

Mid-Michigan Section Newsletter

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Letter from the Chair...

Wow! It's hard to believe that we're almost halfway through our program year already. Our program chair, Tina Islam, has been working hard to assemble a variety of programs for 2004 starting with a lunch presentation on Title V of the Clean Air Act in January. We are also trying to assemble a presentation on Six-Sigma, a plant tour to Monitor Sugar, and a follow-up financial presentation from November's financial planning basics by **Tom Anderson**. As always, our year will wind down with our Annual Awards banquet. A tentative list of upcoming programs is shown below.

Verna Talcott and Sarah Ratcliff have been working diligently on our education outreach activities. We were happy to see many familiar faces at the SciFest in October. Kids and adults alike made UV bracelets that change color depending on the intensity of the sunlight. There was also a demonstration showing the impact of different strengths of sunscreen. More information is listed on page 9. Keep in mind as Engineer's week approaches in February, we will once again be looking for volunteers to go into schools and complete engineering demonstrations.

Finally, in our executive committee meetings recently, we have been working to establish a mission statement and goals for the future of our section. The drafts are listed below:

Mid-Michigan AIChE Section Mission Statement

The mission of the Mid-Michigan AIChE Section is to provide opportunities to continuously develop our members professionally while working with the community to provide a positive view of science and engineering.

Mid-Michigan AIChE Section Goals

- 1. Ensure a self-perpetuating AIChE college scholarship fund (additional \$30,000 needed) by year-end 2010
- 2. Develop a new primary fundraiser to ensure viability of the section by year-end 2004.
- 3. Increase membership attendance at programs 10% by 2005.

As always we gladly welcome your feedback and suggestions for our various programs as well as the mission statement and goals that are being established. The complete listing of officers and contact information is listed on page 19.

We hope 2004 is a healthy and prosperous year for all of our members.

Regards, Tami Heilman-Adam Mid-Michigan Section Chair

Watch for the upcoming programs in 2004...

January Title V, Neil Hawkins, EH&S/Responsible Care Leader, Michigan Operations, The Dow

Chemical Company

February Six Sigma

March Financial planning: Picking stocks for your retirement portfolio, **Tom Anderson**

April/May Monitor Sugar tour and presentation

May/June Annual Awards Banquet



The Mid-Michigan Chapter of American Institute of Chemical Engineers cordially invites you to lunch

Wednesday, January 14, 2004 China Palace, 1908 S. Saginaw Road

Title V Discussion



Speaker: Mr. Neil C Hawkins

Topic: Neil will be discussing Title V (Clean Air Act) as it relates to chemical industries (overview,

compliance, challenges, changes compared to previous requirements). The US EPA has established the Title V Permit Program as a result of the Clean Air Act Amendments of 1990. The purpose of the Title V Permit program is to provide for the establishment of comprehensive State

air quality permitting systems.

Biography: Neil Hawkins was named EH&S/Responsible Care Leader for Dow Chemical's Michigan

Operations in February 2002. In this role, Hawkins is accountable for EH&S work process implementation, including Security and Emergency Services, for all facilities in Midland. He leads the EH&S function and EH&S personnel within the site and is a member of the Plant Leaders Network (PLN) and the Site Strategy Team (SST). Hawkins joined Dow in 1988 in Health and Environmental Sciences/R&D, working in both risk assessment and industrial hygiene roles. In 1996, Hawkins returned to Chemicals as global EH&S Operations Leader and EH&S Product Leader for Chlor-Alkali Assets, Environmental Operations, and EDC/VCM/ECU Management, working out of Texas Operations. In 1998, he was named a member of the EDC/VCM/ECU business team and Global Director of Chlorine, Vinyl, and Dioxin Issues. In this role, he managed and restructured Dow's global trade association in chlorine and PVC

associations.

Hawkins earned a B.S. degree from Georgia Tech, and masters and doctoral degrees the Harvard University School of Public Health. He is a Certified Industrial Hygienist, and an expert in

environmental exposure and risk assessment.

Date: Wednesday, January 14, 2004

Times: 11:30 AM – 12:00 PM Lunch

12:00- 1:00 PM Speaker

Cost: Buffet Lunch: \$5.95, Optional Soda: \$1.50

(Each Person Will Receive an Individual Bill)

RSVP: Please contact Tina Islam with your reservation by e-mail at tmislam@dow.com by 4:00 pm on

Monday, January 12, 2003.

Obituary — Deepak K. Sharma, 1952 - 2003

Editor's note: Deepak Sharma passed away while attending the 2003 AIChE National Meeting in San Francisco and was a member of our local AIChE Section. The Mid-Michigan Section expresses our deepest sympathies to the Sharma family.

Deepak K. Sharma, 1952 – 2003



Deepak K. Sharma, 50, of Midland, beloved son, husband, father, brother and friend passed away suddenly on Tuesday, November 18, 2003 in San Francisco. Deepak was born on December 10, 1952 in Somalia, Africa and came to the United States in 1972. He continued his higher education in the United States and obtained his Ph.D. in Chemical Engineering from University of California, Berkley. Deepak started his career with Dow Chemical Company, Midland in 1976. Recently he was promoted to Research Leader in the Materials Sciences and Information Research Department. This was due to his outstanding technical accomplishments and leadership in process development, as well as his effective leveraging of external technology resources. In recent years, Deepak had performed a dual role. He had been a key contributor to the efforts of Physical Sciences to develop new and improved polymer fabrication processes, and modeling of

poly-condensation reaction kinetics. He also served as Dow's External Technology senior geographic specialist in India. Previously, he had worked in the Designed Latexes and Resins Laboratory and in the Designed Thermoplastics Research Laboratory. He was the recipient of numerous awards in Engineering. Deepak leaves behind his wife, Bharti and their sons, Eric and Chris; his father and mother, Om and Kamlesh Sharma; his brother and sister-in-law, Vipin and Vinita Sharma; his sister, Madhu and brother-in-law, Om Bhasin. Deepak enjoyed playing tennis and golf. He will be fondly remembered for his sense of humor, enthusiasm for life and interest in music. He filled the lives of his family and friends with joy and happiness.

MEMORIALS

It is the family's wish for those planning an expression of sympathy to consider donating towards his children's education.

SERVICES

The funeral services were scheduled for 12 p.m. noon on Friday, November 21, 2003, at the Ware-Smith-Woolever Funeral Chapel, 1200 West Wheeler Street, Midland.

Updates on National AIChE Organization from President Diane Dorland

Editor's Note: Pages 5-7 include a collection of open letters to all AIChE members from **Diane Dorland**, National AIChE President. These letters have been distributed to all members. For completeness, this newsletter publishes all letters issued since the last publication of the Mid-Michigan Section Newsletter, August 2003.

September 3, 2003

Dear Colleague,

I have good news to report about AIChE's future. This has been a very busy summer for the Institute's leadership, but, based on your suggestions, we're implementing a plan that assures the Institute's financial stability.

As you may know, hundreds of members have recommended that AIChE reduce its costs and move out of New York City. I'm happy to report that we are very close to signing an agreement to sublet 75 percent of our Manhattan space. We'll continue to look for opportunities to further reduce or eliminate the remainder of our space at 3 Park Avenue and search widely, including areas outside New York City, for the most cost-effective facilities for our much, much smaller staff.

The sublease comes at a cost, however. Given the current market for office space in Manhattan, AIChE has to provide some incentives and build-out allowances. We're working with our industry partners to fund this investment through gifts and interest-free loans. We've already raised nearly \$1 million from leading companies and generous members toward a goal of \$2.2 million. Of course, we really need additional support from members like you.

By the end of the year, we will have a staff of 40, compared to the current 78 and more than 100 just 18 months ago. Although these changes are difficult, AIChE will continue to provide you with the products and services you've told us are essential.

Discussions continue between the Boards of AIChE and the American Chemical Society, as well as other organizations. We continue to explore mergers, joint ventures, and other partnerships that could better position AIChE to serve chemical engineers as our profession, technology, and our industries evolve. A number of issues still must be resolved before the Board makes any such recommendation. We expect to reach some conclusions this fall. Naturally, current AIChE members will have a voice in our path forward.

I'd be remiss if I didn't report some very good news related to the 2003 AIChE Annual Meeting—a major factor in our financial well-being. It is shaping up to be our biggest and best ever. Early trends in registration and the number of papers accepted for presentation are among the indicators that point to its success. We hope to see you in San Francisco from November 16th to the 21st.

I will continue to keep you posted on our efforts to protect and preserve our Institute in these extraordinary times. I encourage you to visit http://www.aiche.org/changes for detailed and up-to-date information—not just on our finances, but also on our new staff structure and other developments. You may also email your thoughts, concerns, and suggestions to me at changes@aiche.org. Finally, I thank you for your continued support of AIChE.

Sincerely, Dianne Dorland, PhD, PE President

P.S. You can best demonstrate your support for AIChE and our profession by renewing your membership. If you haven't paid your 2004 dues, please do so today.

(Editor's note: Dues can now be paid online. Please see the membership renewal information later in this newsletter.)

October 24, 2003

Dear Member,

To paraphrase Mark Twain, "The reports of our death have been greatly exaggerated." I know it's easy to focus on the challenges the Institute has faced this year, but we are meeting these challenges while continuing to serve the needs of chemical engineers like you. Looking around the Institute, there are many examples of vitality and growth.

- Thousands of AIChE members have already renewed their membership for 2004. A number have also expressed their support of AIChE by becoming lifetime members.
- We are gearing up for our largest Annual Meeting ever (November 16-21, San Francisco). We expect to set a new record in attendance, making this the world's largest technical meeting for chemical engineers and allied professionals.
- There will be a special session Tuesday, November 18, 10:45 am 12 noon, in San Francisco for members to meet with the Board and discuss recent changes and plans for the future. Board members will also be available at the Essentials Booth Monday, 3:00 4:00 p.m., Tuesday, 12 noon 1:00 p.m., and Wednesday, 10:00 11:00 a.m.

As we move forward, AIChE continues to explore joint ventures. At its September meeting, our Board agreed that AIChE should pursue discussions with ACS and any other viable joint venture, but stated its directive as the successful implementation of the Essentials plan, with this taking priority over any merger discussion. A joint taskforce of four AIChE and four ACS directors will meet in November to further discuss a possible partnership. There is presently no binding agreement drafted between the two organizations. While negotiations continue, AIChE is implementing its Essentials program as a viable organization on its own, meeting the needs of chemical engineers.

We are aggressively working to sublease 75% of our office space and have cut staff by 50%. These cost strategies take effort and patience but will positively impact our future.

It's been a year of challenges, but together we're turning them into opportunities. Each of us can demonstrate our commitment to our Institute and our profession by renewing our AIChE memberships and by attending the Annual Meeting in San Francisco. We're making tremendous progress, and I thank you for your continued support.

Sincerely,

Dianne Dorland, PhD, PE President

PS: I am looking forward to seeing you at Annual. For more information on the conference, visit www.aiche.org/annual

December Update from President Diane Dorland

December 10, 2003

Dear Colleagues,

Happy Holidays. Looking back on the last year, AIChE has met tough challenges and seized important opportunities. We developed Essential* AIChE, focused on the services and benefits members deemed essential to their careers. We launched centers in strategic technological areas and explored new partnerships for operational and programmatic synergies.

I am pleased to report the 2003 AIChE Annual Meeting was a stunning success. A record-breaking 6,031 chemical engineering professionals gathered in San Francisco last month for the largest and most comprehensive conference in our history.

A highlight of the conference was the launch of AIChE's Society for Biological Engineering (SBE), a technological center connecting diverse professionals (http://bio.aiche.org). Biological engineering holds tremendous promise for the future of science and engineering, and chemical engineers - and AIChE - are at the forefront of this effort.

On other fronts, AIChE has entered into an agreement with John Wiley & Sons to provide publishing services for AIChE Journal, Environmental Progress, and Process Safety Progress, beginning in 2004. AIChE will retain ownership and editorial control of these well-respected publications. This partnership will enhance services to members through improved online delivery and searchability, reference linking, complete digital archives, and expanded access to online submission and review. The partnership also improves our publications' international reach and their financial performance.

AIChE continues to explore potential partnerships that will enhance member benefits and offer financial synergies. In November, the Boards of AIChE and ACS met and agreed to continue working to negotiate the possibility of a membership and operational alliance between the two organizations. This alliance would offer enrichments to both AIChE and ACS membership, and attract other professionals as well. Such an alliance would maintain AIChE's unique identity and preserve the autonomy of our current governance structure. This is a significant step forward in our discussions.

Throughout the year, AIChE members have demonstrated dedication to the Institute by sharing ideas and concerns for the future with our leaders, through energetic volunteer leadership, and by continued financial support. If you have not done so already, I urge you to support AIChE and renew your membership for 2004 (www.aiche-mart.org/dues/dues.asp or 1.800.242.4363).

While this is my last letter to you as AIChE President, I look forward to working with AIChE for many years to come. I appreciate your support throughout this eventful year and I celebrate with you our successes and new opportunities.

Sincerely,

Dianne Dorland, PhD, PE President

*For more information on Essential AIChE, please visit www.aiche.org/essential.

Renew your 2004 AIChE Membership On-line



For the second year, AIChE is pleased to offer online dues payment. Online dues payment is an easy and secure way to pay your 2004 dues. Please note that the online system will **not** allow you to adjust your Institute Dues amount. Therefore, if you are applying for a dues reduction, please use the contact information below for Customer Service assistance.



AIChE Customer Service

Contact Information: American Institute of Chemical Engineers 3 Park Ave, New York, N.Y., 10016-5991, U.S.A. Tel. Toll Free: 1-800-AIChemE, (1-800-242-4363).

Tel. International: (212) 591-8100

Fax: (212) 591-8888 E-mail: xpress@aiche.org

Mid-Michigan Section Welcomes Lisa Frank

Our Section is pleased to announce that Lisa Frank has joined the Executive Committee as the Publicity/New Hire Chair. Lisa, recently hired by The Dow Chemical Company, comes to us from Penn State where she recently served as President of the local student chapter of AIChE. Her responsibilities for our Section will include publicity of our events with a special emphasis on attracting new hires in the local area, the hardest group to locate and serve. The Executive Committee welcomes Lisa to this role. Lisa can be contacted at:

> Lisa L. Frank Global Process Engineering The Dow Chemical Company 1400 Building, Office #205 Midland, MI 48667-1400

Phone: (989) 636-7167 Fax: (989) 638-6671 E-Mail: LFrank@dow.com

SciFest 2003 Summary..."Be an Ultraviolet Detective"

Contributed by Verna Talcott, Education Outreach Chair



Tami (l. to r), Mike, and Sarah greet a crowd at SciFest 2003.

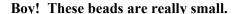
Tami Heilman-Adams, Mike Durisin, Sarah Ratcliff, and Verna Talcott greeted more than 300 students and parents at the Mid-Michigan AIChE booth entitled "Be an Ultraviolet Detective." Verna Talcott especially wants to thank Tami, Mike and Sarah for working on a Saturday morning and afternoon to participate in this event.

The experiment designed by Sarah and Verna educated students on the nature of radiation, particularly UV light emitted by the sun, and its potential dangers. Special bracelets that interacted with UV light were coated with various SPF products and provided the tangible demonstrations on the effects of UV exposure. The scientific principles of hypothesis and observation were applied to bracelets covered with a high SPF (45+) lotion versus a bracelet covered with a low SPF (4) lotion.

Several parents and teachers asked for informational packets concerning the details of the experiment. The packet of information also included a description of chemical engineers and their contributions to SPF protection. Our ultraviolet beaded bracelets were so popular that we unfortunately ran out of beads at 12:30 pm (2½ hours after the science fest opened with 2 hours left to go). There were many students who were unaware of ultraviolet rays or at least were not able to explain the nature of UV radiation and its harmful effects on the skin. Overall, the experiment was a wonderful success.



More interested children and parents.





Kathyrn Baker, Michigan State University, wins Honorable Mention at the National Student Design Competition

Every year since 1932, AIChE has presented to students a "real life" engineering design problem in the Nation Student Design Competition. Students have one month to complete the problem, including considerations related to economics, the environment, and production capacity. The 2003 design challenge was titled, "Recycling Nitric Acid from a Radioactive Liquid Waste Stream." In addition to individual prizes, AIChE has added new awards for team projects.

In the individual category, the First Place A. McLaren White Award was awarded to Richard Pass of the University of Kansas. The A. E. Marshall Second Place Award was received by Robert Neumann of the University of Cincinnati. The Third Place Omega Chi Epsilon Award was won by Sean Murphy of the University of Kansas. An honorable mention prize was awarded to Kathryn Baker of Michigan State University. This year's William Cunningham Award for the First Place team was awarded to Ellen Brennan, Kevin Cash, and Jeffrey Pierce, a team from Northeastern University. Derrick Oneal, Jason Scott, and Mark Wilson of the University of Tulsa earned Second Place, and Rowan University's Michael Gifford, Johanna Kline, and Rachel Specht received Third Prize. A team honorable mention was won by Northeastern University's Joshua Grilly, Joshua Jondro, and Nicole Winters.

Potential Continuing Education Courses Taught Locally

Contributed by Brett Birchmeier, Continuing Education Chair

One of the benefits of AIChE membership is the access to continuing education courses through the national organization. From time to time the local section facilitates the teaching of these courses locally; this saves travel time and expenses versus attending a course out of town.

Based on survey input from earlier this year, we believe there is interest in having courses taught locally in process control, spreadsheets, and / or project management. In addition, for those not trained as chemical engineers, there is a course available on Chemical Process Fundamentals for Non-Chemical Engineers.

Course descriptions may be found on the AIChE web site at http://www.aiche.org/education/crsindex.asp.

Of particular interest are likely to be:

- Chemical / Petroleum Process Fundamentals for Non-Chemical Engineers, course number 021
- Spreadsheet Power, course number 201
- Project Management, course number 050
- Automatic Control of Processes, course number 058
- Automatic Control of Processes (Advanced), course number 108

Interested? If so, what you need to do next is:

First, review the course description on the web page listed above. Second, contact **Brett Birchmeier** (bbirchmeier@dow.com) with the course(s) you are interested in attending. A class may be taught locally as long as there are 7-8 attendees. Timing and pricing will be worked out at a later date; prices will be at or lower than the prices listed on the web pages.

Course Offering for Winter – Spring 2004: Review for the Professional Engineers Examination

Contributed by Brett Birchmeier, Continuing Education Chair

The local AIChE section has purchased a taped review course for the Principles & Practice Examination (P.E.), otherwise known as the Professional Engineers exam. Taught by Dr. Benny Freeman of North Carolina State University, the course provides a good review for candidates preparing to take the exam. Most of the topics that would be expected to appear on the P.E. exam are reviewed in the tapes.

The local section plans to sponsor a review session using this taped course. The planned timing is February – March 2004. Anyone interested should contact **Brett Birchmeier** (bbirchmeier@dow.com). The specific dates and times for the course will be determined based on participants' interest. There are about 15 hours of taped instruction, and the group may choose to have further discussion / reviews of specific topics. The fee will be \$100 for AIChE members, \$150 for non-members.

Test dates for the 2004 exam are **April 16** and **October 29**. More information on the exams and licensure may be found on www.ncees.org. Exam specifications for the P.E. examination as provided by online at can be found at www.ncees.org or at www.ncees.org o



Information specific to examination in the State of Michigan can be found at the subsite http://www.els-examreg.org/michigan.php. There are strict application and registration deadlines for each section of the two-part exam. Registration often must be completed about two months prior to the exam date, and there is an additional required step of getting state board approval to take the exam. Registration dates for the April 2004 examination have just been announced as March 1.



The Mid-Michigan Section does not have review materials for the "F.E.", or fundamentals of engineering (also known as the EIT), exam. Both the P.E. and F.E. exams are required for licensure, but passing a Fundamentals Exam is the first step toward licensure. Please visit www.ncees.org/exams/fundamentals/ for more information.

For those who are interested in pursuing a professional engineering license in chemical engineering and do not wish to participate in the course with other individuals, the Mid-Michigan Section does offer review materials for a rental fee on an as-needed basis. The rental cost of the full videotape course for AIChE members is \$150, non-members \$200. Several years ago, these tapes were purchased by our Section for \$1200 and are still very current. We use this small fee to recoup our original investment in these videotapes, to provide study guides, and to finance the purchase of future videotapes. Study materials from the NCEES in the form of sample questions and practice tests are available for \$40 and can be purchased at http://www.ncees.org/exams/study_materials/. The http://www.ncees.org/exams/study_materials/. The Engineer-In-Training Reference Manual (Engineering Reference Manual Series)) by Michael R. Lindeburg is available from Amazon.com for \$105 when purchased with the solution manual. The Executive Committee believes our price for the videotapes and study material program is an excellent value at \$150.

Training Session for National Engineer's Week Classroom Demonstrations

Contributed by Verna Talcott, Education Outreach Chair





The Mid Michigan Sections of the American Institute of Chemical Engineers (AIChE) and Society of Plastics Engineers (SPE) are once again teaming up to promote an interest in science and technology by providing training and resource materials for their members to conduct Classroom Demonstrations in local area schools. Classroom demonstrations may be conducted during National Engineer's Week and throughout the remainder of the school year.

This one-day experience is an effective and fun way to spread your enthusiasm for science, technology and engineering. We provide experiment ideas, write-ups and training. We will also link you with a partner engineer and a teacher, and help you obtain the materials you need to deliver a winning demonstration. Based on past experience, students, teachers, and volunteers alike have a good time and learn something new. We always have more requests for demonstrations than volunteers to provide the demonstrations. Your participation does make a difference!

A training session will be held on January 26, 2004. At that time you will have the opportunity to sign up for schools and teachers to contact and identify a partner engineer to work with (if desired).

Training Session

January 26, 2004 5:00 - 6:30 p.m. Lounge - Grace A. Dow Public Library

This is a great opportunity for you to make a difference in developing a child's interest in science, technology and engineering. If you are interested in participating, please provide the information below to **Verna Talcott** (989-496-6066, <u>v.b.talcott@dowcorning.com</u>), **Sarah Ratcliff** (989-496-5675, <u>sarah.ratcliff@dowcorning.com</u>), or **Bill Burk** (989-832-9453, <u>Orangetruck68@aol.com</u>).

Thank you.

Name:

Company:
Phone number:
FAX number:
Email:
School Preference (write in school name or "none"):
Partner Preference (write in partner name or "none"):
Will attend training session (Yes or No):

Mid-Michigan AIChE Participates in 2004 Future City Competition

Contributed by Verna Talcott, Education Outreach Chair

The Future City Competition challenges students to design a city of the future using SimCity Design software – and have fun doing it. Students are required to:

- Work as team under the guidance of an engineer and a teacher
- Develop a project plan to guide team activities
- Use SimCity software to design their city.
- Demonstrate writing skills through a 100-200-word abstract explaining their city design and a 300-500 essay on "How plastics can be used to help senior citizens in the future."
- Build a city model using recycled materials
- Enhance communications skills through a team presentation

The National Engineers Week Committee sponsors this program designed to promote technological literacy and engineering to seventh and eighth grade students. The program fosters an interest in math, science and engineering through hands-on, real world applications and helps students better understand the practical applications of mathematical and scientific principles.

This year **Sarah Ratcliff** and **Verna Talcott** will be assisting the <u>Engineering Society of Detroit</u> to judge Future City models and designs during the Regional Finals that take place on January 22, 2004, in Livonia. This is an opportunity to see the impact of this program on the students and to learn how Mid-Michigan AIChE may be involved in bringing this competition to more mid-Michigan schools.

More information on the Future City competition can be found by visiting the ESD web site at http://www.esd.org/future_city.htm.







A view of the Delta College Auditorium during SciFest 2003. See page 9 for a summary of the Mid-Michigan Section's activities during this exciting event.

AIChE 2003 Annual Meeting Breaks Many Records

AIChE 2003 Annual Meeting San Francisco Hilton, SF, CA



http://www.aiche.org/annual

If you haven't already heard, or weren't there yourself to feel the excitement, AIChE's 2003 Annual Meeting, November, 16-21, in San Francisco was a huge success. A record-breaking 6,000 people attended over 570 technical sessions, heard more than 4,300 papers, and participated in 18 topical conferences. AIChE launched the new Society for Biological Engineering and professional and student attendees cheered on chemically powered cars at the annual Chem-E-Car competition. Look for Annual pictures and wrap-up articles in January Extra, found in Chemical Engineering Progress (CEP), the flagship publication of AIChE.

Annual Meeting Proceedings CD-ROM Still Available! Packed with over 1,000 papers and 9,000 pages from topical and non-topical authors, AIChE's comprehensive 2003 Annual Meeting CD-ROM has sold over 600 copies. A limited number are still available. The total cost is \$77. To order your copy, contact AIChE Customer Service at 1-800-242-4363 or email xpress@aiche.org.

AIChE's Society for Biological Engineering

A highlight of the 2003 Annual Meeting was the launch of AIChE's Society for Biological Engineering (SBE), a technological center connecting diverse professionals (http://bio.aiche.org). Biological engineering holds tremendous promise for the future of science and engineering, and chemical engineers. For more information, please contact Cathy Hood, Biological Engineering Manager, at bio@aiche.org or 212-591-7616.

Summary of 2003 AIChE Annual Meeting by Jonathan Moore

Editor's note: This summary of the 2003 Annual Meeting was provided by Jonathan Moore of The Dow Chemical Company. The editor is indebted to Jonathan for this contribution.

The 2003 AIChE Annual Meeting was held at the San Francisco Hilton during the week of November 16-21, 2003. The conference featured 18 topical conferences, 550 sessions, and more than 4,000 papers. The topical conferences included both traditional and cutting-edge subjects including "Advanced Membrane-Based Separations," "Polymerization and Polymer Processing" "Nanotechnology," "Process Research and Innovation," "Envisioning Biorefineries: Chemicals and Materials from Renewable Feedstocks," "Sustainability and Life Cycle," "Fuel Cell Technology," "Advanced Microelectronic Processing," and "Biochemical Engineering: Fundamentals, Innovations, and Technology."

The 55th Institute Lecture was given by **George Stephanopoulos** of the Massachusetts Institute of Technology and was titled "Invention and Innovation in a Product-Centered Chemical Industry: General Trends and a Case Study." He discussed the change that has occurred in the character of the chemical industry over the last 10-15 years, a gradual shift from a process-centered emphasis to a product-centered

one. He suggested that the personality of a company is typically one or the other and that a process-centered company rarely succeeds in product-centered development, and vice versa. Stephanopoulos identified the integration of R&D with marketing and business strategies as the pivotal element in successful industrial innovation and emphasized the significance of leveraging knowledge assets across corporations, research institutions, and other entities. He also presented an analysis of patents produced by universities as a function of discipline. The analysis revealed that chemical engineering departments on average produced fewer patents than other related departments, such as chemistry. He joked that the patents of his MIT chemical engineering colleague **Robert Langer** were excluded so as not to skew the results (Langer has authored over 400 patents, mostly in the field of biotechnology). Stephanopoulos referred to **Calvin Cobb**'s fictitious news headline from the future:

"Chemical engineering as an educational discipline has ceased to exist on the 100th anniversary of AIChE." - Reuters News Service, 2008

and emphasized the need for chemical engineering as a discipline to avoid this facetious prediction by remaining relevant through alignment with the new product-centered focus of the chemical industry.

Despite the current necessity for spending reduction and cost-cutting measures at Dow, the perceived value of participation at the annual meeting was demonstrated by the attendance of several Dow employees who presented papers such as "Nonlinear Model Predictive Control of a Commercial Polymerization Semi-Batch Reactor," "Catalyst Screening and Kinetics Using a Single Pellet Reactor," "Predicting the Henry's Law Constants of Oxygen and Other Gases in Ethylene Oxide by Molecular Simulation," "Mixing of High Viscosity Fluids in Co-axial Mixers: An Experimental Study," "Computational Tools for Rapid Chemical Mechanism Development," "The Legion Modeling Environment to Facilitate Collaboration of Different Disciplines, Computers, Software and Scientific Data," "Effective Research Partnerships with Industry," and "Seed Oil Technology: Launching Pad for a New Generation of Industrial Materials."

Timothy Anderson, professor at the University of Florida and chair of the AIChE's "Chemical Engineering Technology Operating Council," spoke briefly at the business meeting of the AIChE's "Computational Molecular Science and Engineering Forum," giving a general update concerning the state of affairs of the Institute. He reported that the general downward trend in membership was continuing. The number of memberships that are not renewed has been stable, but the number of new memberships has continued to decline, producing a net decrease in membership. In part, he attributed this trend to the fact that many new chemical engineering graduates are being hired into jobs in a variety of other industries that do not necessarily value participation in the AIChE. Therefore, fewer graduates join the AIChE, and those that do typically do so for only one year. Anderson reported that discussions regarding an alliance between the AIChE and another professional organization are on-going. One prominent possibility is an alliance with the American Chemical Society (ACS). The AIChE would maintain its independence and distinctiveness, but "administrative-type" functions would be handled by the ACS.

In other news, a daughter organization was launched at the meeting: the Society for Biological Engineering.

The week was tragically marked by the sudden death of **Deepak Sharma** while in San Francisco attending the conference. A Dow employee since 1976, he was recently promoted to Research Leader in the Materials Sciences and Information Research discipline due to his outstanding technical accomplishments and leadership in process development and his effective leveraging of external technology resources.

AIChE Announces Call for Papers for 2004 Spring National Meeting





Join more than 1,500 professionals and academics at the only conference to focus on the latest areas of growth and advancement for the chemical engineer. It is the premiere forum to learn how to apply the latest technological information, hear about recent regulatory developments, find practical & applied data, and meet face-to-face with other attendees within the chemical engineering industry.

Highlights include:

More than 140 sessions and nine Topical Conferences Short Courses and Tutorials Conference Keynotes from industry leaders

Spring Meeting Keynote Speaker: Jim Gallogly, President and CEO of Chevron-Phillips Chemical Company -- Sponsored by the Fuels and Petrochemical Division

Topical Conferences:

- New: Using Process Integration Technology in Industry to Address Environmental Issues
- The Profession in Transition
- Seventh Topical Conference on Refinery Processing
- Aromatics Conference
- Distillation
- Process Intensification and Microreaction Technology
- Fuel Cells Topical

- Information Technology Applications in the Chemical Process Industries
- Green Chemical Engineering Topical
- Chemical Entrepreneurism Topical
- Transport Processes in Emerging Energy Systems
- The 38th Loss Prevention Symposium
- Ethylene Producers Conference
- Natural Gas Utilization

If you have any questions or need additional information, please contact:

Hugh Kaiser

MPC Meeting Programming Chair PB Energy Storage Services, Inc. 6019 Yarwell Drive Houston, TX77096 Phone: 281-589-5814

Email: spring2004@houston.rr.com

Dragomir B Bukur

MPC CoChair Texas A & M Univ, Dept of Chem Eng Professor 3122 TAMU; College Station, TX77843

Phone: 979-845-3401 Fax: 979-845-6446

Email: d-bukur@tamu.edu

Expanded Career Services for AIChE members and Local Sections

Editor's Note: The following career services were highlighted in the October Local Sections Newsletters.



There are no career and employment guarantees these days. Everyone needs to be prepared for what the future may bring. ExecuPlanet's CareerTools®, an online suite of career products, may be of interest to many members. Through a partnership with Lee Hecht Harrison/ExecuPlanet, AIChE members can access a full array of career development

and job search activities and tools. And access is free to members.

Members who are looking for job search assistance, strategies for career advancement, or tips for maintaining employability will be pleased by what they find at CareerTools. You can post a question to Ask a Coach and get an answer from a Lee Hecht Harrison professional. Or you can learn and contribute by participating in an online discussion group. If personalized career coaching is what you want, it, too, is available at a substantial discount to members. Visit ExecuPlanet. Set up a personal and confidential account; the group password is aiche2003. Career Services Hotline: 1-800-803-3446.



In addition, take the monster out of your job search at AIChE's CareerEngineer.

Member comments and questions about this new benefit are welcome. Please contact careerservices@aiche.org.

AICHE Announces New Members Only Online Community



Here's your professional connection in cyberspace to exchange ideas and information, access networking possibilities and jump-start or build your career. AIChE Online Community (OLC) offers the FREE services outlined below and is exclusive to AIChE members only. It's your direct link to other members and member resources.

Your AIChE Online Community provides:

- An up-to-date, searchable, online member directory
- Career Center, containing our job search manual, salary information, etc.

Register for the members-only online community and start taking advantage of this free member benefit now!

Volunteer Opportunities... Help Midland Students With Math and Reading

Helping young students with their math and reading skills is a very worthwhile and rewarding experience. Midland elementary and middle schools are in need of volunteers willing to give a little of their time to work with students to improve their skills.

Read with Lunch Box Learners

Lunch Box Learners is a program that allows adults to interact with students in the areas of reading and friendship. Volunteers work with children from 1st through 3rd grades at a local elementary school. Lunch Box Learners' main goal is to encourage the love of reading. To do this, the volunteer may read to the child, listen and help the child read, or simply talk with the child.

If you are interested in volunteering for the Lunch Box Learners program, please contact **Linda Lipsitt** at Plymouth Elementary at 631-5948.

Math Mentors Needed

The **STARS** program provides an opportunity for seventh grade students who struggle with math to receive individualized help four days a week (Monday through Thursday). Each student is assigned a mentor for each day of the week. The mentor and student meet from 7:55-8:50 a.m.

The session is divided into three parts. For the first 15 minutes, the student works on some general problem solving skills using a book called the Daily Math Reinforcer (DMR). The skills that are reinforced include basic arithmetic, fractions, decimals, geometry, and problem solving skills. The second 15 minutes is focused on completing assigned math homework. After the homework is finished, the mentor and student can play one of a selection of math-related games for the last 15 minutes.

If you are interested in mentoring, please contact **Kay Rogers** at Central Middle School at 923-5571 extension 3742. If STARS doesn't fit your schedule or interests, consider the reading mentoring program, HOSTS. Mrs. Rogers can provide contact information for the HOSTS program.

Stevens Institute Now Holding Online Processing Plant Training Courses.

Stevens Institute in New Jersey is now holding online processing plant training courses.

Practical plant engineering courses applicable to the fast-moving oil, gas and petrochemical industries are now available to engineers around the globe via the Internet in a program of instructor-led online courses -- part of a partnership between Stevens Institute of Technology and Carmagen Engineering Inc. With the destruction of oil facilities in Iraq, coupled with the volatile global oil economy, this timely program meets the needs of engineers in the profession.

Course overviews can be viewed at www.eseminars.stevens.edu.

For more information, contact:

Robert Zotti (201) 216-5231 rzott@stevens-tech.edu



Nominations needed for the American Society of Engineering Education ChE Division Awards for 2004 (Dated Material, Due Jan. 15, 2004)

The Dow Lectureship Award

This award, sponsored by The Dow Chemical Company, is presented to a distinguished engineering educator to recognize and to encourage outstanding achievement in an important field of fundamental chemical engineering theory or practice. The individual shall demonstrate achievement through the formulation of fundamental theory or principles, improvements of lasting influence to chemical engineering education with books and/or articles, and the demonstration of success as a teacher. In addition, evidence of the ability to conduct original, sound, and productive research, and an interest in the progression of chemical engineering through participation in professional and educational societies shall be demonstrated. The recipient presents a lecture at the ASEE summer school. The award consists of a \$3,000 honorarium and a commemorative plaque presented at the Chemical Engineering Division Banquet of the ASEE Annual Conference.

William H. Corcoran Award

This award, sponsored by Eastman Chemical Corporation, is presented each year to the author of the most outstanding article published in Chemical Engineering Education. Nominations are not accepted. All published papers in a calendar year are automatically considered. The award consists of a \$1500 honorarium (per paper) and a commemorative plaque presented at the Chemical Engineering Division Banquet of the ASEE Annual Conference.

Joseph J. Martin Award

The **Joseph J. Martin** Award is presented for the most outstanding Chemical Engineering Division paper presented at the ASEE Annual Conference. Nominations are not accepted. All papers presented that also appear in the conference proceedings are automatically considered. The award consists of a commemorative plaque presented at the Chemical Engineering Division Banquet of the ASEE Annual Conference.

CACHE Award for Excellence in Computing in Chemical Engineering Education

This award, sponsored by the CACHE Corporation, is presented for significant contributions in the development of computer aids for chemical engineering education. The award consists of a \$1,000 honorarium and a commemorative plaque presented at the Chemical Engineering Division Banquet of the ASEE Annual Conference.

Ray W. Fahien Award

This award is given in honor of **Ray Fahien**, who was editor of *Chemical Engineering Education* from 1967-1995, and who was effectively the founding father of the journal, establishing it as a premier publication vehicle in the field of chemical engineering education. Professor Fahien selflessly gave his time and talents to advance pedagogical scholarship, particularly in the careers of young educators, through his dedication to the journal and the profession. The award is given annually to an educator who has shown evidence of vision and contribution to chemical engineering education, consists of a \$1,500 honorarium and a commemorative plaque presented at the Chemical Engineering Division Banquet of the ASEE Annual Conference. See the Division web site for more details on the award criteria.

Educators who have been faculty members for not more than ten years as of July 1st in the year of the award are eligible.

Lifetime Achievement in Chemical Engineering Pedagogical Scholarship

This award will normally given for lifetime achievement, recognizing a sustained career of pedagogical scholarship that not only caused innovative and substantial changes, but also inspired younger educators to new behaviors that benefit students in Chemical Engineering.

The award will be presented on an as-merited basis, not necessarily annually. Acceptance of the award implies the obligation to attend the Chemical Engineering Division Awards Banquet at the ASEE Annual Conference.

A condition of receiving any of the above awards is attendance at the Chemical Engineering Division banquet at the 2004 ASEE Meeting in Salt Lake City, UT, June 20-23, 2004.

Nomination Deadline: January 15, 2004

For more information on ChE Division awards, see either http://www.asee-ched.org/ http://www.asee.org/awards/nominationinfo/otherdivision.cfm - cache

Instructions for Assembling a Nomination Package

Please assemble the nomination package in the following order. These instructions parallel those available at http://www.asee.org/awards/nominationinfo/program.cfm. Nomination packages not conforming to these guidelines will be discarded.

- 1. Do not submit to ASEE either electronically or with hard copy! Submit nominations to the ASEE ChE Division Awards Chair at the address below. Use the "non-electronic" cover form available at: http://www.asee.org/awards/nominationinfo/nomform.cfm
- 2. Include a 100-word maximum citation, which will be used if the nominee wins the award.
- 3. Include a 700-word maximum description of the rationale for the nomination.
- Include a Curriculum Vitae containing the following information: Degrees earned (university and 4. granting dates); other postgraduate study; record of positions held; publications, including all books, published papers and articles; ASEE activities and offices held; awards, honors and inventions.
- 5. Include a maximum of 8 letters of support for the nomination. These letters may be from peers, students, and/or former students as appropriate to the award.
- 6. Any nominee for an award may be renominated using the original nomination package for one additional year only by sending a letter, email, or fax to the Awards Chair.
- 7. Send 5 copies of the nomination package, plus one original signed copy, by January 15, 2004, to the address below.
- Ouestions? Contact the ChE Division Awards Chair at the address below. 8.

Joseph A. Shaeiwitz Chemical Engineering Department West Virginia University P.O. Box 6102 (if USPS) 417 ESB (if UPS, Fedex, or similar) Morgantown, WV 26506-6102 304-293-2111 ext. 2410 fax: 304-293-4139

jashaeiwitz@mail.wvu.edu

2003 - 2004 Fiscal Year Treasurer's Report

Income Statement as of December 18, 2003 for Fiscal Year ending June 30, 2004 *AIChE. Mid-Michigan Section*

| AIChE, Mid-Michigan Section | | | |
|--|------------------|-------------|------------------|
| • | YTD | Budget | Actual |
| | 2003-2004 | 2003-2004 | 2002-2003 |
| Gross Revenues | | | |
| Dues | \$0.00 | \$4,000.00 | \$3,810.00 |
| Continuing Education | \$0.00 | \$0.00 | \$0.00 |
| Group Functions | \$950.00 | \$2,500.00 | \$2,636.13 |
| Process Equipment & Instrument Expo | \$0.00 | \$5,000.00 | \$0.00 |
| College Scholarship | \$0.00 | \$1,500.00 | \$0.00 |
| MTU Scholarship | \$0.00 | \$0.00 | \$0.00 |
| Educational Outreach | \$0.00 | \$0.00 | \$0.00 |
| Interest on NOW, Money Market, CD | \$19.17 | \$150.00 | \$134.43 |
| Interest from Putnam Money Market Funds | \$0.00 | \$0.00 | \$0.00 |
| Taxed Capital Gains from Putnam Mutual Funds | \$0.00 | \$0.00 | \$0.00 |
| Miscellaneous | \$241.50 | \$0.00 | \$0.00 |
| Total Revenues | \$1,210.67 | | |
| Total Revenues | \$1,210.07 | \$13,150.00 | \$6,580.56 |
| | | | |
| 0 5 | | | |
| Gross Expenses | | ••• | |
| Continuing Education | \$0.00 | \$0.00 | \$0.00 |
| Group Functions | \$2,281.04 | \$3,500.00 | \$3,748.64 |
| Process Equipment & Instrument Expo | \$0.00 | \$0.00 | \$0.00 |
| College Scholarship | \$1,000.00 | \$1,500.00 | \$1,500.00 |
| Publicity/Newsletters | \$0.00 | \$0.00 | \$1,176.20 |
| Educational Outreach | \$0.00 | \$1,500.00 | \$0.00 |
| MTU Scholarship | \$980.00 | \$1,100.00 | \$1,495.00 |
| Awards | \$0.00 | \$400.00 | \$346.41 |
| Executive Committee Meetings | \$0.00 | \$500.00 | \$430.04 |
| Merchant Credit Maintenance Fee | \$60.00 | \$120.00 | \$110.00 |
| Administration | \$111.00 | \$500.00 | \$881.79 |
| Total Expenses | \$4,432.04 | \$9,120.00 | \$9,688.08 |
| · | | | |
| % of Expenses attrib to Admin. + Exec.Comm | 2.5% | 11.0% | 11.3% |
| % of Group Functions costs covered | 41.6% | 71.4% | 65.6% |
| % of Continuing Education costs covered | #DIV/0! | #DIV/0! | #DIV/0! |
| · | | | |
| Net Income (Loss) | (\$3,221.37) | \$4,030.00 | \$72.58 |
| ret moome (2000) | (ψυ,ΖΖ1.01) | ψ-1,000.00 | Ψ12.50 |
| Account Balances | | | |
| | #0.700.00 | | #4.050.07 |
| Chemical Bank NOW Checking | \$3,702.82 | | \$1,356.07 |
| Chemical Bank Money Fund Account | \$5,899.25 | | \$14,310.60 |
| Chemical Bank CD | \$0.00 | | \$0.00 |
| Putnam Voyager Fund | \$20,468.31 | | \$18,061.10 |
| Putnam Money Market Fund | \$0.00 | | \$0.00 |
| Expo Checking Account (half of value) | \$187.00 | | \$187.00 |
| | | | |
| Total Assets | \$30,257.38 | | \$33,914.77 |
| 1 0(a) 7335(3 | φυυ,Ζυ1.30 | | ψυυ, 3 14.11 |

American Institute of Chemical Engineers Mid-Michigan Section 2003–2004 Officers and Committee Chairpeople

| Position | Name | Address | Internal E-mail (within company) Internet E-mail | Phone | Fax |
|--------------------------|-------------------------|--|--|----------|----------|
| Chairperson | Tami Heilman | Dow Corning Corp. Mail# 128 Midland, MI 48686-0995 | TRHEILMA tami.heilman@dowcorning.com | 496-8771 | 496-6243 |
| Past-Chairperson | Mike Durisin | Dow Chemical Co. 1702 Building Midland, MI 48674-1702 | Durisin, Mike (MJ) durisinm@dow.com | 638-7291 | 636-4019 |
| Chairperson-Elect | Sarah Ratcliff | Dow Corning Corp. Mail# 121 Midland, MI 48686-0995 | SJRATCL2 sarah.ratcliff@dowcorning.com | 496-5675 | 496-8812 |
| Treasurer | Mark Riddle | Dow Chemical Co. 684 Bldg. Midland, MI 48674-1702 | Riddle, Mark (MS) msriddle@dow.com | 638-2252 | 636-5121 |
| Secretary | Kip Mercure | Dow Chemical Co. 1702 Building Midland, MI 48674-1776 | Mercure, Kip (PK) pkmercure@dow.com | 636-0546 | 636-4019 |
| Dow Chemical Director | Victor Atiemo- Obeng | Dow Chemical Co. 1776 Building Midland, MI 48674-1776 | Atiemo-Obeng, Victor (VA) vatiemoobeng@dow.com | 636-3972 | 638-9674 |
| Dow Corning Director | Dennis Phillips | Dow Corning Corp. Mail# 146 Midland, MI 48686-0995 | DEPHILLI dennis.phillips@dowcorning.com | 496-5243 | 496-1560 |
| Director- at-Large | Norm Lake | | thelakes@juno.com | | |
| Program Chairperson | Tina Islam | Dow Chemical Co. 200 Larkin Building Midland, MI 48674 | Islam, Tina (TM) tmislam@dow.com | 638-9036 | 636-0194 |

| Membership | Doug Todd | Dow Chemical Co. 1250 Harmon Road Auburn Hills, MI 48326 | Todd, Doug (DK) dktodd@dow.com | (248) 829-2903 | (248) 391-6417 |
|---|------------------|---|---|-------------------|-------------------|
| Publicity/New Hire | Lisa Frank | Dow Chemical Co. 1400 Building, #205 Midland, MI 48667-1400 | Frank, Lisa | 636-7167 | 638-6671 |
| MTU Scholarship | Erik Ohare | Dow Corning Corp. AUB1007 Midland, MI 48686-0995 | ESOHARE erik.ohare@dowcorning.com | 496-4741 | 496-5121 |
| EXPO 2003 Chair | Mike Molnar | Hemlock Semiconductor Corp. 12334 Geddes Road, P.O. Box 80, Mail# HEM090 Hemlock, MI 48626 | MJMOLNAR michael.molnar@hscpoly.com | 642-5201 x2218 | 642-7360 |
| Education Outreach | Verna Talcott | Dow Corning Corp. Process Industries Midland, MI 48686 | VBTALCOTT v.b.talcott@chartermi.net | 496-6066 | |
| AIChE Scholarship | David Tascerella | Dow Corning Corp. Mail# C042A1 Midland, MI 48686 | DSTASCAR david.tascarella@dowcorning.com | 496-5377 | 496-6824 |
| Continuing Education | Brett Birchmeier | Dow Chemical Co. 483 Building Midland, MI 48667-0438 | Birchmeier, Brett (BM) bbirchmeier@dow.com | 636-1916 | 638-7337 |
| School Donations/ Webmaster | Joe Anderson | Dow Chemical Co. 845 Building Midland, MI 48667-0845 | Anderson, Joe (J) janderson2@dow.com | 636-2045 | 636-3939 |
| Newsletter Editor/ Publicity Chair/ Webmaster | Eric Stangland | Dow Chemical Co. 1776Building Midland, MI 48674-1776 | Stangland, Eric (EE) eestangland@dow.com | 636-0517 | 638-9674 |
| Section Historian | To be determined | | | | |

All telephone numbers listed above are in the 989 area code unless otherwise specified.