

Richmond Joint Engineers' Council

NEWSLETTER December 2005

P.O. Box 8988, Richmond, Va 23225 www.rjec.org

BERKNES SCHOLARSHIP CHALLENGE UPDATE!

RJEC Member Societies are more than half-way to meeting the American Society of Mechanical Engineers (ASME) challenge to raise a total of \$1,000 which they will match with an additional \$1,000 to their initial \$1,000 contribution. Please send in your check this week as we move towards reaching our goal for establishing the I. Russell Berkness Endowed Scholarship at Virginia State University.

The endowment will be established with an initial gift of \$10,000, received from RJEC when that amount is raised. VSU has agreed to match the \$10,000 for a total sum of \$20,000.

This gift is solely for the purpose of attracting and providing financial awards for students enrolled and matriculating at Virginia State University who are majoring in the field of engineering. Full details on the scholarship fund are provided at www.rjec.org.

Meet The ASME Challenge!

Please write payment to:

I. Russell Berkness, P.E., Endowed Scholarship Fund

Please send to: **RJEC**

P. O. Box 8988

Richmond, Virginia 23225.

HEARING ABOUT NUCLEAR ALOT LATELY?

The price of oil has prompted everyone consider alternative sources of energy and nuclear is being looked at more closely. Please read the attached article on this issue from our American Nuclear Society (ANS) member and North American Young Generation in Nuclear (NA-YGN)



CALL FOR 2006 AWARD NOMINATIONS

Please seriously consider nominating someone for:

- **2006 Engineer of the Year** to recognize an engineer who serves as an example of integrity and dedication to the engineering profession, or
- **2006 Community Service Award** to recognize someone in our member organizations who has made outstanding contributions to Richmond metropolitan area communities.

These awards will be presented at the upcoming 2006 RJEC Engineers Banquet and Engineers Week celebration on February 23, 2006.

The guidelines for nominations are to provide a maximum three-page description of the nominee including background on their professional career and contribution to the field of engineering (Engineer Award) or contributions to the community. Supporting information on the nominee can be included with the nomination. A primary contact person for each nomination is required.

Send hard-copy nomination packages to the RJEC mailing address, or e-mail electronic submissions to Herb Walke, RJEC Chair, at wherb@erols.com. **Nominations must be received by January 12, 2006.**

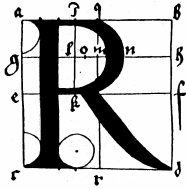
ENGINEER'S WEEK BANQUET

It's time to put the Engineer's Week Banquet on your personal calendar for February 23, 2006. We have a wonderful evening planned at the Historic Jefferson Hotel and are especially excited about our Guest Speaker! **Dr. Kathryn Thornton** served as a NASA astronaut for 12 years, flying four space missions, including the first Hubble Space Telescope Service Mission, and logging more than 975 hours in space and over 21 hours of extravehicular activity (space walking). She holds the women's record for both number and duration of extravehicular activity.

Dr. Thornton is currently a professor at the University of Virginia with appointments in the Division of Technology, Culture and Communication, and in Mechanical and Aerospace Engineering, and is also director of the UVA Center for Science, Mathematics, and Engineering Education whose goal is to promote excellence in science, mathematics and technology education at all levels in Virginia's public schools.

Due to a wonderful partnership with RJEC Member Society **Project Management Institute (PMI) Central Virginia Chapter** and past direction of Luis Naranjo we plan to offer on-line registration via the RJEC website.

Stay tuned for an invitation!



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ENGINEER'S WEEK SUPPLEMENT

We are now planning for the National Engineers Week Supplement which will be included in the February 19, 2006 Richmond Times Dispatch Sunday Paper. RJEC member societies that have paid their 2005-2006 dues will have space provided for information on their society including contact information. This is a great way to get the word out on your organization and potentially recruit new members.

IMPORTANT!!

We need the contact information, i.e. person (and their position in the organization if appropriate), telephone number and/or e-mail to be included with the description of the Member Society that will be published in the engineers supplement.

We can include other appropriate contact information such as a web site address if a contact person is not to be included. **The deadline for this is January 20, 2006.**

Please send this information to Bob Chandler via e-mail at:
Bob.Chandler@VDOT.Virginia.gov.

Advertising Opportunities

We encourage RJEK Member Societies to consider advertising in the Engineer's Supplement with either a 6-inch or 3-inch advertisement space. *The Richmond Chapter of American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)* has consistently advertised in the supplement and RJEK greatly appreciates their continual sponsorship and support. This provides excellent exposure, and it supports the success of the Engineer's Week Supplement.

ENGINEER'S WEEK CAREER DAY

Career Day will be held at the Science Museum of Virginia on Sunday, February 26. Please contact Nasser Ghariban (nghariba@vsu.edu) to let him know that you are planning to have representatives and we will get a table ready for you. (We can actually get a table set up for you at the last minute, so don't let a lack of advance notice stop you from being there.)

FIRST LEGO LEAGUE JUDGES AND REFEREES



Speaking of events of general interest, FIRST LEGO League, the robotics competition for 4th through 8th graders, is in need of adult volunteers to help out at the local qualifying tournaments. Local competitions are planned and the FIRST Robotics Regional Competition is March 3-6, 2006. This is our eighth season, and we expect to break the record again for high school teams in Virginia this year, with over 25 in the Richmond/Tri-Cities area.

We are looking in particular for judges and referees. Eight referees and 12-16 judges are needed for each tournament. Teams are evaluated on the technical merits of their robots, which are completely autonomous robots built from standard LEGO components. In addition to the technical judging, teams also present a research project to a group of judges.

Contact Dee Tomczak:
dbtomczak@aol.com or
robotstoo@aol.com

The tournaments are open to the public at no charge, so if you cannot spare the whole day, but would like to see what it's all about, please come by for a peek at the action.

2006 RJEK LEADERSHIP FORUM

A committee has been working on developing an outstanding Leadership Forum event for March 2006. Plans are to have a motivational, inspirational, but realistic event that will help everyone grow personally and professionally. Again, stay tuned!

RJEK MEETING PLACE CHANGE

The January RJEK Regular Meeting location will be held at the Science Museum of Virginia – a great place to meet. If you can't remember when or where our next meeting is, just go to the "RJEK Activities" page of our website, www.rjec.org.

**January 12, 6:00-7:00 PM,
Science Museum of Virginia**

**A photograph will be taken
for the RJEK Supplement
before the start of the meeting**

**Meetings are intended for all
member society delegates, RJEK
officers and RJEK committee
chairs. We also encourage
individuals from both member and
non-member societies to attend.**

Please remember pay your RJEK annual dues. Need to check if you've paid? Just go to the Societies page at www.rjec.org to check!

**RJEK Greatly Appreciates
Your Support!**

Hearing the "Nuclear" Word a Lot Lately?

If you read the newspaper, listen to the radio, or view the news on television, you have certainly heard the "N" word over and over, even in the local media. *Nuclear Renaissance, Nuclear Revival, Nuclear Energy "Best Choice" By Far, Our Nuclear Lifeline, Opposition Raised to Nuclear Reactor, Nuclear Energy Does Not Pollute, Nukes Are Green, Nuclear Site Plan Stirs Controversy, Thirty Miles to Meltdown, and The Case Against Nuclear Power* are only a few examples of tag lines and titles published recently. What is this all about and how does it affect you, engineers of all kinds?

As you know, nuclear energy is an integral part of the US energy mix, helping to produce about 20% of the electricity consumed. Here in Virginia, four nuclear reactors (two situated on Lake Anna and two on the banks of the James River across from Williamsburg at Surry) produce about 38% of the electricity generated in Virginia, or 3,650 megawatts-electric. To operate a nuclear power plant, like any other type of power plant, many different kinds of engineers are needed – nuclear engineers constitute a relatively small fraction of the engineering staff that support North Anna and Surry power stations. The safe and reliable operation of Virginia's nuclear power stations also depend on mechanical, electrical, instrument & controls, civil, welding, and chemical engineers – to name just a few. That is why the fate of these power stations, and any future "developments," should be of interest to every RJEC-member society and its membership.

The newly approved National Energy Bill (signed by President Bush in August 2005) provides many provisions favorable to the development of new nuclear generation; hence the "nuclear renaissance" mentioned everywhere. What does this mean for Virginia? As the state continues to grow, energy demands will grow and electricity generation capacity will need to be increased, even when encouraging energy conservation. This can be done several different ways: increase the electrical output of current power stations, build new power stations, add new generation capacity using different kinds of fuels, or importing electricity from neighboring states. Utilities and operators throughout the state are working to increase electrical output as much as is reasonably and economically feasible. At some point, new generation capacity needs to be installed. The question then becomes "which fuel do we want to use?"

Considering the growing concerns over environmental issues, fossil fuels (especially coal and oil) face a serious challenge in coming years. Prices of certain fuels (such as natural gas) render those fuels uneconomical in the short term. Sources of hydroelectric power have been fully exploited in the region. Renewable energy from wind, solar, geothermal, or biomass sources is still not reliable or economical enough to constitute a strong base load for electricity generation. The fuel that makes more sense (to this "unbiased" nuclear engineer) is of course nuclear fuel. Once in the reactors of North Anna and Surry, it produces clean, safe, reliable, and cheap electricity. So, should we agree to build a new nuclear reactor in Virginia?

The question is on the table, since Dominion submitted to the Nuclear Regulatory Commission an application called an Early Site Permit to evaluate the suitability of the North Anna site for a third nuclear reactor. The application is still in the review process, since it utilizes a new Federal Rule that is supposed to simplify and expedite the process of licensing, constructing, and

Attachment 1 – RJEC December 2005 Newsletter

operating a new nuclear reactor. This application brought out many anti-nuclear activists from all over the region, opposed to the concept for a variety of reasons. They have been flooding the local media with information that is not always correct, organizing public meetings to “educate” the public on the reasons why “nuclear is bad for you.”

In order to have a fair and balanced playing field, members of the Virginia local sections of the American Nuclear Society (ANS, RJEC member) and the North American Young Generation in Nuclear (NA-YGN) have worked hard to provide the other side of the story. We try to bring the facts about nuclear energy and strong arguments to counter the misinformation provided by the anti-nuclear activists. As professional societies, it is our role to educate the public at large about science, engineering, and technology. ANS and NA-YGN need your help in spreading the correct information about nuclear energy to all Virginians.

We are available to come to your society's meetings and present some useful information that you can then disseminate to your friends and colleagues. Just contact Sophie Gutner, ANS-RJEC liaison, at s_gutner@yahoo.com to schedule a presentation at your next meeting.