

Montana Society of Engineers

A state society of the National Society of Professional Engineers



Founded 1887

2004 NSPE Winter Meetings

Doug Brekke, PE, President

In January, I joined several hundred NSPE members at the 2004 Winter Meetings in Washington, D.C. It was great to hear about activities in other state associations. We visited NSPE Headquarters and talked with several national staff members.

NSPE continues to be challenged by decreasing membership numbers. Other engineering societies also face this problem. NSPE continues to explore ways to increase interest in the engineering profession.

Past NSPE president David Waugh gave a presentation suggesting a new level of membership for graduates in engineering from ABET approved schools. Immediate Past President Blitman is very supportive. David points out that there are 3,000,000 engineering graduates; 360,000 P.E.s; and 48,000 NSPE members. Most of the P.E.s are "build" engineers (i.e. construction projects of various forms). Millions of engineers are doing every other thing imaginable. David suggests that NSPE create a new designation for non-P.E. engineers. The term "Engineering Registry" has been applied to this suggestion. I found the discussions concerning the Registry proposal to be very interesting. A consensus vote showed that the majority of members at the meeting oppose creating this membership level for non-P.E.s.

NSPE members were supportive of increasing support for programs that target young engineers by providing information on career-advancement and professional issues. There is also great support for the NSPE website. The NSPE website

continues to grow and improve. Obtaining information on a host of topics is now easier than ever. I encourage all MSE members to visit www.nspe.org.

I am always happy to visit with MSE members. Please contact me with your concerns and questions.

Hall of Fame

This issue of the newsletter includes a nomination form for the Montana Professional Engineers Hall of Fame. The induction ceremonies will be held on November 5 at the Joint Engineers Conference in Helena. The Hall of Fame is a wonderful way to honor engineers that have contributed to our profession and to the development of the State of Montana.

Call for Entries to the Montana's Professional Engineers' Hall of Fame

Enclosed in this issue is the qualifications, method of selection and nomination format for the PE Hall of Fame. If you know of someone that should be considered, please take some time to make sure that someone is considered by the committee. This is a great honor!

Presentations will be made at the Joint Engineers Conference Annual Awards Banquet scheduled for November 5, 2004.

Deadline for nominations for this year's entries is June 1, 2004.

April, 2004

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2003-04 MATHCOUNTS: State Competition

Dan Munson, PE, State Coordinator

Teams of 6th, 7th, and 8th grade student Mathletes™ from middle schools all across Montana competed in the State MATHCOUNTS contest on Tuesday, March 16th at MSU in Bozeman. A total of 26 middle schools across the state comprised of 88 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.

Eighth graders Kate Dramstad, Ross Rowsey and Antony Speranza from Helena's CR Anderson Middle School, as well as sixth grader Alec Patterson from Missoula's Rattlesnake Middle School won the top honors at the State Competition this year. These four students, along with the CR Anderson Middle School Math teacher Chuck Bozdog, will represent Montana as our official state team at the National MATHCOUNTS Competition in Washington D.C. on May 7th. Rowsey and Speranza are returning state champions who won the Montana MATHCOUNTS competition last year.

The top teams this year were Helena's CR Anderson, Billings' Will James, Missoula's Washington Middle, Missoula's Sussex Middle, and Missoula's Rattlesnake Middle Schools.

This competition undoubtedly featured some of the brightest middle school students in our state! 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 the student Mathletes™ competed within their school to become a member of the "school team". From there, 444 students from 68 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 7th 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 21st 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. Additional information on MATHCOUNTS is available at www.mathcounts.org.



Dave Koch from MRL handing out the awards, Kate Dramstad, Alec Patterson, Antony Speranza, and Ross Rowsey. Alec is a sixth grader from Missoula's Rattlesnake Middle School, and the rest are eighth graders from Helena's CR Anderson Middle School.

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Special Thanks to the 2003-04 Corporate MATHCOUNTS Sponsors!

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Montana MATHCOUNTS

*Corporate Sponsors are
making a difference!*

Through the financial support that these corporate companies, Montana MATHCOUNTS has continued to grow and reach more students in Montana. These students are introduced to the wonderful world that mathematics can open and able to take advantage of these skills at an earlier level making their future and ours brighter. THANK YOU!

As "Girl Day" Turns Four, Engineers Redouble Efforts

Press Release: National Engineers Week Headquarters

Thousands of women engineers—with the support from their male counterparts—participated in the mentoring effort this year (dubbed "Girl Day" in engineering circles), led by 2004 National Engineers Week co-chair, The Institute of Electrical and Electronics Engineers (IEEE/IEEE-USA), with major sponsors Agilent Technologies, Inc., and the Elizabeth and Stephen Bechtel, Jr. Foundation.

On March 25, Girl Day went global as National Engineers Week participated in a United Nations briefing, "Girls and Technology: New Educational Opportunities." Dr. Sylvia Wilson-Thomas, representing EWeek and IEEE, reported on Introduce a Girl to Engineering Day and other Science, Technology, Engineering and Mathematics programs to promote education for girls and career opportunities for women, as part of the weekly UN Department of Public Information briefing for non-governmental organizations.

National Engineers Week has also invited organizations, educational institutions, and individuals to sign a statement supporting its initiatives, which can be accessed at the National Engineers Week website at www.eweek.org:

"We, the undersigned, encourage all nations to week the talents, viewpoints and intellects of women in engineering and related mathematics and science fields. Encouragement, education and work opportunities for girls and women in these

fields are imperative to generate and turn ideas into reality for the health, safety, and welfare for all."

For years, the engineering community has recognized the need to bring more women into its ranks. Currently, only one out of ten engineers in America is a woman. National Engineers Week launched Introduce a Girl to Engineering Day in 2001 to provide girls and young women with a firsthand experience in the engineering arena. An estimated one million girls have been involved annually in what is considered to be the first outreach program targeting girls ever established by a single profession.

Those involved in the program stress that Girl Day is much more than an attempt to diversify the profession and more than simple a numbers game. Besides broadening and increasing the ranks of engineers in America, engineers say the initiative helps in the long range, by opening up the profession—and, thus, its societal impact—to serve a larger need. Though the impact of any such an effort is not always easy to measure, few doubt that girls are up to the challenge.

A Pledge Roster of Girl Day events across the country can be viewed at www.eweek.org/site/News/Eweek/2004_nationalpledgeroster.shtml Organizers and engineers are urged to continue listing their activities throughout the year to help make educational and career opportunities and mentoring programs available for girls and prospective women engineers nationwide.

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such an effort is not
always easy to measure,
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Don't Sabotage Your Job Search with Faults Assumptions

Most job seekers understand that the job market has changed radically over the last few years. Sadly, however, many still hold to job-search assumptions that do not apply to our current market conditions. If you believe any of the following five statements, you could be dragging your job search out longer than necessary. Cut your job search time by knowing the truth about the job market and learning how to combat these assumptions.

1. "My last job search was a snap. I'm sure this time won't be any different."

Chances are, your last job search was in the mid to late 1990's when the job market favored job seekers. Even up to 2001, jobseekers (and even employers) lived under a rosy glow of unrealistic optimism. In the last few years, however, most job seekers have noticed a drastic drop in the market demand for their career skills. Persons who were once courted by recruiters and headhunters from top firms wonder why they are no longer receiving calls with enticing opportunities. For many job seekers, frustration and lack of confidence have replaced optimism.

Action: The job seeker of 2004 will avoid discouragement by developing a strategic action plan that involves a high degree of proactive and systematic effort.

2. "Employers and recruiters take the time to read entire resumes."

This is couldn't be farther from the truth. The reality is if the best information isn't in the top four to five inches of your resume, it's doubtful anyone will notice. Try this out for yourself. Open up your current resume on your computer. Do you see the entire first page? Probably not. Most likely when your resume is opened, the reader will see the top four to five inches. You must sell the reader in those first few inches or he/she is not going to bother scrolling down to read more. With the volume of resumes that employers and recruiters receive, who has the time to hunt out the good material on a resume?

Action: If your current resume isn't making best use of the top four to five inches, consider using a hybrid format that will allow you to place your best assets up on top where you'll be noticed and called.

3. "I don't want to limit my potential job opportunities, so I'll write one resume to apply for all kinds of jobs."

I learned early in my recruiting days that employers turn down perfectly qualified candidates because the resume's focus is too general. A one-size-fits-all resume gives the impression that the job seeker is uncertain of his career goal. An employer once told me that if a candidate is interested in two completely different positions, he must not be very good at either.

Action: The most effective resumes leave no doubt as to the job seeker's career objective. If you have more than one career objective, you need more than one resume.

4. "I'm not going to bother with cover letters. No one really reads them anyway."

The truth is the quality of your cover letter often will determine whether your resume gets read at all. The worst offense, however, is to send a cover letter that sounds as "cookie-cutter" as junk mail.

Your cover letters will create a stronger first impression if you remember the buying motives of each of these major categories of recipients:

- **Executive decision makers** are most interested in your ability to help them achieve their corporate bottom-line objectives.
- **HR screeners** look for the best qualifications match.
- **Third-party recruiters** need strong selling points to help present you to their corporate clients.

Action: If you keep in mind the buying motives of your cover letter recipient, you'll win their attention more often than not.

5. "If I can just get my foot in the door, my interview skills will get me an offer."

That may have been true back when you had less interview competition. But today, employers have the advantage of choosing from the best talent available, because so much of the best talent IS available. Since you'll probably be interviewing against candidates at least as strong as yourself, you'll need to distinguish yourself through superior interview preparation.

Action: Remember that the best way to prepare for an interview is to think of an interview in three parts:

- Ask questions to uncover the interviewer's hidden buying motives.
- Answer questions based on the interviewer's buying motives.
- Ask closing questions to win the job offer.

(To read a full-length article on the three essential interview skills visit my article archive at www.AlphaAdvantage.com. Follow the articles link to "Win Your Next Position with Three Essential Interview Skills".)

Once you are free of false assumptions, you're less likely to fall victim to many of the disappointments, frustrations and anxieties associated with an extended job search.

Deborah Walker, CCMC
Resume Writer ~ Career Coach
For more in-depth information on resumes, job-search strategy and interview skills, check out the article archive at my website: www.AlphaAdvantage.com
Email: Deb@AlphaAdvantage.com
Toll-free phone: 888-828-0814

Action: If you keep in mind the buying motives of your cover letter recipient, you'll win their attention more often than not.

MATHCOUNTS Support

If you haven't already contributed to the Montana MATHCOUNTS program with a financial donation, please consider it. Montana MATHCOUNTS is a non-profit organization primarily supported by local engineers and engineering based companies. To keep the quality of the program high, and the middle school registration fees low, we are totally dependent on the generosity of our state engineers. We trust that you will see the benefit in helping us out. Donations should be sent directly to:

Montana MATHCOUNTS Foundation
P.O. Box 20996

Billings, MT 59104-0996

Thanks for your help and kindness.

Out to dinner MATHCOUNTS Quiz:

How about a little brainteaser? This is a fun little exercise that really works. Take a minute and try it. Work this out as you read.

1. First of all, pick the number of times a week that you would like to have dinner out. (More than once but less than 10)
2. Multiply this number by 2 (Just to be bold)
3. Add 5.
4. Multiply it by 50 - I'll wait while you get the calculator.....
5. If you have already had your birthday this year add 1754.... If you haven't, add 1753.....
6. Now subtract the four-digit year that you were born.

You should have a three-digit number. The first digit of this was your original number (I.e., how many times you want to have eaten out each week.) The next two numbers are... YOUR AGE! (Oh YES, it IS!!!!)

So mail in your answer as to why this works, and we'll send you more brainteasers. Expect to see more quizzes in future newsletters!

Plan Now to Attend The Joint Engineers Conference

Doug Brekke, P.E., Vice President

Mark your calendars now for the 2004 Joint Engineers Conference. The Conference will be held Thursday and Friday November 4 and 5, 2004 at the Red Lion Colonial Hotel in Helena. The conference features continuing education, a trade show, and board meetings for the sponsoring societies. This year we will welcome the Intelligent Transportation Society Rocky Mountain Region annual meeting. We will feature an excellent track for transportation engineers.

The Joint Engineers Conference is an ideal opportunity to obtain the continuing education credits required for Professional Engineers license renewal. The two-day conference provides 14 continuing education hours. Everyone with an interest in engineering related topics is encouraged to attend. We especially encourage students and engineers in training to participate. MSE members are asked to encourage young engineers, contractors, and other design professionals to consider attending the Joint Engineers Conference.

The Joint Engineers

Conference will be held

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November 4 and 5, 2004 at

the Red Lion Colonial

Hotel in Helena.

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Visit www.nspe.org TODAY!

The Board of Professional Engineers and Professional Land Surveyors consists of nine members appointed by the governor with the consent of the senate.

MT Board of PE & PLS

Did you know?

The Board of Professional Engineers and Professional Land Surveyors consists of nine members appointed by the governor with the consent of the senate. A) The members are five professional engineers who have been engaged in the practice of engineering for at least 12 years and who have been in responsible charge of engineering teaching or important engineering work for at least 5 years and licensed in Montana for at least 5 years. No more than two of these members may be from the same branch of engineering. B) Two professional and practicing land surveyors who have been engaged in the practice of land surveying for at least 12 years and who have been in responsible charge of land surveying work for at least 5 years and licensed in Montana for at least 5 years. C) Two representatives of the public who are not engaged in or directly connected with the practice of engineering or land surveying.

Each member must be a citizen of the United States and a resident of this state. A member, after serving three consecutive terms, may not be reappointed. Each member shall serve a term of 4 years. The governor can remove a member for misconduct, incompetence or neglect of duty or for any other sufficient cause and may shorten the term of one public member so that it is not coincident with the term of the other public members.

Next Issue: Do you know what constitutes a "public building" in the Montana Codes Annotated? You will be surprised!

03-04 MSE Board

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