PTF Newsletter
Particle Technology Forum

AMERICAN INSTITUTE OF CHEMICAL ENGINEERS

Vol. 8 No. 1 Fall 2002

The PTF is an international and interdisciplinary forum that promotes information exchange, scholarship, research, and education in the field of particle technology – that branch of science and engineering dealing with the production, handling, modification, and use of a wide variety of particulate materials, both wet or dry, in sizes ranging from nanometers to centimeters. Particle technology spans a range of industries to include chemical, petrochemical, agricultural, food, pharmaceuticals, mineral processing, advanced materials, energy, and the environment. See www.erpt.org/ptf for more information.

In this issue…

Announcements

PTF Award Winners

November 2000 Awards: (no poster awards this year)

Brian Scarlett (Tech. Univ. of Delft) – PTF Award
Robert Pfeffer (New Jersey Inst. of Technol.) – Thomas Baron Award in Fluid-Particle Systems
Wen-Ching Yang (Siemens-Westinghouse) – Lectureship Award in Fluidization
Hiroyuki Shinto (Kyoto Univ.) – Best Ph. D. in Particle Technology

November 2001 Awards:

Sheldon Friedlander (Univ. of California, Los Angeles) – PTF Award
Lee White (Carnegie Mellon Univ.) – Thomas Baron Award in Fluid-Particle Systems
Masasyuki Horio (Tokyo Univ. of Agricultural) – Lectureship Award in Fluidization
PTF Student Poster Awards (Annual AIChE Meeting)
1st place Jose Fabrega (Univ of Connecticut)
2nd place Xuegeng Li (SUNY Buffalo)
3rd place Einar Kruis (University of Duisburg)

November 2002 Awards:

Brian Kaye (Laurentian Univ.) - PTF Lifetime Achievement Award
Darash Wasan (Illinois Inst. Techn.) - Thomas Baron Award in Fluid-Particle Systems
Himanshu Gupta (Ohio State Univ.) - Best Ph. D. in Particle Technology
Dmitri Gidaspow (Illinois Inst. Techn.) - Lectureship Award in Fluidization
PTF Student Poster Awards (Annual AIChE Meeting): determined in November; will post on Web

Please plan to attend the PTF Award Banquet on Tuesday, November 12 at the upcoming AIChE Annual Meeting (Indianapolis), when about 100 members and guests will gather to honor these colleagues who have contributed much to the advancement of particle technology.

NOMINATIONS FOR NEXT YEAR: The deadline for nominations is March 31. Please talk with your colleagues during the AIChE Annual Meeting in November (or on-line), consider who might be a good candidate, and decide who will be the nominator and sponsors. Then complete the nomination package and submit it. The awards, requirements, and forms are available through the PTF Web site (http://www.erpt.org/ptf).

PTF Elections

Please Vote! Every two years we elect four new members to four-year terms on the Executive Committee of the Particle Technology Forum. Two will be elected to represent academia and two to represent industry. Below is some background information about the candidates.

NOMINEES FROM ACADEMIA

Hugo S. Caram is Professor of Chemical Engineering at Lehigh University in Bethlehem, Pennsylvania. He received his undergraduate degree in 1967 from the University of Buenos Aires He worked for Shell IPC for approximately 4 years as a process engineer before. He came to the U.S. in 1972 to start graduate studies at the University of Minnesota where he completed his Ph.D. After a brief postdoctoral stay at the University of Houston he joined the faculty of Lehigh University in 1977. His research interests have included in addition to fluidization and the mechanics of dry and wet granular solids, chemical reactor theory and environmental issues related to electric arc welding, plume evolution and greenhouse gas emissions. He has supervised the research work of more than 30 graduate students and a number of post-doctoral students. He has authored/co-authored over 80 refereed publications and been an active participant in the AIChE.

Thomas C. Ho is currently a professor and the inaugural holder of the Michael E. and Patricia P. Aldredge Endowed Chair in Engineering at Lamar University. He is also the Director of the EPA's Gulf Coast Hazardous Substance Research Center headquartered at Lamar University. Dr. Ho is a registered professional engineer. He earned his doctorate and master's degrees from Kansas State University and his bachelor's degree from the National Taiwan University. His research areas have been on fluidization, air quality measurements and modeling including ozone and particulate matter, metal emissions control, and mercury adsorption. He has published more than 60 journal articles and has conducted more than 150 conference presentations. He is currently serving on the program advisory committee of several international conferences, including serving as the AIChE Group3bVice-Chair.

Brij M. Moudgil is a Professor of Materials Science and Engineering, and Director of the NSF Engineering Research Center for Particle Science and Technology at the University of Florida, Gainesville. His research interests are in the areas of dispersion and flocculation, nano functional particles, rheology and coatings. He has received major awards for his professional achievements. He has been elected a member of the National Academy of Engineering, one of the highest distinctions in engineering.

NOMINEES FROM INDUSTRY

Manuk Colakyan is a Technical Leader in the Solids Processing Group at The Dow Chemical Company. He has held positions both in the R&D and the Engineering Department with Union Carbide Corporation as the group leader of the Reaction Engineering and Solids Processing

Groups. Since 1989, he has been an adjunct faculty member at the College of Graduate Studies in South Charleston, WV. Dr. Colakyan holds a B.Sc. from Istanbul Technical University, M.S. and Ph.D. degrees from Oregon State University, all in Chemical Engineering. He is an active member of the National AIChE where he organized several technical sessions and served on several sub-committees. He is currently the chair of Area 3b, Fluidization and Fluid Particle Systems, served as the chair of Charleston Section of AIChE and played an active role in the formation of PTF. Dr. Colakyan's interests include Reaction Engineering and Fluidization. He has several publications and meeting presentations in these fields.

Dr. C.C. Huang is the group leader of Nano Technology and Material Business in North America for Hosokawa Micron International Inc. He holds an M.S. degree in engineering from Illinois Institute of Technology and a Ph.D. degree in chemical engineering from West Virginia University. He has many years' experience in industrial R&D, as well as academia, in the field of powder technology and science. Dr. Huang specializes in powder processing, powder characterization, powder granulation, and fluidization. He has published over 30 articles and 8 patents, chaired several meetings, and continues to be an active member in a number of scientific and engineering societies.

Dr. Mel Pell retired from the DuPont Co. as a principal consultant where his specialty was fluidized bed systems. He has published in Perry's and has written a book on gas fluidization. He has over 25 other publications and 5 patents. He is a fellow of the AIChE and teaches the AIChE fluidization course.

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PTF Ballot for Executive Committee Members to Serve 2002-2006
(Two for academia and two for industry)

Please mark with X to vote for no more than two candidates in each group below:
(In each group ballot order was determined by a random drawing.)

TO REPRESENT ACADEMIA
___ Hugo Caram (Lehigh University)
___ T. C. Ho (Lamar University)
___ Brij Moudgil (University of Florida)

TO REPRESENT INDUSTRY
__ Manuk Colakyan (Dow/Carbide)
__ Costos Coulaloglou (Exxon/Mobil)
__ C. C. Huang (Hosakawa)
__ Mel Pell (consultant, ex-DuPont)

Before October 15 mail your ballot -- along with a separate piece of paper (in the same envelope) that has both your signature and your printed name – to the secretary of the PTF:
Mark Bumiller, Vice President
Malvern Instruments, Inc.
10 Southville Road
Southborough MA 01772, USA

Announcements (cont'd)

2002 AIChE Annual Meeting

November 3-8, 2002
Indianapolis Convention Center
Indianapolis, IN
URL: www.aiche.org/annual

Chair: Dr. G.V. Reklaitis, Purdue University
email: aiche02@ecn.purdue.edu
Vice-Chair: Dr. Jennifer Sinclair, Purdue University
email: aiche02@ecn.purdue.edu

The PTF will publish a CDROM with extended abstracts of papers in sessions that are (co-)sponsored by the PTF.

PTF-Sponsored Sessions (* indicates co-sponsor)

Day of Week	Time	Title	Location
Sunday, November 3	8:30-10:50 am	[135] - Solids Handling Tutorial	Room 121 – Indianapolis Convention Ctr
Monday, November 4	8:30-11:10 am	[136] - Nanostructured Materials and Particles I	Room 121 – Indianapolis Convention Ctr
Monday, November 4	8:30-11:10 am	*[395] - Theory, Modeling and Simulation of Nanoscale Systems I	Room 124 – Indianapolis Convention Ctr
Monday, November 4	8:30-11:20 am	[138] - Fundamentals of Fluidization and Fluid Particle Systems	Marriott Ballroom 3
Monday, November 4	8:30-11:25 am	[137] - Dynamics and Modeling of Particulate Systems I	Marriott Ballroom 4
Monday, November 4	8:30-11:25 am	[138] - Fundamentals of Fluidization and Fluid Particle Systems	Marriott Ballroom 4
Monday, November 4	2:00-4:38 pm	[139] - Solids Handling and Processing	Marriott Ballroom 3
Monday, November 4	2:00-4:40 pm	[141] - Dynamics and Modeling of Particulate Systems II	Marriott Ballroom 4
Monday, November 4	2:00-4:40 pm	*[396] - Theory, Modeling and Simulation of Nanoscale Systems II	Room 124 – Indianapolis Convention Ctr
Tuesday, November 5	8:30-10:45 pm	[142] - Scale Up of Particulate Processes - State of the Art I	Marriott Ballroom 4
Tuesday, November 5	8:30-10:50 am	*[294] - Fluid Particle Interactions in the Pharmaceutical Industry	Indiana Ballroom A/B – Marriott
Tuesday, November 5	8:30-11:10 am	[143] - Reaction Engineering in Particulate Systems	Marriott Ballroom 3
Tuesday, November 5	2:00-4:30 pm	*[275] - Computational and Numerical Approaches in Particle Flows	Room 207–Indianapolis Convention Ctr
Tuesday, November 5	4:30 pm	[144] - Poster Session: Particle Technology	Exhibit Hall Convention Ctr
Wednesday, November 6	8:30-10:45 am	[146] - Scale Up of Particulate Processes - State of the Art II	Marriott Ballroom 4

Announcements (cont'd)

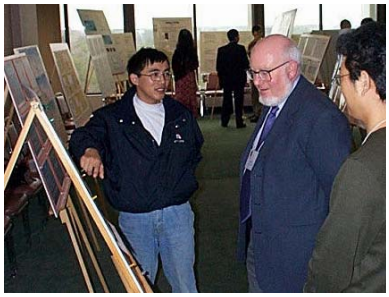
Day of Week	Time	Title	Location
Wednesday, November 6	8:30-10:50 am	[145] - Industrial Processes of Particle Formation	Marriott Ballroom 3
Wednesday, November 6	8:30-10:50 am	*[201] - Nanoparticle Coatings and Molecular Simulation of Materials Processes	Room 122 – Indian-apolis Convention Ctr
Wednesday, November 6	2:00 pm	[148] - Panel Discussion: Silo Theory and Practice	Marriott Ballroom 5
Wednesday, November 6	2:00-4:35 pm	[147] - Heat and Mass Transfer in Fluidization	Marriott Ballroom 4
Wednesday, November 6	2:00-4:45 pm	[149] - Process Monitoring and Control of Particulate Growth Processes	Marriott Ballroom 3
Thursday, November 7	8:30-11:10 am	*[207] - Liquid Phase Synthesis of Nanomaterials and Particles	Room 124 – Indian-apolis Convention Ctr
Friday, November 8	8:30-10:40 am	[150] - Nanostructured Materials and Particles II	Room 124 – Indian-apolis Convention Ctr
Friday, November 8	8:30-10:51 am	*[214] - Synthesis and Processing of Nanocomposites	Room 122 – Indian-apolis Convention Ctr
Friday, November 8	8:30-11:00 pm	*[306] - Solids Handling in Food, Pharmaceutical and Bioengineering	Indiana Ballroom B – Marriott
Friday, November 8	2:00-4:35 pm	*[308] - Heat and Mass Transfer in Particulate and Multiphase Systems	Indiana Ballroom A – Marriott
Friday, November 8	2:00-4:40 pm	*[309] - Nanostructured and Coated Particles	Indiana Ballroom B – Marriott

Additional Sessions of Interest

Day of Week	Time	Title	Location
Tuesday, November 5	8:30-11:15 am	[87] - Fundamental Research in Fluid Mechanics: Particulate and Multi-Phase Flows I	Marriott Ballroom 7
Tuesday, November 5	2:00-4:45 pm	[89] - Fundamental Research in Fluid Mechanics: Particulate and Multi-Phase Flows II	Marriott Ballroom 7

Summer School in Winter

The challenge in advanced training in particle science and technology is that although there are many specialized areas that are components of PS&T no single institution can reasonably be expected to have expertise in each of these areas. To meet this challenge, the Engineering Research Center for Particle Science and Technology at the University of Florida has developed a program to connect students from across the globe with experts in the field. The annual Particle Science Summer School in Winter at the ERC (SSIW) offers students the opportunity to choose two out of eight specialized 2-day modules taught by world-renowned experts, participate in a poster session, and attend a series of special topic seminars. The modules that will be offered during the upcoming SSIW 2003 program are: Biotechnology, Powder Processing, Modeling, Interfacial Phenomena, Nanotechnology, Particle Processing, Characterization, and Engineered Particulates.



Student participants present their research during the SSIW 2002 poster session.

FAQ:

- ***WHEN IS IT?***
  January 10-18, 2003
- ***WHERE IS IT?***
  University of Florida, Gainesville, Florida.
- ***WHO CAN PARTICIPATE?***
  Any graduate student working in a particle science and technology area is eligible. Previous student participants represented 9 different academic departments.
- ***WHAT DOES IT COST?***
  If you are studying at a U.S. Institution and are selected to participate you will receive a grant to support your travel and local living costs for the program. Up to 50 students will be selected to receive this support. There is no registration fee.

  If you are a student at a non U.S. Institution, you must pay for your own travel and local living expenses (estimated to be approximately $350 U.S. based on double hotel accommodations). Previous SSIW students have been sponsored by their faculty, home institution or industry to attend. There is no registration fee.

- ***HOW DO I APPLY?***
  Use the on-line application (http://www.erc.ufl.edu/ssiw2003/ssiwapplication.htm) to apply. If you are at a foreign institution, please indicate the source of support for your participation.

- ***QUESTIONS?***
  E-mail Dr. Anne Donnelly at adonnelly@erc.ufl.edu or Ms. Rhonda Blair at rblair@erc.ufl.edu.

Upcoming Conference: WCPT5

A Message from Professor George Klinzing, PTF Chair

As some of you know, we had a very successful WCPT-4 in Sydney in late July. The President of the WCPT - Judy Raper turned over the "hour glass" to me to begin the process for WCPT-5.

Before the meeting the sponsoring organization of the Americas decided to propose Orlando as the venue for WCPT-5 in 2006. The University of Florida offered to be the local hosts for the Congress. AIChE will be the infrastructure organizer and the meeting was proposed to be held in April of 2006. AIChE will help with the organization of the WCPT-5 which will take place at the same time as the Spring Meeting of AIChE. The important point of having the joint arrangement is one of economy and efficiency of the operation. It is imperative that even though the two meetings will take place at the same time the WCPT-5 will have its own identity which will be clearly delineated from the regular Spring Meeting format. (Discussion with Jeff Wood of AIChE guaranteed that this will be the case and we will have a distinct and easily identifiable Congress which we will be proud of. A reduced registration fee for students has also been agreed to.) This is a MUST.

These arrangements were presented to World Particle Technology Congress executive group and they heartily approved the arrangements. At the closing ceremony of WCPT-4 I invited the delegates to Orlando in 2006 and help move Particle Technology forward with our international collaborations and discussions. The PTF sponsored a closing reception to emphasize its commitment to the next Congress.

We are now launched. The next step is to designate an organizing and planning and group of the PTF with assistance from the other sponsoring organizations. I suggest that a committee of six per Judy Raper's advice be designated as the organizing and planning group or committee. The sponsoring organization shall function as an oversight committee and must be consulted on the process and issues.

The various functions to be accomplished by the organizing and planning groups are

- Organizing Committee (Chair/Deputy Chair)
- Technical Program (Chair/Deputy chair
- Exhibits
- Industrial Sponsorship (Try to shoot for at least $25K in industrial support)
- Technical Proceedings
- Social Programming (Receptions, Banquet, Others)
- Student Program (A pre-student conference has been suggested.)
- Treasurer

Liaison with AIChE will be through Jeff Wood.

ERPT Update

Major industrial problems arise or persist because most process technologists have no training in particle technology. Alas, university programs are reluctant to change their curricula to include instruction on particulate phenomena. See references. To alleviate this problem the Particle Technology Forum launched a public service project to introduce the major concepts of particle technology, discuss common industrial production problems, and suggest practical paths toward resolving them. The goal was to provide several hundred tutorials on the Web -- soliciting, securing, packaging, and presenting quality educational material in a professional format.

Educational Resources for Particle Technology -- at http://www.erpt.org -- has now been in operation for nearly four years. It has grown steadily and now comprises about thirty tutorials and many links to related resources. These may be accessed on-line, world-wide, free-of-charge, at any time of day (just-in-time). *ERPT* provides material in several languages, has video editing capability (several tutorials use video clips), and can provide downloadable programs for illustrative calculations.

ERPT provides three classes of resource:

Tutorials present material as an instructional module. Those developed specifically for *ERPT* use journal article format. Others are outlines of courses, chapters from academic texts, discussions by industrial consultants, and vendor descriptions of equipment operations.

Links to Supplemental Material provide access to on-line items that can supplement an instructional program, such as animations of model simulations.

Notes on Other Learning Media provide references to books, pamphlets, print modules, instructional CDs, videotapes, and major suppliers of short courses and video broadcasts.

ERPT resources have many uses:

- illustrations of unfamiliar concepts
- ideas for enriching lectures and labs
- suggestions for solving research problems
- locating resources to supplement courses
- locating courses in continuing education
- generic descriptions of commercial processes
- practical suggestions for resolving problems
- locating experts for consultation

ERPT is indexed by major search engines and is linked from several major engineering sites. Visits to the home page have grown steadily and reached 400 per month in 2002. The average visitor looks at eight text pages beyond the home page. Half of those who visit the first page of a tutorial go on to visit all the remaining pages. The evidence indicates that we are meeting real needs. Please visit the site and consider contributing a tutorial.

Nelson, Ralph D., Jr., Reg Davies, and Karl Jacobs (1995) "Teach 'Em Particle Technology", *Chem. Eng. Ed.* **29**(1), 12-16

Nelson, Ralph D., Jr., and Reg Davies (1998) "Industrial Perspective on Teaching Particle Technology", *Chem. Eng. Ed.* **32**(2), 98-101

"Know Floe's Korner"

"Know Floe's Korner" is a contribution from the members of Group 3c (Solids Handling and Processing). The objective of this section is to share their industrial learning experiences through a variety of articles and case studies. Please send your comments to Shrikant Dhodapkar at sdhodapkar@dow.com.

Top Ten Tips to Prevent and Resolve Segregation Issues

Lyn Bates (Ajax Equipment), Shrikant Dhodapkar (Dow Chemical)
and George Klinzing (University of Pittsburgh)

1. Free flowing particles tend to segregate if they have any physical differences. Particle size variation is a major discriminating factor; bulk dilation and agitation are great enablers. Remember, "segregation commences as soon as you stop mixing". Inhibit deformation of the mass in bulk transport by tight packing, gentle handling and close confinement.

2. Chutes, belt trajectories, pneumatic conveyor outlets, and pile formation by transverse flow streams are common locations for segregation in process plants. Ensure that feed streams are not deposited onto a pile or into a storage bin with a biased composition. Focus the flow stream, or divide it in a controlled manner, so that the surface is at least built up in an even manner around the point of fill.

3. Consider particle engineering to reduce variations between particle, or bulk manipulation to reduce the freedom of particles to separate. Question whether it is practical to remove troublesome fines at an early stage of production and add back at a late of production. Intermediate processes and handling may benefit and the final composition can be more carefully controlled. However, make sure that you do not create other handling problems.

4. Avoid long repose slopes when filling bins and silos. Use multi-point fill or dispersing plates, making sure that material in the split flow channels are of uniform composition.

5. Transfer batches of bulk material, such a mixer contents or bin discharge, as quickly as possible with maximum confinement. This restricts the time and space over which segregation processes can act, and limits the dilation that facilitates the differential migration of fractions.

6. Use mass flow type bins to re-mix the cross sectional contents when emptying, but be aware that faster flow in the center will concentrate material deposited in the outer periphery in the terminal discharge. Use a 'Reverse Cone' insert or 'Binsert' to attenuate flow velocity variations.

7. Fines segregated near the wall or on one side of the bin can alter the outflow pattern from mass flow to funnel or eccentric flow, thereby accentuating the problem at discharge or possibly introduce dangerous stresses on the bin walls. Check the hopper design against measured flow related values of the various size fractions of the bulk solid, to make sure that flow is reliable under all circumstances.

8. Watch carefully the end effects of batch and continuous operations. Refill contours in non-mass flow bins provide boundaries for segregation that provides sharp concentrations when the material subsequently discharges.

9. Fluctuating levels in non-mass flow storage bins, used to balance varying supply and demand, alternately tends to retain and re-enter preferential fractions as surface level rises and falls whilst the demand feed stream passes through the stored mass.

10. Remember that segregation is pervasive and pernicious. The place where it shows is not always where it occurs. Detectable results may be consequence of accumulated behavior, or even a partially rectified pattern. CHECK THE TOTAL FLOW PATH.

Suggested Readings:

1. Williams, J.C., *The Segregation of Particulate Materials: A Review*, Powder Technology, Vol. 15, pp. 245-251 (1976).

2. Johanson, J., *Particle Segregation… and what to do about it*, Chemical Engineering, May 8 (1978).

3. Carson, J.W., Royal, T.A. and D.J. Goodwill, *Understanding and Eliminating Particle Segregation Problems*, Bulk Solids Handling, Vol. 6, No. 1, Feb. (1986).

4. Bates, L., *User Guide to Segregation*, (Ed: George Hayes), published by British Material Handling Board, UK (1997).

Upcoming Conference Calendar

2002

2002 AIChE Annual Meeting
November 3-8, 2002, Indianapolis, Indiana

Chair:
G. V. Reklaitis, Purdue University, School of Chemical Engineering, West Lafayette IN; phone: 765-494-4075, fax: 765-494-0805, email: aiche02@ecn.purdue.edu

Vice-Chair:
Jennifer Sinclair, Purdue University, School of Chemical Engineering, West Lafayette IN; phone: 765-494-2257; fax: 765-494-0805, email: aiche02@ecn.purdue.edu

Web Site: http://www.aiche.org/annual/

2002 MRS Fall Meeting: Symposium on Granular Material-Based Technologies
December 2-6, 2002, Boston, Massachusetts

Symposium Chairs:
Surajit Sen, Suny-Buffalo, Dept. of Physics, 239 Fronczak, Buffalo, NY 14260; phone: 716-645-6314, fax: 716-645-2507; email: sen@buffalo.edu

Melany Hunt, California Institute of Technology, Department of Mechanical Engineering, Mail Code 104-44, Pasadena, CA 91125; phone: 626-395-4231; email: hunt@caltech.edu

Alan J. Hurd, Los Alamos National Laboratory, Lansce-12, MS H805, P.O. Box 16, Los Alamos, NM 87545; phone: 505-665-0630, fax: 505-665-2676, email: ajhurd@lanl.gov

Abstract Deadlines: June 5, 2002 sent via fax or mail; June 19, 2002 sent via MRS Web Site
Web Site: http://www.mrs.org/meetings/fall2002/program

Upcoming Conference Calendar (cont'd)

2003

The 11th International Conference on Fluidization: Present and Future for Fluidization Engineering

May 9-13,2003, Sorrento (Napoli), Italy

Co-Chairs:

Prof. Umberto Arena, Dipartimento di Scienze Ambientali, Seconda Universita degli Studidi Napoli, Via Vivaldi, 43-81100 Caserta, Italy, phone: +39 0823 274414, fax: +39 0823 274605, email: umberto.arena@unina2.it

Dr. Riccardo Chirone, Istituto di Ricerche sulla Combustione, Consiglio Nazionale delle Ricerche, Piazzale Vincenzo Tecchio, 80-80125 Napoli, Italy, phone: +39 081 7682242, fax: +39 081 5936936, email: chirone@irc.na.cnr.it

Prof. Michele Miccio, Dipartimento di Ingegneria Chimica e Alimentare, Università degli Studi di Salerno, Via Ponte don Melillo, 1-84084 Fisciano (Sa), Italy, phone: +39 089 964148, fax: +39 089 964057, email: mmiccio@unisa.it

Prof. Piero Salatino, Dipartimento di Ingegneria Chimica, Università degli Studi di Napoli Federico II, Piazzale Vincenzo Tecchio, 80-80125 Napoli, Italy, phone: +39 081 7682258, fax: +39 081 5936936, email: salatino@unina.it

Abstract Deadline: November 1, 2002
Web Site: http://www.engconfintl.org/4afbody.html

Computational Fluid Dynamics in Chemical Reaction Engineering III

May 25-30, 2003, Davos, Switzerland

Chair:

Professor Rodney O. Fox, Iowa State University, Department of Chemical Engineering, 3157 Sweeney Hall, Ames, IA 50011-2230; phone: 515-294-9104; fax: 515-294-2689; email: rofox@iastate.edu Iowa State University

Co-Chair:

Professor J.A.M. (Hans) Kuipers, University of Twente, Faculty of Science and Technology, P.O. Box 217, 7500 AE Enschede, The Netherlands; phone: +31-53-489 3039; fax: +31-53-489 2882; email: J.A.M.Kuipers@ct.utwente.nl

Abstract Deadline: December 31, 2002
Web Site: http://www.engconfintl.org/3af.html

The 4th International Conference for Conveying and Handling of Particulate Solids

May 27-30, 2003, Hotel Inter-Continental, Budapest

Upcoming Conference Calendar (cont'd)

Chair:
Prof. János Gyenis, University of Kaposvár, Research Institute of Chemical and Process Engineering (MÜKKI), P.O. Box 125, Veszprém, H-8201, Hungary, phone: +36-88-425-206, fax: +36-88-424-424, email: gyenis@mukki.richem.hu

Co-Chair:
Dr. János Szépvölgyi, University of Kaposvár, Research Institute of Chemical and Process Engineering (MÜKKI), P.O. Box 125, Veszprém, H-8201, Hungary, phone: +36-88-428-67706, fax: +36-88-424-424, email: szep@mukki.richem.hu

Abstract Deadline: August 15, 2002
Web Site: www.partconf2003.hu

Second International Conference on Computational Methods in Multiphase Flow

November 3-5, 2003, Santa Fe, NM

Chairs:
A. A. Mammoli, University of New Mexico, Department. of Mechanical Engineering, Albuquerque, NM 87131, phone: 505-277-9215; fax: 505-277-1571; email: mammoli@me.unm.edu

C. A. Brebbia, Wessex Institute of Technology, Ashurst Lodge, Ashurst Southampton, SO40 7AA, UK; institute phone: +44 (0)238 029 3223; institute fax: +44 (0)238 029 2853; institute email: wit@wessex.ac.uk

Abstract Deadline: ASAP
Web Site: http://www.wessex.ac.uk/conferences/2003/multiphase03/index.html

2003 AIChE Annual Meeting: PTF Topical Conference on "Engineered Particle Structures: Manufacture, Processing, and Characterization"

November 2003, San Francisco, CA

(details will be available in February 2003)

2004

2004 AIChE Annual Meeting

November 7-12, 2004, Austin Convention Center, Austin TX

(details will be available in February 2004)

PARTEC 2004

March 16-18, 2004, Nürnberg, Germany

Web Site: http://www.partec2001.de/e/index.html

Upcoming Conference Calendar (cont'd)

Gordon Conference on Granular and Granular-Fluid Flows
July 2004

Chair:
Professor Michel Louge, Sibley School of Mechanical and Aerospace Engineering, Cornell University, 192 Rhodes Hall, Ithaca, NY 14853, phone: 607-255-4193, email: michel.louge@ cornell.edu

Vice-Chair:
Professor Christine Hrenya, Department of Chemical Engineering, University of Colorado, Boulder, CO 80309-0424, phone: 303-492-7689, fax: 303-492-4341, email: hrenya@ colorado.edu

Web Site: http://www.grc.uri.edu

XXI International Congress of Theoretical and Applied Mechanics
August 15-21, 2004, Warsaw, Poland

Co-Chairmen:
Michal Kleiber, IPPT PAN, Warszawa; phone (secretary): 826 89 11; fax: +48-22-8269815; email: michal.kleiber@ippt.gov.pl

Wlodzimierz Kurnik, Technical University of Warsaw, Warsaw, Poland; fax: 48-22-6607209; email: wku@simr.pw.edu.pl

Abstract Deadline: January 9, 2004
Web Site: http://ictam04.ippt.gov.pl

2004 AIChE Annual Meeting
November 2004, Austin, TX
(details will be available in February 2004)

2006

The Fifth World Congress on Particle Technology
2006, Orlando FL
(exact date not set, likely at end of April; web site should be available by November 2002)

2006 Annual AIChE Meeting
November 12-17, San Francisco Hilton, San Francisco, CA
(details will be available in February 2004)

PTF Organizational Info

Officer and Committee Listing

Officers:

Chair 2000-2002: Professor George Klinzing, klinzing+@pitt.edu, 412-624-0784
Vice-Chair 2000-2002: Dr. Ralph D. Nelson, erptmged@aol.com, 302-239-0409
Immediate Past Chair 2000-2002: Dr. Karl V. Jacob, jacobkv@dow.com, 517-636-5706
Secretary 2000-2002: Dr. Mark Bumiller, mark_bumiller@malvernusa.com, 508-480-0200
Treasurer 2000-2002: Professor Alan Weimer, alan.weimer@colorado.edu, 303-492-3759

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Academic 1998-2002: Professor Alan Weimer, alan.weimer@colorado.edu, 303-492-3759
Academic 1998-2002: Professor Melany Hunt, hunt@caltech.edu, 626-395-4232
Academic 2000-2004: Professor Richard Turton, turton@cemr.wvu.edu, 304-293-2111
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Industry 1998-2002: Dr. Ralph D. Nelson, erptmged@aol.com, 302-239-0409
Industry 1998-2002: Dr. Mark Bumiller, mark_bumiller@malvernusa.com, 508-480-0200
Industry 2000-2004: Dr. Paul Mort, mort.pr@pg.com, 513-627-8876
Industry 2000-2004: Dr. Shrikant Dhodapkar, sdhodapkar@dow.com, 979-238-7940
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AIChE Staff Associate: Mr. Richard Green, richg@aiche.org, 212-591-8677

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Membership: Dr. Manuk Colakyan, colakymc@ucarb.com
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Group 3a: Particle Production and Characterization: Dr. Paul Mort, mort.pr@pg.com, 513-627-8876
Group 3b: Fluidization and Fluid-Particle Systems: Manuk Colakyan, colakymc@ucarb.com, 304-746-2500
Group 3c: Solids Flow, Handling, and Processing: Dr. Clive Davies, c.davies@itl.cri.nz, +64-4-569-0000
Group 3d: Nanoparticles: Professor Sheryl H. Ehrman, sehrman@eng.umd.eduf, 301-405-1917

Complete mailing addresses can be found @ http://www.erpt.org/ptf/officers.htm

Report from the Treasurer

PTF currently has $13,724 in the bank. In July, PTF provided $2,000 for travel supplements ($250 each) to support eight graduate students to attend and present papers at the Fourth World Congress on Particle Technology (Sydney). In addition, PTF provided $2,000 towards the closing ceremony to usher in the Fifth World Congress to be sponsored by PTF and held in Orlando in 2006. PTF also spearheaded support from NSF for thirty $1,000 travel supplements to support U.S. faculty to attend the Sydney World Conference.

Recipients of Travel Supplements

Students

Gustavo Joseph – Cal tech

Jaimee K.Dahl – University of Colorado

Steven R. Dahl – University of Colorado

Michael Weber – University of Colorado

Madhavan Esayanur – University of Florida

Maria Palazuelos – University of Florida

Vishal Mukesh Patel – University of Florida

Marco Verwijs – University of Florida

From the Editor's Desk

The *PTF Newsletter* is published twice a year as a vehicle for communication for all **PTF** members. **PTF** members are encouraged to send in news and information of general interest to **PTF** members. Please address your communication to

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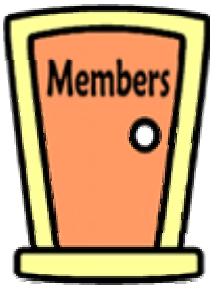
Advertisements may also be placed in the newsletter. The rates on a per issue basis are:

1/4 page $40 1/2 page $60 Full page $110

Web Site

In January of 2002 we registered a simple domain name for *ERPT* (see article in this newsletter), and PTF now uses a subdirectory in that domain, so our URL is **http://www.erpt.org/ptf**. Please add this address to your list of favorites and link it as needed from your own Web pages.

The PTF site contains both news briefs and basic information for students and technical professionals working with particles. You may continue to use the URL associated with the AIChE's domain – **http://www.ptfdiv. aiche.org** – which sends you on to the PTF site. We thank the Engineering Research Center for Particle Technology at the University of Florida in Gainesville for hosting the PTF site for the previous two years.



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____ $20 Engineering/Scientific Society Member

____ $65 Non-Society Member

____ $5 Student Signature _____

Checks must be payable to American Institute of Chemical Engineers. International money orders are acceptable. Check must be drawn on a U.S. bank or draft on a foreign bank with a New York City branch.

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Attn: **Document Processing, 3 Park Avenue, New York, NY 10016**