

# Central Oklahoma Section Newsletter

Volume 7, Number 9

May 2006



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## Joint AIAA/ASME COS May Meeting Announcement

**Speaker: Mike Bergey, President, Bergey Wind Power**

**Topic: Bergey Windpower Tour**

**Place:** Bergey Windpower  
2200 Industrial Blvd, Norman, OK 73069

**Time:** Thursday, May 25th  
6:15PM: Registration  
6:30PM: Meal  
7:00PM: Presentation and Tour

**Cost:** \$8 for all Senior Members and Guests, \$5 for Student Section Members

**PLEASE PLACE RESERVATIONS BY 12:00PM THURSDAY MAY 18**

**Please make reservations with Frank Parker; <mailto:parkerfj@asme.org>; Ph. (405) 739-1813 (with each reservation, please include the name of each guest &/or student)**

This month's Joint Meeting is a Presentation and Tour of Bergey Windpower in Norman, OK. The establishment of Bergey Windpower Co. (BWC) has its origins in research activities at the University of Oklahoma dating back to 1970. These activities included feasibility studies, consultation to the original NSF/ERDA wind program,

and the construction of three experimental wind turbines. In 1977 work was begun on a small horizontal-axis wind turbine meant for production. During the following two years a number of advanced technologies including special airfoils, passive blade pitching, passive rotor speed control, and low-speed permanent magnet alternators

were developed and integrated. These developments resulted in several patents and the unique "sophisticated simplicity" wind turbine design for which the company is known throughout the world. BWC's first product line was the BWC 1000. Over 600 of these 1 kW systems were delivered between 1980, (Continued on Page 2)

**\*\*\*\*This Program will qualify for 1.0 PDH for attending Professional Engineers\*\*\*\***

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## Additional May Meeting Information

when it was introduced, and 1990, when it was superseded by a larger 1.5 kW unit. These units have now been installed in more than 50 countries and have gained a worldwide reputation for reliability and performance.

In 1983 BWC introduced its larger 10 kW unit, the [BWC EXCEL](#), which utilized the same integrated design found on the BWC 1000. Since that time over 900 systems have been delivered and EXCEL's have accumulated over 60 million operational hours at a wide variety of sites. The EXCEL is used for residential/farm utility bill reduction and for larger remote power applications such as village electrification, community water supply, and telecommunications.

In 1990 BWC replaced the BWC 1000 line with a 1.5 kW unit, the BWC 1500, and introduced the first wind electric water pumping systems

on the market. In 1994, BWC introduced an 850 W turbine for smaller off-grid applications such as remote homes. The BWC 850 was discontinued in 1998 to make way for an advanced 1 kW turbine, the [XL1](#). The BWC 1500 was discontinued in 2002.

An advanced 50 kW wind turbine is in development. Bergey wind turbines have now been installed in all 50 States and more than 90 countries. In the size range up to 10 kW BWC is the leading supplier in the world.

Bergey wind turbines are sold directly and through a national and international network of authorized dealers. BWC personnel have provided supervisory and training services throughout the world and BWC has conducted numerous factory training schools covering system design, installation, and support. BWC provides complete design, supply, and installation services for hybrid power systems utilizing wind turbines, diesel generators

and photovoltaic arrays.

BWC is a member of the American Wind Energy Association (AWEA) and the Business Council for Sustainable Energy (BCSE). BWC is also a member of more than a dozen state renewable energy associations.

In 1992 BWC was recognized by AWEA "**For outstanding accomplishment in developing international markets for small wind turbine technology.**"

BWC has received two national design awards from the Society of the Plastics Industry for its fiberglass rotor blades. BWC's wind turbines have been featured in *Life*, *Popular Science*, *Design News*, *The Wall Street Journal*, *The New York Times*, *The Los Angeles Times*, and *USA Today*. Visit <http://www.bergey.com> for more information.

## 1<sup>st</sup> Annual ASME COS Golf Tournament

The ASME Central Oklahoma Section would like to extend a special Thank you to all the sponsors that helped contribute to the success of our Golf Tournament. Thanks!!

### Platinum Sponsor

PGS Companies  
<http://www.pgs.net>  
800.749.4788



Silver Sponsor  
Engineering Services  
and Testing, Inc.  
<http://www.estinc.cc>  
405.307.8378



### Bronze Sponsors

Emerson Climate Technologies  
<http://www.emersonclimate.com>  
937.498.3086



Industrial Machine Co.  
800.692.6957

Merkler and Associates, Inc.  
918.298.9944

### Raffle Prizes

The Boeing Company  
Oklahoma City  
<http://www.boeing.com>



Emerson Climate Technologies  
<http://www.emersonclimate.com>



Java Dave's  
10 NE 10<sup>th</sup> Street, Oklahoma City  
<http://www.javadavescoffee.com>



Panera Bread  
Oklahoma City Bakery, Inc  
Oklahoma City  
<http://www.panera.com>



York International, UPG  
A Johnson Controls Company  
<http://www.yorkupg.com>



Frank Parker, PE

## Chair's Corner

### Dear ASME-Central Oklahoma Section Members:

I have to say that it's been a banner year for our Section, especially when you consider how it started. With a 25% cut in our allocation implemented this year by ASME National and the prospect of no allocation in the years to come, our prospects for remaining a viable organization certainly looked grim. We're not out of the woods yet. However, with savings realized from eliminating 95% of our mailing expenses and income from awards & our 1<sup>st</sup> Annual Golf Tournament we seem to be well on our way to self-sufficiency.

Cuts in our newsletter publication and mailing expenses saved us a bundle and was a good first step. However, to support the way our Section subsidizes general meetings—since venue & meal costs typically exceed our meeting revenues—we must look for other sources of income. Each year, we also provide financial support for the AIAA/ASME Symposium and other student outreach programs.

Speaking of which, I would like to report that this year's AIAA/ASME Symposium was a great success, thanks to the willingness of **Dr. Subramanyam Gollahalli** to host it this year when the University of Tulsa was unable to do so. **Dr. Kuang-Hua Chang** and **Dr. Zahed Sid-dique**, who were ably supported by **Ms. Cari Harris**, headed the University of

Oklahoma Aerospace & Mechanical Engineering Department's Symposium Committee. Their work and those of volunteer students resulted in a very interesting and well-attended event.

The Section also received a \$500 **Earl V. Fisher Award**, which helped offset this March's ASME Leadership Conference expenses. But the key event holding promise of future self-sufficiency is our newly implemented Golf Tournament. It not only provided the Section with \$597 of additional funding for its operational needs, but also brought in \$1,500 for our newly incorporated Engineering Scholarship Fund. Additionally, it brought together ASME and non-ASME participants and sponsors for a very enjoyable event. Even non-golfers like myself enjoyed the camaraderie on a pleasant spring day.

It is our hope that news of the success we had this year will encourage more sponsors for next year's tournament. However, we could not have done it without the hard work of our Golf Tournament Subcommittee, headed by Nathan Weber. His organizational and managerial skills in this effort confirms that we made an excellent choice in nominating and electing Nathan as our Section Chair for the next program year. As this year's Chair, I felt very fortunate to have the support and help of all the Officers and Directors who served with me. My job was made substantially easier this time by the increased number of Committee mem-

bers.

We were also fortunate to have a balanced mix of very capable young Officers and Directors and long-serving and experienced veterans. If any of you is interested in joining as a Director next year, I would like to encourage you to do so. It's a very rewarding experience and the more we have on board to share ideas and work load, the more the your Section benefits. In fact, we currently have an opening for the Newsletter Editor for anyone who may be interested. Jon Akins, who has served well in that position, has been accepted by the University of Pittsburgh's Graduate Engineering School. We're sorry to see such a valuable member leave, but we certainly can't blame him for taking advantage of such a great opportunity to advance his career.

Lastly, I would like to thank **Dr. Donna J. Nelson** of the University of Oklahoma's Department of Chemistry & Biochemistry, who provided us with an interesting presentation at last month's meeting. Her insight into the diversity of U.S. Academic and Engineering Research Faculty & Staff was an eye-opener. Our next meeting will be a tour of the new Bergey Windpower plant in Norman. I hope you can make this last meeting of the program year, as it promises to be a fun and interesting tour of a technology, which holds great promise for energy diversification.

Frank Parker – Chair

## Membership Information

A notice to our ASME members to be aware of discounted membership dues rates that are available for different categories of ASME membership:

### New Member Dues Discount Rates:

Yr After Graduation: \$48.00/Yr.

1-2 Yrs After Graduation: \$66.00/Yr.

2-3 Yrs After Graduation: \$84.00/Yr.

3-4 Yrs After Graduation: \$102.00/Yr.

### Retired Member Dues Discount Rate:

A member who has paid dues for twenty-five years and is not gainfully employed because of retirement or disability. Discounted Dues-\$60.00/Yr.

### Life Membership (Dues Exempt):

*A member who has paid dues for thirty-five years and has reached age 65 and/or retired from regular work.*

*This ASME membership information is available on the ASME website at <http://www.asme.org/member/info.html>*

## ASME Student Member Recognition

ASME Central Oklahoma Section student member awards recognizing individual students for their academic achievement and outstanding service to their ASME Student Sections were presented to the following students at our April meeting:

**The Tom J. Love Award** - The University of Oklahoma - Jeff McCabe

**The Jerald D. Parker Award** - Oklahoma Christian University - Laura Kite

**The James H. Boggs Award** - Oklahoma State University - Keith Proffitt

**Mechanical Engineering Technology Award** - Oklahoma State University - Kyle W. Filson

Congratulations to these student members!

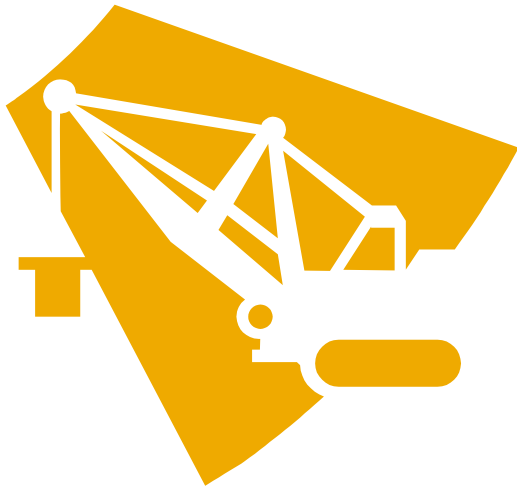
## J. Andrew Baker Wins the 2006 Old Guard Early Career Engineer Essay Competition

J. Andrew Baker, PE, has been chosen as the 2006 winner of the Old Guard Early Career Engineer Essay Competition.

This competition, sponsored by **The Old Guard**, was developed to engage early career engineers in communicating advice and guidance based on their own personal/professional experiences and their relationship with ASME to new ME/MET graduates. Currently, Mr. Baker is a structural engineer with The Boeing Company. He graduated from Oklahoma State University School of Mechanical and Aerospace Engineering with a B.S. in Mechanical Engineering. He has served ASME in many capacities, including Central Kansas Section Chair, Regional Representative for the Committee on Membership, and his most recent position as the Northern Plains Region Representative.

J. Andrew Baker provides valuable words of advice to our members just starting their engineering careers.

To read J. Andrew Baker's winning essay, "Enhancing Your Career - The Value of ASME", visit: [http://www.asme.org/NewsPublicPolicy/Newsletters/MechanicalAdvantage/J\\_Andrew\\_Baker\\_Wins\\_2006\\_Old.cfm](http://www.asme.org/NewsPublicPolicy/Newsletters/MechanicalAdvantage/J_Andrew_Baker_Wins_2006_Old.cfm)



## Call for Submissions: Mechanical Advantage

Do you have something to share with ASME's Student Members? Submit your article or ideas to *Mechanical Advantage*, ASME's online student newsletter. *Mechanical Advantage* offers engineering students useful articles, program information and upcoming events and deadlines. Please send all submissions to <mailto:mechadv@asme.org>.

Student submissions are highly encouraged!

## Frontiers in Biomedical Devices 2006

The ASME Nanotechnology Institute presents Frontiers in Biomedical Devices 2006, to be held **June 8-9, 2006** at the McDonnell Douglas Engineering Auditorium at the University California at Irvine campus.

Leading authorities in the commercial and academic arenas will focus their expertise in 4 intense meeting tracks including: Physiological & pathological environment for medical devices, Monitoring & imaging techniques, Device development, Regulatory & clinical issues. The conference also includes an evening reception, exposition and poster session on June 8th at the University Club. General Audience and Student Registration fees include access to all sessions, one copy of the conference proceedings, daily coffee/tea breaks, lunches, and conference reception/poster session/exhibit. For more details visit <http://www.asmeconferences.org/NanoBio06/> or contact Brandy Smith at 917-596-0306 or email: <mailto:smithb@asme.org>

## Calling all Mechanical Engineering Students!!

There is still time to join the ASME E-Mentoring Program! The program is free to all student members and is a great way to network with professional members of the society, and find out about career choices in engineering. So why not try the E-Mentoring program today? For more information, log on to <http://www.asme.ementoring>. Remember to tell a friend.

## ASME CONGRESS '06 SET FOR CHICAGO

Mark your calendar to attend the 2006 ASME International Congress and Exposition to be held Nov. 5-10 at the Hilton Chicago.



The Congress will bring together engineers, scientists and technical professionals from around the world to discuss and demonstrate innovation in advanced technologies. The program will feature special tracks organized around leading industries and technical disciplines, including energy, biomedical systems, transportation, and homeland security. Other highlights at the Congress include the Young Engineers Forum, Student Design Contest finals, and the Honors Assembly ceremony recognizing service and achievement in mechanical engineering.

Hundreds of sessions, forums, exhibits, tours and social events will keep you current on the latest trends in technology and industry, and provide the opportunity to network with engineers in different industries and companies.

For more information about this year's Congress, visit the Web site at <http://www.asmeconferences.org/congress06/>

### Katrina Loans Available for Eligible Students

ASME has established a fast track student loan for mechanical engineering students who have been adversely affected by Hurricanes Katrina & Rita. Applications will be accepted on a continuous basis thru June 30, 2006.

For more information contact Maisha Phillips at (212) 591-7371 or <mailto:PhillipsM@asme.org>. Additional information can also be obtained by visiting the Web site at <http://www.asme.org/education/enged/aid/loan.htm>

### Moving Along?

Are you graduating or just moving home for the summer? Before you go, make sure to check and change your ASME membership address. If you are graduating, we'll need to know so that you receive your membership upgrade and graduation gift from ASME. If you are still in school, you'll want to keep receiving news from ASME all summer to get ready for the fall activities, and keep track of competitions and scholarships. To change your address or graduation date, visit:

<https://www.asmeny.org/memberaddr/html/security.htm>

### New Competition!!

The **FAA Airport Design Competition for Universities** gives individual students or teams under the guidance of a faculty mentor the chance to address a number of technical challenges, which have mechanical engineering aspects, relating to airport operations and maintenance, runway safety/runway incursions, and airport environmental interactions. Students can win cash prizes for outstanding work and the opportunity to present their work in a professional forum.

Learn more at the competition website, [http://www.faa.gov/runwaysafety/design\\_competition.htm](http://www.faa.gov/runwaysafety/design_competition.htm)

### Energy Nanotechnology International Conference Set for June

Featuring presentations on the role of nanotechnology in energy conversion, storage and utilization, the Energy Nanotechnology Int'l Conference will be held **June 26-28, 2006**, at the Massachusetts Institute of Technology in Cambridge.

Engineers and scientists on the leading edge of research in nanotechnology will interface with professionals engaged in the national debate over alternative energy technologies to reduce America's dependence on oil and natural gas. The ASME Nanotechnology Institute is a sponsor of this event. For more information visit <http://www.asmeconferences.org/energynano06/>

FOR UPDATES ON THESE AND OTHER EVENTS, VISIT OUR SECTION WEB SITE AT

<http://sections.asme.org/CentralOK>