Fall 2002

Division of Fluid Dynamics Newsletter

A Division of The American Physical Society

# Executive Committe Elections Ballot due October 25, 2002

Ballots are due by October 25, 2002. This year voting is by email ballot. These were sent out to the DFD membership in early September. Paper ballots were only sent to members whose email addresses are not on file with the APS and to those members to whom the email ballot could not be delivered.

**Candidates for Vice Chair** (who will serve in that capacity in 2003, then as Chair-Elect in 2004, and as the Division Chair in 2005).

# **Vice Chair**

Jerry P. Gollub

Professor in the Natural Sciences (Physics), Haverford College Adjunct Professor, University of Pennsylvania

Jerry Gollub received his A.B. from Oberlin College in 1966, and his Ph.D. in experimental condensed matter physics from Harvard University in 1971. He was appointed to the faculty at Haverford in 1970, became Professor in 1979, served three terms as Chair of the Physics Department, and was Provost (Chief Academic Officer) of the College in 1988-90. Since 1981 he has also been affiliated with the Physics and Engineering Faculties of the University of Pennsylvania, where he has supervised the Ph.D. research of many graduate students.

Since 1974, Gollub's research has focussed on fluids, including studies of instabilities, pattern formation, and mixing, chaotic dynamics and turbulence, nonlinear waves, patterns formed at the surface of growing crystals, and the dynamics of granular shear flows: http:// www.haverford.edu/physics-astro/Gollub/lab.html. He has co-authored a textbook entitled "Chaotic Dynamics".

Gollub became a Fellow of the American Academy of Arts and Sciences in 1992, was elected to the National Academy of Sciences in 1993, and is a Fellow of the APS and AAAS. He was the first recipient of the APS Award for Research in an Undergraduate Institution in 1985, was a Guggenheim Fellow in 1984-85, and earlier held Danforth and Woodrow Wilson Fellowships. He was appointed as Morris Loeb Lecturer in Physics at Harvard University in 1990, served as a Sigma Xi National Lecturer in 1983-85, and has held Visiting Professorships at the Ecole Normale (Paris) and The Weizmann Institute.

Gollub is currently the APS-DFD Divisional Councilor, serves on the APS Council and Executive Board, has chaired several APS Committees, and previously served as DFD Secretary-Treasurer. He was recently Co-Chair of a major NRC study on advanced secondary science and mathematics education, published by the National Academy Press: http:// www.nap.edu/catalog/10129.html. He co-organized the 1997 Conference of Physics Department Chairs, and has contributed to the organization of several research conferences.



Statement: The DFD is unique among all APS divisions in the degree to which it is interdisciplinary. Members of the DFD span a range of academic departments, including mechanical and chemical engineering, physics, geophysics, applied mathematics, etc. We also have a substantial industrial representation. It is a particular challenge to ensure that we take advantage of this breadth in all of the activities of the Division, including particularly our meetings and awards. The future of fluid dynamics is likely to be even more interdisciplinary than its past.

#### Lex Smits

Professor of Mechanical and Aerospace Engineering, Princeton University

Lex Smits is a Professor in the Department of Mechanical and Aerospace Engineering at Princeton University. He received his Ph.D. from the University of Melbourne, Australia, in 1975. He was on the research staff at Imperial College and the University of Melbourne until he joined the faculty of Princeton University in 1981. Since July 1998, he has served as Chairman of his department. His research interests are centered on experimental research in turbulence and fluid mechanics. He is currently an Associate Editor of *Physics of Fluids*, and an Associate Editor of the *Journal of Fluid Mechanics*. He is a Fellow of the American Physical Society, the American Institute of Aeronautics and Astronautics, and the Royal Aeronautical Society. He was the Secretary/Treasurer of the DFD in 1996-1997, served on the APS François Frenkiel Award Committee in 1998, 2000 and 2001, the last year as its Chair. He was Chair of the DFD External Affairs Committee, 1996-1997, a member of the DFD Executive Committee, 1993-1996, and a member of the 1989 Fluid Dynamics Prize Committee. He co-chaired the American Physical Society Division of Fluid Dynamics 51<sup>st</sup> Annual Meeting in 1998.

Statement: The primary duties of the DFD Executive Committee are to ensure the continued success of the Annual Meetings, and to administer the process for appointing Fellows and selecting the recipients for prizes and awards. As Vice Chair of the Executive Committee I intend to enhance the Committee's role by improving communication with the membership, to try to make the Committee more effective in considering educational and policy issues as related to fluid mechanics, and to improve the dialog between the Committee and funding agencies regarding new opportunities in research.

# Candidates for Executive Committee Member-at-Large

(who serve for three year terms).

#### Bob Behringer

Professor of Physics and Professor of Mechanical Engineering and Materials Science, Duke University

Bob Behringer is James B. Duke Professor of Physics and Professor of Mechanical Engineering and Materials Science at Duke University. His research interests cover nonlinear pattern forming systems such as Rayleigh-Benard convection, convection in porous media and Taylor-Couette flow. A second major focus is the behavior of granular materials. More recently, he has carried out experiments on thin films, and in the past on transport and other properties of liquid helium. He is a Fellow of the American Physical Society, via the DFD. He has served on the DFD Fellowship Committee, and is currently the vice-chair of the Topical Group on Statistical and Nonlinear Physics.

#### **Robert Ecke**

Laboratory Fellow in Condensed Matter & Thermal Physics, Los Alamos National Laboratory

Robert Ecke is a Laboratory Fellow at Los Alamos National Laboratory in Condensed Matter and Thermal Physics and a Fellow of the APS. He received his B.S. and Ph.D. degrees in Physics from the University of Washington. He was a Postdoctoral Fellow at Los Alamos working on thermal convection in helium mixtures including research on hydrodynamic stability, dynamical systems, and chaos. He became a Technical Staff Member in 1986, extending his work to rotating convection, material dissolution and compositional convection, turbulent boundary layers and heat transport scaling, spatio-temporal dynamics and pattern formation, 2D turbulence, and granular media. He is the author of over 70 publications in scientific journals. Ecke was awarded the Los Alamos Fellows Prize in 1991. His professional activities include the Local Organizing Committee ('93 DFD Annual Meeting), the DFD Nominating Committee, the DFD Fellowship Committee, Chair APS Group on Statistical and Nonlinear Physics, and the organization of many international conferences on fluid dynamics, nonlinear science, and soft condensed matter physics.

#### Ellen K. Longmire

Associate Professor of Aerospace Engineering and Mechanics, University of Minnesota

Ellen K. Longmire received an A.B. in physics from Princeton University in 1982. In the following year, she studied mechanical engineering at TU Braunschweig in Germany on a fellowship from the German Academic Exchange Service (DAAD). She received M.S. (1985) and Ph.D. (1990) degrees in mechanical engineering from Stanford University where she specialized in experimental fluid mechanics. Prior to receiving her Ph.D., she worked as an engineer at Hauni-Werke Koerber & Co in Germany and at Honeywell and SAIC in the U.S. Since November, 1990, she has taught and directed research at the University of Minnesota where she is currently Associate Professor in the Department of Aerospace Engineering and Mechanics. Professor Longmire's research interests include turbulent particle-laden flow, vortex dynamics, buoyancydriven flow, liquid/liquid flows with surface tension, and multiphase flows in MEMS. In 1994, Professor Longmire received the NSF National Young Investigator Award and the University of Minnesota McKnight Land-Grant Professorship. In 1998, she held the TEPCO Chair as a visiting professor at Keio University in Japan. She is a member of the American Physical Society, the American Institute of Aeronautics and Astronautics, and the American Society of Mechanical Engineers.

### Michael J. Miksis

Professor of Engineering Sciences and Applied Mathmatics, Northwestern University

Michael Miksis is a Professor of Engineering Sciences and Applied Mathematics at Northwestern University. He received his B.S. from Drexel University in 1976 and his Ph.D. from the Courant Institute of New York University in 1981. Following postdocs at Stanford University and the Courant Institute, he joined the faculty of Duke University in 1983. In 1985 he moved to Northwestern University.

Mike's research interests are primarily in interfacial flows. He has worked on the dynamics and stability of thin films with contact lines, with thermal gradients and with surface-active agents. He has studied the dynamics of bubbles and drops and has worked on the development of an effective media theory for bubbly fluids. Recently he has been developing computational methods to study complex interfacial flows with contact line motion. He also works on interfacial instability problems in materials science.

Mike is a Fellow of the American Physical Society. Currently he is an Associate Editor of the Journal of Fluid Mechanics, and he is on the editorial board of the SIAM Journal on Applied Mathematics.

# DFD 2002 ANNUAL MEETING DALLAS, TEXAS, NOVEMBER 24-26

The 2002 APS Division of Fluid Dynamics 55th Annual Meeting (DFD02) will be held in Dallas, Texas, November 24-26, 2002. Southern Methodist University and the University of Texas, Austin, will host the meeting. Professor Peter Raad is Chair of the Organizing Committee. The conference planning firm, *Meetings And More*, will perform most of the services needed for the meeting except for the technical program planning.

# 2002 MEETING SITE

The 2002 meeting will be held at the Wyndham Anatole Hotel. Located in the heart of the Dallas Market Center, adorned with antiques and art, the **Wyndham Anatole** is the largest convention hotel in the Southwest. Providing an elegant setting and superb service to conference participants, the hotel also boasts numerous restaurants, pools, shops, a seven-acre park, and a world-class health and fitness center. Downtown businesses, arts, nightlife, and shopping are all conveniently nearby.

For more information about the hotel, go to http:// www.wyndham.com.

## DALLAS, TEXAS

Dallas/Fort Worth has been ranked among the seven most livable urban complexes in the world - and fastest growing of the top 36 "most livable." Dallas was named the "Best City for Business" by Fortune Magazine in December of 1999. More information about tourist attractions can be obtained from the Dallas Visitors & Convention Bureau at http://www.VisitDallas.com. Restaurants, movies, and current events are available at http://www.guidelive.com.

#### View of Dallas Skyline



# Important Info

# DATES AND DEADLINES

| Abstract Submission                          | 8/02/02  |  |
|--|----------|--|
| Gallery of Fluid Motion Entry Forms          | 10/04/02 |  |
| Video Entries to the Gallery of Fluids 1     | 10/10/02 |  |
| Order Additional AV Equipment                | 10/11/02 |  |
| Hotel Reservation                            | 10/16/02 |  |
| Early Registration (lower rate)              |          |  |
| on or before                                 | 10/25/02 |  |
| Regular Registration (higer rate) 10/26-     | 11/08/02 |  |
| After November 8th you must register on-site |          |  |
| Pre-Registration Cancellation                | 11/08/02 |  |
|  |          |  |

# AUDI O- VI SUAL EQUI PMENT CONTRI BUTED SESSI ONS

The standard A-V package for contributed sessions consists of an overhead projector, VHS VCR and monitor, screen, laser pointer, and lapel microphone. Any other A-V equipment may be rented by the speaker directly through the Conference's designated A-V provider. The speaker is responsible for the cost of renting any additional equipment.

#### I NVI TED SESSI ONS

The standard package for invited sessions (scheduled in designated invited session rooms in which all speakers are invited speakers) consists of an overhead projector, VHS VCR and monitor, LCD projector, screen, laser pointer, and lapel microphone. Any additional A-V equipment may be rented by the speaker directly through the Conference's designated A-V provider. The speaker is responsible for the cost of renting any additional equipment.

# APS POLICIES & GUIDELINES ABOUT USE OF LCD PROJECTORS\*

The responsibility for a smooth, technically trouble-free presentation ultimately rests with the presenter.

•The APS strongly recommends that LCD projectors not be used for contributed talks (12 minute talks). The presentation schedule must be maintained, and, as is too often the case, the set-up of the laptop/projector can be problematic, using up valuable presentation time.

•Speakers choosing to use an LCD projector must do the following:

•Bring your own projector, laptop computer, power cord, and any proprietary cords required for your computer.

•Check-in at the Conference Registration Desk the day before your presentation.

•Test your equipment in the meeting room prior to your presentation.

•Bring a back-up vu-graph presentation in case there are set-up difficulties with the LCD equipment.

•Note: The APS/DFD is not responsible for the security of personal laptop computers.

# **EMPLOYMENT CENTER**

There will be an Employment Center located in the Exhibit Hall for the purpose of facilitating communication between attendees and prospective employers. There is no charge to employers or candidates who are paid conference registrants.

•Employers may provide job descriptions, which will then be posted for consideration by prospective candidates (i.e., those seeking employment). Employers may bring these descriptions to the meeting or provide them in advance. For the latter, please email Meetings And More (mtgs911@aol.com) by November 8, 2002.

•Candidates (i.e., those seeking employment) may either submit a resume for prospective employers to review or provide one when requesting an interview for one of the posted positions. Candidates must be registered participants at the meeting. For additional information or assistance, please contact: *Meetings And More*. <u>mtgs911@aol.com</u>

### Ехні ві тѕ

Do not miss this opportunity to reach over 1000 attendees of the APS/DFD Annual Meeting! For more information on exhibiting or sponsorship, please contact Meetings And More at (301) 229-1037 <u>mtgs911@aol.com</u>.

# CONTACT | NFORMATI ON

CONFERENCE WEBSITE: <u>HTTP: //www.engr.smu.edu/dfd2002</u>

#### **PROGRAM I NFORMATION:**

Professor Peter Raad Southern Methodist University Department of Mechanical Engineering P.O. Box 750309 Dallas, TX 75275-0309 Tel.: (214) 768-4278 Fax: (214) 768-9900 Email: <u>praad@mail.smu.edu</u>

# GENERAL MEETING & EXHIBITING INFORMATION:

#### **Meetings And More**

5257 River Road, PMB 905 Bethesda, MD 20816 Tel.: (301) 229-1037 Fax: (301) 229-0206 **Email:** <u>mtgs911@aol.com</u>

REGISTRATION INFORMATION AND Assistance:

#### **Meetings And More**

P.O. Box 83309 Gaithersburg, MD 20883 Tel: (301) 869-0968 Fax: (301) 869-1637 Email: <u>mtgs911@aol.com</u>

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# HOTEL

Wyndham Anatole Hotel 2201 Stemmons Freeway Dallas, TX 75207 Main Tel.: (214) 748-1200 Guest Fax: (214) 761-7520

## **TRANSPORTATI ON**

#### AI RLI NES

American Airlines is serving as the "official airline" of the APS/DFD 2002 meeting and is offering 5% and 10% savings depending on the type of airfare you purchase. For American Airlines reservations call 1-800-433-1790 from anywhere in the U.S. and Canada. Reference code 31N2AI (valid in the U.S. and Canada)

Southwest Airlines (flights arrive at Love Field Airport) is offering a 10% discount on most of its already low fares for air travel to and from the Conference. You or your travel agent may call Southwest Airlines Group and Meetings Reservations at 1-800-433-5368 and reference the assigned ID Code J6300. Reservations and Sales Agents are available 7:00a.m. – 8:00p.m. Monday-Friday, or 8:30a.m. – 5:30p.m. Saturday and Sunday, Central Standard Time. You must make reservations five or more days prior to travel to take advantage of this offer.

#### AI RPORTS

The **Dallas/Fort Worth International Airport (DFW)** is approximately 18 miles from either city, located equidistant between Dallas and Fort Worth. Normal drive time from many places in the Metroplex to the airport ranges from 30 to 45 minutes. The airport has one main road, International Parkway, which runs the length of DFW.

#### LOVE FIELD

This is a commuter airport approximately five miles from the hotel. Southwest Airlines offers many flights via Love Field.

#### **GROUND TRANSPORTATI ON**

| Taxi    | DFW          | \$36/one person; \$2 each additional |
|---------|--------------|--------------------------------------|
|         |              | person                               |
|         | Love Field   | \$12/one person; \$2 each additional |
|         |              | person                               |
| Shuttle | Shuttle ser  | vice is available from both          |
|         | airports thr | ough SuperShuttle. Infor             |
|         | mation will  | be included with registra            |
|         | tion confirm | nation, or call (817) 329-           |
|         | 2000 or (80  | 0) BLUE-VAN.                         |
|         |              |                                      |
|         |              |                                      |

# ABOUT THE PROGRAM

### SCIENTIFIC PROGRAM

This year's scientific program will include two honor lectures, eight invited lectures, contributed papers, exhibits, and the Gallery of Fluid Motion. The invited lectures are selected to illustrate the richness of topics, techniques and applications inherent in the study of fluid dynamics. More than 950 contributed abstracts, divided into 14 concurrent sessions, and are anticipated.

#### Awards Program

Each year the APS Division of Fluid Dynamics presents several awards: the Fluid Dynamics Prize, the Otto Laporte Award, the Francois Frenkiel Award, and the Andreas Acrivos Dissertation Award. Winners of these awards will be announced in the fall.

#### I NVI TED LECTURES

Arne Johansson, Royal Institute of Technology (KTH) Sandra M. Troian, Princeton University Michael P. Brenner, Harvard University Geoffrey R. Spedding, University of Southern California Eberhard Bodenschatz, Cornell University Victor Steinberg, Weizmann Institute Philip S. Marcus, University of California Berkeley Kenneth Breuer, Brown University

# ABSTRACT SUBMI SSI ON

#### POST-DEADLI NE SUBMI SSI ON

Abstracts received after the abstract deadline, Friday, August 2, and before Monday, September 23, will automatically be assigned to the post-deadline session. Abstracts will not be accepted after the post-deadline date of September 23. If you have questions regarding abstract submission, please send them to **abs-help@aps.org**.

**Sorting Categories** 

- 1. Turbulent boundary layers
- 2. Turbulent shear layers
- 3. Turbulent mixing
- 4. Compressible turbulent flows
- 5. Turbulence theory
- 6. Turbulence simulations
- 7. Turbulence modeling
- 8. Turbulence and instability control
- 9. Boundary layer instabilities
- 10. Jet and wake instabilities
- 11. Shear layer instabilities
- 12. Taylor-Couette instabilities
- 13. Rayleigh-Taylor instabilities
- 14. Interfacial and thin-film instabilities
- 15. General stability
- 16. Separated flows
- 17. Viscous flows
- 18. Flows in porous media
- 19. Surface tension effects
- 20. Drops and bubbles
- 21. Suspensions
- 22. Multiphase and particle-laden flows

# SPECIAL PROGRAMS

### GALLERY OF FLUID MOTION

GALLERY OF FLUID MOTION (to be reviewed by Jim) The 20th Annual Picture Gallery of Fluid Motion will be held as part of the Meeting. The Gallery consists of aesthetically pleasing, insightful displays of still pictures, computer graphics, and video clips submitted by attendees. Both computational and experimental fluid dynamics entries are encouraged. Poster and video entries must not duplicate one another. Outstanding entries, selected by a panel of referees for originality and ability to convey and exchange information, will be honored during the meeting. Entry forms must be received at the following address *no later than October 4, 2002.* Send to: Professor David Willis, SMU, Department of Mechanical Engineering, P.O. Box 0337, Dallas, Texas 75275-0337.

## POSTER ENTRI ES

**POSTER ENTRIES** In addition to photographs and/or graphics, poster entries should contain brief explanatory text and the names and affiliations of all authors. Multiple entries by the same authors must contain different artwork. Posters must be checked in at the Conference Registration Desk and set-up in the Gallery *no later than noon on Sunday, November 24, 2002.* One-half of an 8-foot long x 4-foot high poster board (4'x 4') and pushpins will be provided for each entry. Thus, for ease of set-up, entries should NOT be mounted on foam core. **Questions should be addressed to Professor Noel Clemens at clemens@mail.utexas.edu**.

# VIDEO ENTRIES

Video entries must be submitted in VHS format (1/2" NTSC; PAL is not acceptable) with a total running time of no more than three minutes. This time limit will be strictly enforced. Tapes should begin with a 20-second blank leader followed by the three-minute entry. Entries may be in color and with sound. Tapes must include titles and the names and affiliations of contributors. All entries will be copied onto a single VHS tape prior to the meeting and will be shown in continuous, posted order. All videotapes must be received *by October 10, 2002*. Send to: Professor David Willis, SMU, Department of Mechanical Engineering, P.O. Box 0337, Dallas, Texas 75275-0337. Questions can be addressed to Professor David Willis at dwillis@engr.smu.edu, or Professor Vladimir Ajaev at ajaev@mail.smu.edu.

# SOCIAL ACTIVIES

## CONFERENCE RECEPTION

The magnificent Morton H. Meyerson Symphony Center will serve as the venue for the Conference Reception on **Sunday, November 24, 2002**. The Center has joined the ranks of the world's great halls with its combination of extraordinary acoustics by Russell Johnson and distinguished architecture by I. M. Pei. Join us for this wonderful evening! Shuttle bus service will be provided.

# **REGI STRATI ON**

# **F**EES

The registration fee includes the Sunday evening reception and coffee breaks on Sunday, Monday, and Tuesday. It does not include meals or lodging. Breakfast and lunch will be available at the meeting site on a cashand-carry-out basis.

The fees are indicated in the Registration Form included in this announcement. Please note that there is a substantial discount for registering *on or before October 25, 2002* (Early Registration). We strongly recommend that you pre-register to obtain this savings and to avoid standing in long registration lines on-site.

# PAYMENTS

Registration payment may be made by credit card (Visa or MasterCard) or check drawn on a U.S bank. All payments must be made in U.S. dollars. Checks should be made payable to APS/DFD. We cannot assume fees for foreign bank transfers.

Forms received without payment will not be processed and therefore the registrant WILL NOT be registered for the conference.

#### ADDI TI ONAL I NFORMATI ON

•AIIREGISTRATION AND FEESREGISTRATION AND FEES1REGISTRATION AND FEES participants must be registered, and badges must be worn to gain entrance into all sessions and events.

•Students should be prepared to provide student identification at the time of registration to be granted student full registration prices.

# FOUR WAYS TO REGISTER:

Please refer to the conference site <u>http://</u> <u>www.engr.smu.edu/dfd2002</u> for registration instructions. The registration form included at the end of this newsletter is also available online at <u>http://www.aps.org/meet/DFD02/</u> <u>dfd02-reg.pdf</u>.

## **ONLI NE**

Online registratin is scheduled to open Aubust 20, 2002.

MAIL

APS/DFD '02 Meetings And More P.O. Box 83309 Gaithersburg, MD

# Fax

(301) 869-1637 (Credit Card Only)

## **E**XPRESS

Overnight services (such as Federal Express, UPS, DHL, etc.) will NOT deliver to a P.O. Box. When using one of these services, send to:

APS/DFD '02 c/o Meetings And More 5257 River Rd., PMB 905 Bethesda, MD 20816

# QUESTIONS ABOUT REGISTRATION?

Contact *Meetings And More*: Tel: (301) 869-0968; Email: mtgs911@aol.com

# ON-SITE REGISTRATION

**ON-SITE REGISTRATION HOURS**The registration desk will be open on **Saturday, November 23, 2002, at 6:00 pm** at the Wyndham Anatole Hotel where you will be able to pick up your badge and Bulletin if you have pre-registered, or register on-site if you have not.

# CANCELLATION POLICY

The registration fee, minus a \$50 processing fee, is refundable if written notice is received by Meetings And More *prior to November 8, 2002*. After this date, it is not refundable. The hosts are not responsible for any charges or cancellation fees assessed by airlines. Refunds will be issued 4-6 weeks after the meeting.

### AMERICANS WITH DISABILITIES ACT

APS/DFD wishes to take any steps required to ensure that no individual with a disability is excluded, denied services, segregated or otherwise treated differently due to the absence of auxiliary aids and services identified in the Americans with Disabilities Act. If any such services are necessary in order to participate in the APS/DFD 55th Annual Meeting, please communicate your needs to APS/ DFD (c/o Meetings And More, mtgs911@aol.com) in writing on or before October 28, 2002. APS/DFD cannot ensure the availability of appropriate accommodation without prior written notifeication of need. Questions? Please contact mtgs911@aol.com.

## HOUSI NG

The *Wyndham Anatole Hotel* has been selected as the conference hotel where all technical sessions will be held. Guest rooms at reduced rates have been set aside for attendees at this hotel from November 22-26, 2002.

All hotel reservations must be received **by October 16**, **2002**. After this date, attendees making reservations can expect to pay higher rates, if rooms are available.

#### Wyndham Anatole Hotel

Rates: \$119 + tax/ single or double \$149 for triple \$169 for quadruple Main telephone: (214) 748-1200

**To make your reservation** contact the hotel, identify yourself as an APS/DFD attendee, and obtain a confirmation number for the reservation. Reservations may be made by phone, fax, or online.

**Tel:** (214) 761-7500 or toll free: 1-800- 996-3426 **Fax:** (214) 761-7808

**Online:** <u>http://www.wyndham.com/</u> Go to the "Make a reservation" screen and put the Group ID 1122178k1 in the Group Box. This will bring up the group rate and availability.

A deposit of one night room and tax is required by credit card, check or money order. Credit cards will be charged on October 23, 2002. Hotel cancellations will be accepted up to 72 hours prior to arrival.

# COMMUNITY BASED REVIEW OF PHYSICS OF FLUIDS

The operations of each journal published by the **American Institute of Physics (AIP**) are routinely reviewed by committees representing the journals' respective communities. As part of these standard operations, a Review Committee consisting of members of the Physics of Fluids community is in the process of conducting a review of the journal. This committee is charged by the Executive Director of the AIP with conducting "an examination of the present characteristics of the journal, the effectiveness and efficiency of its operations, and its future development."The committee will thus review a range of aspects of the journal including:

- Subject area coverage (actual and potential)
- Manuscript selection
- Regular features such as Letters and the Gallery of Fluid Motion
- Operations of the Editorial Offices
- AIP Author Services
- Overall efficiency (in terms of publishing speed)

- Quality of print and online editions
- Development of new and/or enhanced electronic products and services
- Role of the Editorial Board

The review committee would also appreciate input from the journal's community. What is Physics of Fluids doing right? Where can improvements be made? How can the journal better serve the community? Please address any comments to me at the address given below.

#### Stephen B. Pope

Chair, Physics of Fluids Review Committee Mechanical and Aerospace Engineering Cornell University 240 Upson Hall Ithaca, New York, 14853-7501 Tel: (607) 255 4314 Fax: (607) 255 1222 e-mail: pope@mae.cornell.edu

# SHORT TAKES

Andreas (Andy) Acrivos was awarded the National Medal of Science by President Bush "for his contributions to the modern theory of fluid mechanics and convective heat and mass transfer." (see http:// www.whitehouse.gov/news/releases/2002/05/20020509 5.html)

Fluid Dynamicist elected this spring to the *National Academy of Sciences* were:

Brian J. Hoskins, Reading University (U.K.). "[He] has elucidated the dynamical mechanisms that determine the distinctive structure and evolution of extratropical storms, with their attendant surface and upper level fronts and severe weather. He has also provided a conceptual framework for understanding the profound influence of the EI Nigo phenomenon upon global weather and climate."

James C. McWilliams, National Center for Atmospheric Research and University of California, Los Angeles. "A world leader in the field of nonlinear fluid mechanics with special application to geophysical systems. His work on strong vortices, turbulence, the physics of the oceanic general circulation, and nonlinear instability theory has been foundational."

Anatol Roshko, California Institute of Technology. "Through critical experiments and original physical reasoning, Roshko developed novel models for vortex shredding from circular cylinders, produced spectacular evidence for organized coherent structures in turbulent flows, decisively altered accepted notions of the nature of turbulent mixing, and most recently proposed fundamentally new ideas on flow-induced vibrations."

David P. Ruelle, Institut des Hautes Etudes Scientifiques (France). "[He] is a founder of the modern mathematical formulation of statistical mechanics: he put the study of phase transitions into a rigorous framework. Ruelle is also a leading figure in the theory of dynamical systems and discovered deep connections between the onset of turbulence and the appearance of strange attractors." Sheldon Weinbaum, City Collegeof the City University of New York. "[He] and his collaborators developed many important new theories bioengineering, including the discovery of leaky junction pathways for low density lipoproteins in blood vessels, heat transfer in living tissues, the activation of bone cells by fluid shear stress, and the erythrocytes's gliding over glycocalyx in capillary blood vessels."

Fluid Dynamicist elected this spring to the *National Academy of Engineering* were:

Subrata K.Chakrabarti, Offshore Structure Analysis Inc.. "For major contributions to the field of hydrodynamics and fluid structure interaction in the design of harbor, coastal, and offshore structures."

Chung K. (Ed) Law, Princeton University. "For outstanding contributions to the understanding of the fundamentals of combustion processes and theory and the applications in propulsion systems."

Norbert Peters, Stanford University. "For contributions to the field of combustion modeling of turbulent flames and the development of chemical kinetic mechanisms for hydrocarbon oxidation."

William A. Sirigano, University of California, Irvine. "For contributions to the science and technology of spray combustion systems for propulsion.

## **ANNOUNCEMENTS**

The David Crighton Memorial Concert CD is still available. Information can be found at <u>http://</u><u>www.atm.damtp.cam.ac.uk/people/mem/crighton.html</u>. It can be ordered by phone at the Cambridge University Bookshop: 44-1223-333333 using credit cards in many currencies.

The 5th Euromech Fluid Mechanics Conference will be held in Toulouse, France; August 24-28. Contact Jacques Magnaudet for more information (<u>magnau@imft.fr</u>)

The website for the conference is: <u>http://www.imft.fr/</u> efmc2003/info.html.

# APS/DFD 2002 Committee Membership

#### CHAIR:

Stanley A. Berger Dept. of Mech. Engr. University of California Berkeley, CA 94720-1740 Phone: (510) 642-5950 E-mail: saberger@me.berkeley.edu

#### CHAIR-ELECT:

Fazle Hussain Dept. of Mech. Engr. University of Houston 4800 Calhoun Road Houston TX 77204-4792 Phone: (713) 743 4545 E-mail: FHussain@UH.EDU

#### VICE-CHAIR:

James Wallace Dept. of Mech. Engr Univ. of Maryland College Park, MD 20742 Phone: (301)405-5271 Fax: (617)495-9837 E-mail: wallace@eng.umd.edu

#### **SECRETARY-TREASURER:**

Howard A Stone Division of Engineering & Applied Sciences Harvard University Pierce Hall Cambridge, MA 02138 Phone: (617)495-3599 Fax: (617)495-9837 E-mail: has@deas.harvard.edu

#### **PAST CHAIR:**

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