wilbur J. Bennington Inducted

Doug Brekke, Chair of PE Hall of Fame

At the 2010 Montana Engineers Honors Awards Banquet held on Wednesday—November 3 at the Joint Engineers Conference, Wilbur J. Bennington was honored as this year's inductee into the Professional Engineers Hall of Fame.

Wilbur J. Bennington, A.I.A., P.E. served as structural engineer, principal and executive for CTA Architects and Engineers from 1950 to 1980. During 30 years he held many positions with CTA, including Chairman and Executive Director.

CTA began as Cushing and Terrell in 1938 and provided both architectural and engineering services. Bennington was the only staff engineer until 1967. By 1980 the firm grew to 60 design professionals. Today CTA has 350 employees working in sixteen branch offices.

Bennington was structural engineer or supervised engineering for numerous health and education facilities in several states. He worked on projects for Montana State University, Montana State University - Billings, Rocky Mountain College, and the College of Southern Idaho. He was recognized as a technical leader in double-wythe reinforced brick masonry mid-rise design, driven and injected foundation systems, structural steel design, and structural concrete systems.

Bennington initiated CTA's Peer Review Type Management, gaining insight from national firms outside the region and hiring management consultants to improve operations,

organization and quality of services. He was the catalyst for CTA's emergence as a regional service provider with a national presence.

For his career of service and leadership dedicated to the advancement of structural engineering and to the development of a premier architectural and engineering company in Montana, Wilbur J. Bennington is inducted into the Montana Professional Engineers Hall of Fame.

Each spring, MSE will announce a call for nomination for consideration for induction into the PE Hall of Fame. Inductees are honored at the JEC each November at the Montana Engineers Honors Awards Banquet. Plaques honoring the inductees are displayed in Roberts Hall at the Montana State University College of Engineering in Bozeman. The PE Hall of Fame began in 2002 and the following professional engineers have been inducted:

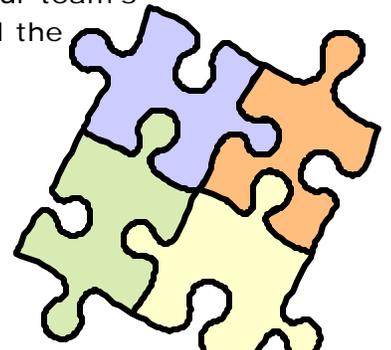
- Ben F. Hurlbut, PE (November 2002)
- John H. Morrison, PE, LS (November 2002)
- Leland J. Walker, PE (November 2003)
- W. Paul Schmechel, PE (November 2003)
- Harold S "Sonny" Hanson, PE (November 2004)
- Robert L. Sanks, PhD, PE (November 2005)
- Eldon R. Dodge, PhD, PE (November 2006)
- Joseph A. Maierle, PE, LS (November 2006)
- Fred F. Videon, PhD, PE (November 2007)
- Daniel T. Berube, PE (November 2008)
- Willis J. Wetstein, PE (November 2009)
- Wilbur J Bennington, AIA, PE (November 2010)

“Plaques honoring the inductees are displayed in Roberts Hall at the Montana State University College of Engineering in Bozeman.”

Is Something Missing From Your Ethics Training?

NSPE now offers *customized* training presentations, seminars, keynotes and Web seminars for engineering firms, government agencies, and other institutions of all sizes and areas of practice. NSPE General Counsel and engineering ethics expert Arthur Schwartz will work with you to create the optimal program needed to increase your team's engineering ethics awareness — and put all the pieces together.

Visit www.nspe.org/ethics,
or contact Arthur Schwart at
aschwartz@nspe.org.



Call for Nominations for PE Hall of Fame is now OPEN: The Call Closes on May 1, 2011.

Call for Nominations Montana Professional Engineers Hall of Fame

The Montana Society of Engineers (MSE) requests nominations for induction into the Montana Professional Engineers Hall of Fame. Plaques honoring the inductees will have a permanent home at the Montana State University College of Engineering.

The award was established in 2002 to recognize Montana professional engineers who have made outstanding contributions to the engineering profession and public welfare of Montana. This award is open to all professional engineers licensed in Montana.

Qualifications/Method of Selection

The MSE Executive Board will consider nominees for induction into the Montana Professional Engineers Hall of Fame. Professional engineers licensed in the State of Montana and working on projects in the State of Montana are eligible. Retired and deceased professional engineers are eligible. Current Officers and directors of MSE are *ineligible*.

MSE Executive Board members will consider these aspects of the nominee's career: The candidate's professional integrity is beyond question; the professional reputation is more than local in character; the undertaking of services upon which the award is based are of high order; and there is more than an ordinary relationship between the undertaking of services and the public welfare. Preference is given to candidates who have consistently promoted the social and professional interests of the engineer. This criterion for the award is suggested by the National Society of Professional Engineers.

Nomination Format

Please provide the following biographical information on each nominee:

- Personal information including current address and phone number. If nominee is deceased, so note and provide information of surviving family members.
- 500-word or less statement describing the nominee's education, professional achievements, professional and technical society membership, humanitarian and civic contributions, unusual consulting assignments, and family information.

Presentation

The award(s) will be presented at the Joint Engineers Conference Annual Banquet on Wednesday - November 2, 2011.

Deadline

Nominations must be postmarked no later than May 1, 2011 and sent to this address:

Montana Society of Engineers
Nomination for the MT PE Hall of Fame
PO Box 20996
Billings, MT 59104-0996

Entries postmarked after May 1, 2011 will not be considered.

“Often we hear “what can MSE do for me?” This is the wrong attitude when considering membership with MSE. Members of MSE are doers.”

From the MSE Office

Wasn't that an impressive list of engineers listed in the PE Hall of Fame article on page 4? Do you or someone in your firm know of an individual deserving of inclusion in the PE Hall of Fame? This would be a great issue to share with principals in your firm. Take a bit of time to complete the nomination form for that engineer you have always admired for his/her contribution to the profession. Nominations are due to this office by May 1, 2011.

Presentation opportunities are still available for the 2011 Joint Engineers Conference. If you or someone you know has a presentation, please submit the proposal at www.mtengineers.org. Calls for presentations will be closing on March 31, 2011 — there is not much time. The JEC committee will begin reviewing and approving presenters the first part of April.

2010-2011 MSE Board

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Deadline for the Next
Issue of this Newsletter is
June 10, 2011

Submit articles and advertising to
mse@assoc-mgt.com

2011 Joint Engineer Conference November 2-4, 2011 Helena, Montana

Scenes from Inside Scoring Room at 2011 State MATHCOUNTS

Volunteers at work scoring tests on March 9 at MSU—Bozeman.



We hope to see you all again in 2012 . . .

