

Check out PAGE 5 for an exciting new presentation modality starting this year!



DFD2019 SEATTLE
 72nd Annual Meeting of the American Physical Society
 Division of Fluid Dynamics
 November 23-26, 2019

**Seattle, WA
 November 23-26, 2019**

The 72nd Annual Meeting of the American Physical Society's Division of Fluid Dynamics (DFD) will be held in Seattle, WA on November 23-26, 2019. The meeting is being hosted by the University of Washington, the University of Washington – Applied Physics Lab, Northwest Research Associates, Oregon State University, Portland State University, Saint Martin's University, the University of British Columbia, the University of Idaho.

Meeting Venue

Seattle, a city on Puget Sound in the Pacific Northwest, is surrounded by water, mountains, evergreen forests, and contains thousands of acres of parkland. Known as a port city, Seattle is Washington State's biggest city, with the largest per capita share of technology-dependent jobs than any other US state as it is the headquarters to both Microsoft and Amazon. The futuristic Space Needle, a 1962 World's Fair

Annual Meeting will start on Saturday, November 23rd

For the first time in the history of the APS-DFD Annual Meeting, this year's scientific sessions will start on **Saturday, November 23rd at 3 pm**. This is to allow for an early finish of the meeting at, or shortly after, noon on Tuesday, November 26th.

The parallel sessions that would have traditionally been scheduled on Tuesday afternoon will be scheduled on Saturday late afternoon, allowing more flexibility for travel to Seattle from Asia, Europe and the East Coast.

We anticipate that most APS-DFD attendees will be able to arrive in Seattle on Saturday morning or early afternoon and have time to go from the airport to the hotel, have some time to freshen up and walk to the convention center for registration and start of the Saturday sessions. If attendees prefer to arrive on Friday, November 22nd, the APS-DFD rooms block will be available at most area hotels.

The APS-DFD organizers expect that attendance will be much better for the Saturday afternoon sessions that would have previously been on Tuesday afternoon. We do not want to put the meeting attendees in the difficult spot of having to decide between attending a significant part of the scientific program on Tuesday or leaving town early to avoid being in an airport on Wednesday, the busiest day of air travel in the US.

Registration and the speaker ready room will be open early in the morning on Saturday, November 23rd, to welcome all attendees on the first day of the meeting. Exhibits will open on Sunday morning and will close on Tuesday morning, as usual.

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The articles in this issue represent the views of the Division of Fluid Dynamics (DFD) Publication Committee and are not necessarily those of individual DFD members or the APS.

legacy, is its most iconic landmark. Seattle has more than 13 James Beard award winning chefs. It is the second largest wine grape-producing region in the US and is a leading city in the handcrafted beer renaissance. Seattle is the nation's model city for recycling, it is one of six cities in the US with a major symphony, opera and ballet.

Located in the heart of downtown, the Washington State Convention Center will host the 72nd Annual Meeting of the Division of Fluid Dynamics and is walking distance from the waterfront as well as many shops and restaurants.

Hotel Accommodations

Detailed Hotel information is available through the meeting web site:

<http://apsdfd2019.org/hotels>

The APS DFD Housing team will start accepting hotel reservations on Monday **June 17th**. All hotels are in walking distance to the Washington State Convention Center in the heart of downtown Seattle.

In order to keep conference registration affordable it is **crucial** participants stay at one of the hotels listed below and book through our housing website.

Rates are per night and do NOT include 15.6% + \$2 lodging tax & fee per night; all rates include complimentary internet in sleeping rooms.

- You can book, modify or cancel your hotel reservation anytime using the APS-DFD housing website.
- A valid credit card is needed to guarantee your reservation (no deposit will be charged at time of booking).
- Deadline for Reservations: the discounted hotel rates are available until **October 21st or until the room blocks at the conference hotels are sold out**.
- Cancellation: reservations need to be cancelled 72 hours prior to arrival to avoid a cancellation fee equal to one night room and tax (15.6% + \$2).
- All hotels are non-smoking.

How to Make a Hotel Reservation

You may make a reservation at any of the contracted hotels by going to our housing website **on or after June 17, 2019**.

<http://www.apsdfd2019.org/hotels>

Or by contacting:

APS DFD Housing Bureau

Toll Free: 1-877-226-1859

Email: apsdfd2019@apshousing.com

Hours: Monday - Friday from 8:30am to 5:00pm PT

Hotel Rates and Distance From The Convention Center

Hotel	Rates			Number of Blocks to Convention Center
	Single or Double (1-2 people)	Triple (3 people)	Quad (4 people)	
Sheraton Grand Hotel Seattle (Headquarters Hotel)	\$189	\$209	\$229	Connected
Grand Hyatt Seattle	\$169	\$194	\$219	0.5
Hilton Seattle	\$174	\$194	\$194	1.0
Homewood Suites by Hilton (Rate includes breakfast)	\$149	\$159	\$169	1.0
Hotel Max	\$129	\$149	\$169	3.5
Hotel Theodore	\$149	\$169	\$189	1.0
Hyatt Olive 8	\$169	\$179	\$189	1.5
Paramount	\$169	\$189	\$189	1.0

Registration

Registration Opens Early June

Please visit the meeting website to register for the 2019 APS-DFD Meeting:

<http://apsdfd2019.org/registration>

Student Registrants

APS student members may register for the meeting online at a discounted member rate by clicking “Member Registration”. If you are not an APS member, you can JOIN NOW and then register online to receive discounted student rates. If you do not wish to become an APS member, you must pay non-member rates.

First year membership is free for first time students and includes (2) free Divisions or Topical Groups for all students.

Undergraduate registrations do not include a ticket to the Sunday night reception. Reception tickets may be purchased for \$115.

International Registrants

All international attendees will automatically receive a letter of invitation at the time of registration. If you need one PRIOR to registering please go to the meeting website <http://www.apsdfd2019.org/letter-of-invitation> and follow the instructions. Please note it takes 3-5 days to process.

If you are not able to register on-line, fax your registration to: 801-355-0250.

Registration Type	Received on/before 9/19	Received between 9/20 - 10/24	Received between 10/25 - 11/26
Member	\$500	\$570	\$750
Reciprocal Society Member	\$500	\$570	\$750
Retired Member (with APS Senior Membership)	\$290	\$310	\$400
Graduate Student Member**	\$275	\$295	\$400
Undergraduate**	\$120	\$120	\$175
Non-Member	\$755	\$825	\$900
Additional Reception Ticket	\$115	\$115	\$115



Seattle Space Needle

Key Dates

Registration Deadlines

Early Registration Rate

on or before Sept 19, 2019

Regular Registration Rate

Sept 20 – Oct 24, 2019

On-Site Registration Rate

Oct 25 – Nov 26, 2019

Cancellation Deadline

(no registration refunds past this date)
Nov 8, 2019

Hotel Reduced Rate Ends

Oct 21, 2019 or earlier if block sells out

Abstract Submission Deadline

Aug 1, 2019

Travel Grant Application Deadline

Aug 1, 2019, 5:00 PM EDT

Child Care Grant Application Deadline

Aug 1, 2019, 5:00 PM EDT

Gallery of Fluid Motion (GFM)

GFM Poster and Video Submission

Entries Must be Made by Sep 16, 2019

Video Uploading Deadline

Oct 7, 2019

GFM Poster

Upload poster by Oct 7, 2019 and bring poster to meeting

Message from Charles Meneveau, 2018-19 Chair of the APS Division of Fluid Dynamics



Welcome to the Spring 2019 Division of Fluid Dynamics newsletter. I am grateful for the opportunity to share with you some thoughts about the division, its place within APS, and some issues of current interest.

Our yearly November meeting is the DFD's flagship activity. In this newsletter you will find highlights of the DFD's 71st meeting in Atlanta (GA), which was a great success. The reasons why fluid dynamics is such an exciting discipline and branch of physics were on full display at the meeting: a tremendous variety of applications across many fields, beautiful theoretical and mathematical constructions, great visualizations to provide tangible insights, and results of direct relevance to many contemporary grand challenges. In this newsletter you will also find useful information about our next meeting, to take place this November in Seattle (WA). Over the next few months, please be on the lookout for APS-DFD email announcements regarding the meeting in general as well as about some new additions to the meeting structure and novel modalities for presentations, including a new short talk and poster presentation option as well as a mid-afternoon Saturday start of the meeting.

This year, the DFD Executive Committee has been working on bringing our bylaws up to date. There will be a consultation with membership later this year to vote on the proposed changes. Please look out for emails about this process, which will be combined with the voting of the next slate of elected DFD officers (Vice Chair and two Members-at-Large).

In its role as one of the Nation's leading learned societies, the APS has continued its active role in speaking to lawmakers regarding many issues of great interest to us, issues such as research funding, graduate student visas, sexual harassment policies, science infrastructure, climate and energy, and STEM education. I encourage you to peruse <https://www.aps.org/policy>, and also to be on the lookout for emailed appeals from APS to contact lawmakers in a coordinated and effective manner.

A current issue of great importance to us is the business of scientific publishing and the critical role the learned societies such as APS play in the process. There are profound transformations taking place with potential to improve, or worsen, the current situation. The questions run deep. They deal with quality of refereeing, at what stage the cost of publishing is covered and by whom, the long-term maintenance of access to archival journals, new modes of information transmittal in this age of multi- and social media, etc. I encourage you to become informed about these important issues and to participate in the discussions and decision-making, keeping in mind the crucial role the APS and other learned societies play in the process. A thoughtful analysis can be found in a recent piece by N.A.S. president Dr. Marcia McNutt in P.N.A.S. (<https://www.pnas.org/content/116/7/2400>).

This year's deadlines for award nominations have passed, but it is never too early to start planning for next year. One of the most valuable contributions you can make to the DFD is to nominate deserving colleagues for APS-DFD prizes and awards, for APS Fellowship, for elected positions, propose invited speakers for our meeting, and organize mini-symposia and focus sessions. If you attend the APS March meeting, there too is ample opportunity to organize special sessions. When nominating, please keep in mind that recognizing diversity in its many dimensions is a crucial part of the process.

In closing, I would like to express gratitude to those who contribute to the well-being and vibrancy of our division and APS. Many members serve on the various DFD committees, are elected officers, are past, present and future Annual Meeting organizers, serve as journal referees and editors, or have put in the necessary work to prepare strong nominations. They deserve our thanks. Such commitment is absolutely necessary to ensure a vibrant, intellectually healthy and well-organized community.

Scientific Program

The scientific program will include four award lectures, along with twelve invited lectures, numerous focus sessions, and a series of minisymposia. This year will also inaugurate an exciting new presentation modality, **Flash Presentations (see right for details)**, in addition to the usual oral contributed, technical poster, and student poster competition sessions, as well as the Gallery of Fluid Motion. We anticipate receiving more than 3,000 contributed abstracts in 2019!

Awards Program

Each year the APS Division of Fluid Dynamics presents the Fluid Dynamics Prize, the Francois N. Frenkiel Award, the Andreas Acrivos Dissertation Award, and the Stanley Corrsin Award. The 2019 award winners, each of whom will give a lecture at the meeting, will be announced in the Fall.

Invited Lectures, Minisymposia, and Focus Sessions

New for 2019, there will be twelve invited lectures on topics of broad interest to the DFD community given by experts in each field. The program will also include Minisymposia and Focus Sessions dealing with exciting current research.

Poster Session

The Meeting will have one poster session on Monday afternoon, which will take place in the Exhibit Hall and will host Technical posters, Student Competition posters, and Flash Presenter posters.

The Technical Poster session will remain unchanged from previous years. Abstracts submitted as posters will still be presented as posters, and will not be considered for a Flash Presentation.

The Student Poster Competition is also unchanged. Student posters will still be judged and awarded 1st and 2nd Prize for “Best Poster” in several categories. First and second place winners in each category will receive cash awards and certificates. Awardees will also be highlighted in the DFD Newsletter. The Student Poster Competition constitutes a specific opportunity for graduate and undergraduate students to enhance their presentation skills and to build their professional network.

To be considered for the Student Poster Competition, be sure to submit your poster to the sorting category titled “Fluid Dynamics - Student Poster Competition”. Posters submitted to any other category will not be included in the competition.

Flash Presentations for DFD 2019 Meeting

This year’s DFD meeting will pioneer Flash Presentations as a new presentation modality. Thus, submissions for Oral Presentations will fall along two choices:

- The traditional 12-minute presentation, or
- be considered for a 1-minute oral “Flash Presentation” with an accompanying poster presentation. Note that this option is only available for Oral submissions. Abstracts submitted as Poster will not be eligible for Flash Presentations.

The Flash Presentation sessions will take place on Monday afternoon in parallel in the three large invited session rooms. Each will consist of approximately 90 1-minute presentations, with each presenter having a single Powerpoint slide, submitted in advance of the meeting, summarizing their work. To maximize the audience of these presentations, the sessions will be the only sessions scheduled for this time.

These sessions will be immediately followed by the poster session in the Exhibit Hall, where presenters can continue in-depth discussion of their work at their poster.

To be considered for a Flash Presentation, the submitter will check a box during submission of their oral abstract. If this box is not checked, then the abstract will be assigned a traditional Oral 12-minute presentation and not be considered for a Flash Presentation. A committee will review the submissions, and the top 270 will be placed into the Flash Presentation sessions. All other abstracts will be assigned to a traditional session in accordance with APS guidelines.

New Abstract Handling Software for DFD 2019 Meeting

In 2018 APS used a new abstract submission system for several meetings, including DFD18. While the DFD18 Meeting was highly successful, the new system did not meet expectations for the submission and sorting processes. For 2019 we will be returning to the original APS submission system.

All APS abstract submission policies (see below) remain unchanged.

There are a few differences between the 2018 system and the APS system to keep in mind:

- You will have full LaTeX compatibility for your abstract submission. The system used in 2018 was HTML-based, and resulted in some issues for LaTeX users.
- You cannot save a draft of your abstract and finish it later. The 2018 system allowed users to start a draft and finish it at a later time. The APS system does not allow this. If you need to change something on your abstract, withdraw your original submission and submit a new abstract with the corrections by the submission deadline.
- The first author will be considered the presenter. In the 2018 system you could list the authors in any order you wanted, and then select the presenting author. In the APS system you may not select a presenter; the first author will always be considered the presenter.

APS Policy

Authors of contributed abstracts are limited to one abstract (oral or poster) as first author.

The first author should always be the presenting author.

If more than one contributed abstract is submitted with the same first author, one abstract will be placed in a regular session and other abstracts may be rejected at the organizers' discretion.

Invited speakers may submit one contributed abstract as first author in addition to their invited abstract.

Abstracts in the education categories do not count against the one abstract limit.

Speakers in minisymposia or focus sessions may not submit contributed abstracts as first author in addition to their minisymposium or focus session abstract.

To Submit an Abstract, You Need:

Names, affiliations, and emails of all authors. First author is presenter.

Abstract content, 1300 characters maximum.

Gallery of Fluid Motion

The 38th Annual Gallery of Fluid Motion will be held as part of the meeting. The Gallery consists of posters or videos submitted by attendees illustrating the science—and very often also the beauty—of fluid motion. Both computational and experimental entries are encouraged. Poster and video entries must not duplicate one another. Outstanding posters, selected by a panel of referees, will be recognized during the meeting, will be displayed at the Annual APS meeting in March, 2020 and will appear in the September 2020 issue of the *Physical Review Fluids*. Please note that the videos will be accessible on-line at gfm.aps.org.

New this year, posters submitted to the Gallery must be uploaded prior to the meeting and also brought to the meeting to hang in the exhibit hall.

Travel Grants, Child Care Grants and Grants for Participants with Disabilities

In 2014 the APS-DFD External Affairs Committee instituted a new category of enabling travel grants for the DFD meeting, designed to provide full support for attendance for a select few scientist (all researchers are eligible). Priority will be given to researchers who would not otherwise be able to attend the meeting, for whom the meeting comes at a timely point in their career and who have not previously attended a DFD meeting (applicants should address these points in their application). Applications must be received by August 1, 2019 at 5:00 pm EDT. Further details can be found on the conference website under Travel Awards.

DFD has also initiated a special child care grant program designed to provide financial assistance to APS/DFD members who will have additional child care expenses in order to attend and participate in the annual November meeting. The deadline is August 1, 2019. More details can be found under Child Care Grants.

Additionally, DFD has initiated a pilot program of grants to assist conference participants with disabilities. The program is designed to provide financial assistance and help offset costs for members attending the meeting who will incur additional expenses due to a disability.

Audiovisual Equipment

All rooms will be equipped with an LCD projector, screen, microphone, and pointer. Speakers must provide their own laptop computer to use with the projector. A speaker ready room with technicians will be available to help attendees ensure that their presentations work smoothly with the LCD projection equipment. We suggest all presenters visit the speaker ready room in advance of their presentation.

Meeting room projectors will have 1920 by 1200 resolution. Please set your laptop resolutions to 1920 by 1200 (16×10 format). Your images will not display properly if your laptop resolution is higher than the projector's. The projectors are capable of supporting presentations at a lower resolution including presentations in a 4×3 format.

Animations and equations in PowerPoint are not necessarily compatible across different versions. If you load your presentation on to a different computer, please check that it displays correctly.

Exhibitor and Sponsorship Opportunities

Exhibits will be centrally located in the Exhibit Hall 4ABCD of the Washington State Convention Center.

For more information on exhibits or sponsorship, please email Margaret McDonald at:

margaret2@meetingsandmore.net

Conference Reception

Museum of Flight

Enjoy the wonder of flight in one of Seattle's most spectacular settings, the Museum of Flight. This world-renowned museum offers over 160 airplanes and spacecraft, the original Boeing Aircraft factory, flight simulators, and dozens of fun, interactive exhibits. The Museum is a sprawling campus with six buildings. The "Great Gallery" is a breathtaking, 6-story glass building with 43 aircrafts from the 1920s to the present, including a rare M-21 Blackbird spy plane and jet fighters from the Korean and Vietnam wars.

The original Boeing airplane factory is a walk through Boeing history; while in the next building visitors can experience the planes and touching stories of World Wars I and II in dramatic galleries housing 28 fighter planes and rare personal artifacts.

The West Campus is a voyage to the space shuttle era, the current space age and the evolution of large aircraft. The Space Gallery is the permanent home to NASA's Space Shuttle Trainer, used by every shuttle astronaut. Outside is the 19-plane Aviation Pavilion with large military and civilian planes from the 1930s to the present. There visitors can stroll through a Concorde jetliner, the first 747 and the first Air Force One jet.

This is truly an amazing venue for the 2019 APS-DFD Reception and a great way to catch up with others in the field and make new connections.

The reception is included in the registration fee for those who register as APS Members, Nonmembers, Graduate Students, and Retired Members. Undergraduate students and guests may purchase tickets for \$115. Transportation will be provided from downtown to the Museum of Flight. Details will be provided at the conference.

Meeting Co-Chairs

Alberto Aliseda

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Dana Dabiri

University of Washington
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Abstract Submissions

Eric Barth

Scientific Program Coordinator
American Physical Society
Phone: (301) 209-3285
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Registration

Phone: 1 (800) 217-0002
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Exhibitor Information and Website Updates

Margaret McDonald

Meetings and More
Phone: (240) 355-5608
margaret2@meetingsandmore.net

Hotel Reservations

Phone: 1 (877) 226-1859
apsdfd2019@apshousing.com

General Meeting Questions

Monica Malouf

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Peggy Holland

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peggy@meetingsandmore.net

Future APS/DFD Meetings

2020: Chicago, IL

Jonathan Freund, Meeting Chair
University of Illinois Urbana-Champaign

2021: Phoenix, AZ

Marcus Herrmann, Meeting Chair
Arizona State University

2022: Indianapolis, IN

Luciano Castillo, Meeting Chair
Purdue University

2023: Washington, DC

Kenneth Kiger, Meeting Co-Chair
University of Maryland
Michael Plesniak, Meeting Co-Chair
George Washington University

APS-DFD 2018 Awards, Prizes, New Fellows, and Gallery Winners

**2018 Fluid Dynamics Prize**

Keith Moffatt, University of Cambridge, is the recipient of the 2018 Fluid Dynamics Prize, which recognizes major contributions to fundamental fluid dynamics made during a career of outstanding work. The citation reads, "For profound, elegant, and lasting contributions to fluid mechanics, including turbulence, Stokes flows, topological fluid mechanics, interfacial flows, and self-similarity."

**2018 Stanley Corrsin Award**

Anette "Peko" Hosoi, Massachusetts Institute of Technology, is the eighth recipient of the Stanley Corrsin Award which "recognizes and encourages a particularly influential contribution to fundamental fluid dynamics." The citation reads: "For creative analysis of locomotion, contributions to the development of soft robotics as an emerging field, and her ability to combine mathematical analysis with physical insight."

The Stanley Corrsin Award is supported by an endowment fund contributed by the Division of Fluid Dynamics and held by the APS.

**2018 Andreas Acrivos Dissertation Award**

Shabnam Raayai, Massachusetts Institute of Technology, was the recipient of the 2018 Andreas Acrivos Award for the Massachusetts Institute of Technology doctoral thesis titled: *Geometry mediated drag reduction using riblets and Stream-wise surface textures.*

**2018 François N. Frenkiel Award**

Alberto Villois, University of Bath, **Giorgio Krstulovic**, Université Côte d'Azur, and **Daive Proment**, University of East Anglia were the recipients of the 2018 François N. Frenkiel Award for the paper titled: *Universal and nonuniversal aspects of vortex reconnections in superfluids*, *Phys. Rev. Fluids* 2 (2017), 044701



The award is given in recognition of significant contributions to fluid mechanics by young investigators. The award, which is sponsored by the Division of Fluid Dynamics, is given in honor of a paper published in the *Physical Review Fluids*.

**2018 Elected APS-DFD Fellows**

Each year the number of new Fellows is limited to be not more than 1/2 of 1% of the membership. Congratulations to the following 2018 Fellows:

**Neil Balmforth**
University of British Columbia

For fundamental contributions to astrophysical fluid dynamics, dynamical systems, geophysical fluid dynamics, non-Newtonian fluid dynamics, and granular flow.



Martin Bazant
Massachusetts Institute of Technology

For seminal contributions to electrokinetics and electrochemical physics, and their links to fluid dynamics, notably theories of diffuse-charge dynamics, induced-charge electro-osmosis, and electrochemical phase separation.



Claudia Cenedese
Woods Hole Oceanographic Institution

For fundamental contributions to the understanding of fluid-dynamical processes in the world's oceans, particularly turbulent entrainment into overflows and the melting of glaciers and icebergs, obtained through elegant and physically insightful laboratory experiments.



Jacqueline Chen
Sandia National Laboratories

For fundamental insights into turbulence-chemistry interactions revealed through massively parallel direct numerical simulations.



Lisa Fauci
Tulane University

For pioneering work in using modeling and simulation to understand the basic biophysics of organismal locomotion and reproductive fluid dynamics, and for her emphasis on the integrated study of stroke, form, and flow.



Mimi Koehl
University of California Berkeley

For pioneering work in ecological biofluid dynamics, seminal laboratory and field studies of how organisms locomote, feed, and withstand flow forces in turbulent ambient winds, water currents and waves, and for innovative studies of the hydrodynamics of olfaction around antennae by crustaceans.



Clancy Rowley
Princeton University

For inventive and rigorous analysis and model reduction of fluid systems.



David Saintillan
University of California San Diego

For incisive analysis of suspension dynamics involving complex and active particles and including electrokinetic effects.

The 2018 Gallery of Fluid Motion and the Milton Van Dyke Award Winners

As has long been the tradition, the best posters and videos are chosen amongst the entries at the meeting each year. The top three from each category are awarded the Milton Van Dyke Award for fluid flow visualization. The posters and videos can be viewed at gfm.aps.org.

2018 Milton Van Dyke Award (Posters)

P0045: Viscoelastic fishbones

Bavand Keshavarz, Michela Geri, Gareth McKinley, Massachusetts Institute of Technology

P0020: Effect of a wall on three-dimensionally unstable trailing vortices from a delta wing

Sarah Morris, C. H. K. Williamson, Cornell University

P0002: Whiskey webs: Microscale “fingerprints” of bourbon whiskey

Stuart Williams, Martin Brown, Adam Carrithers, University of Louisville

2018 Gallery of Fluid Motion Award (Poster)

P0056: Liquid deposition through evaporation

Asher Mouat, Clay Wood, Justin Pye, Justin Burton, Emory University

P0004: Painting fluid motion using convolutional neural networks

Maxime Bassenne, Andrew Banko, Sadaf Sobhani, Stanford University

2018 Milton Van Dyke Award (Video)

V0054: The shaky life of a water drop in an anise oil-rich environment

Oscar Enriquez, Universidad Carlos III de Madrid; Daniel Robles, Universidad Nacional Autónoma de México; Pablo Peñas-López, Javier Rodríguez-Rodríguez, Universidad Carlos III de Madrid

V0018: Premixed-flame oscillations in narrow channels

Daniel Martínez-Ruiz, Universidad Politécnica de Madrid; Fernando Veiga-López, Mario Sánchez Sanz, Universidad Carlos III de Madrid

V0070: Dripping down the rivulet

Gaétan Lerisson, Gioele Balestra, Pier-Giuseppe Ledda, François Gallaire, LFMI - EPFL

2018 Gallery of Fluid Motion Award (Video)

V0097: Hoverdrops: Flying fizzy drops

Divya Panchanathan, Philippe Bourrienne, Massachusetts Institute of Technology; Phillippe Nicollier, ETH Zurich; Abhijatmedhi Chotrattanapituk, Kripa Varanasi, Gareth McKinley, Massachusetts Institute of Technology

V0057: The surfactant-free persistence of surface bubbles in a volatile liquid

Mark Menesses, Boston University; Matthieu Roché, Laurent Royon, CNRS UMR 7057 - Université Paris Diderot; James Bird, Boston University

V0032: Nitrogen swirl: Creating rotating polygons in a boiling liquid

Alexis Duchesne, Tomas Bohr, Technical University of Denmark; Laust Tophoj, Naestved Gymnasium, Naestved; Barbara Bohr, Asger Rymsgade, Copenhagen Denmark

V0027: The birth of a microbubble in breaking waves

Wai Hong, Ronald Chan, Shahab Mirjalili, Suhas S Jain, Javier Urzay, Ali Mani, Parviz Moin, Stanford University

Student Poster Competition Award Winners

The Student Poster Competition is an opportunity for undergraduate and graduate students to refine their presentation skills and network. Awards were presented for 1st and 2nd place in two categories. Congratulations to the following:

Computational

1st prize: Keisuke Yamamoto, Katsuyuki Nakayama Relationships between development/decay of a vortex and its topology in different flow scales in an isotropic homogeneous turbulence.

2nd prize: Kotaro Nakamura, Yuji Tasaka, Yuichi Murai Creations of a turbulent puff in a pipe flow with dilute microbubbles.

Experimental

1st prize: Kyle Johnson, Brian Thurow, Kevin Wabick, James Buchholz, Randall Berdon Vortex Topology of rolling and pitching wings.

2nd prize: Ketaki Joshi, David Schaffer, Paul Chiarot, Peter Huang

Transport of interstitial fluid in the brain



Additional Highlights of the 71st Annual DFD Meeting in Atlanta, GA

The 2018 DFD meeting was held in November at the Georgia World Congress Center in Atlanta, GA. The meeting had nearly 2760 contributed papers in up to 39 parallel sessions and 134 entries to the Gallery of Fluid Motion. There were 139 technical posters and 35 student posters submitted from around the world.

In addition to the contributed abstracts, there were 4 award lectures **See page 8 for 2018 award winners** and 8 invited talks, 2 minisymposia and 7 focus sessions. The Division would like to thank P.K Yeung and Donald Webster from the Georgia Institute of Technology for chairing the event and for the following sponsoring universities: Georgia Institute of Technology, Auburn University, Clemson University, Emory University, University of Alabama at Birmingham, University of Georgia and Vanderbilt University.

2018 Invited Talks

Itai Cohen, Cornell University

Flight of the Fruit Fly

Dennice F. Gayme, Johns Hopkins University

Towards Control Oriented Models of Wall-bounded Turbulence

Matthew Juniper, University of Cambridge

Extreme Sensitivity in Thermoacoustics

Marcus Hultmark, Princeton University

Wind Energy: The Pressure is On

**Ana M. Mancho, Instituto de Ciencias Matemáticas.
Consejo Superior de Investigaciones Científicas**

Revealing Lagrangian Pathways for Transport in a Turbulent Ocean

**Joseph James Niemela, International Center for
Theoretical Physics, Trieste, Italy**

Revisiting Turbulent Convection

Sandra Troian, California Institute of Technology

MicroAngelo Technique: 3D Sculpting of Nanofilms by Spatiotemporal Modulation of Thermocapillary Forces

**Roberto Zenit, Universidad Nacional Autónoma de
México**

Fluid Mechanics of Modern Artistic Painting

Roseanna Zia, Stanford University

The Hydrodynamics of Intracellular Macromolecular Motion

2018 Minisymposia

Introduction to Topics in Fluid Dynamics

Prediction of Highly Turbulent Premixed Combustion in LES Framework

2018 Focus Sessions

(10 focus session on 7 topics)

The Physics of Microscale Fluid Structure Interactions: Fully Coupled Flow and Deformation Mechanics I & II

Hydrodynamics of Particles and Macromolecules at Fluid Interfaces I & II

Fluid Dynamics of Atmospheric and Oceanic Extreme Events

Supericephobic Surfaces

Flow Past Passive Hairy Surfaces

From Single Swimmers to Swarms: Active Matter in Fluids at Intermediate Reynolds Numbers

Complex Fluid Flows Through Porous Media I & II

APS-DFD 2018-2019 Leadership & Contact Information

DFD members are invited to contact the DFD Leadership with suggestions and concerns.

EXECUTIVE COMMITTEE

Chair:

Charles Meneveau
(11/18 - 10/19)
Johns Hopkins Univ

Chair-Elect:

Minami Yoda
(11/18 - 10/19)
Georgia Inst of Tech

Vice-Chair:

Shelley Anna
(11/18 - 10/19)
Carnegie Mellon Univ

Past Chair:

Eckart Meiburg
(11/18 - 10/19)
Univ of California, Santa Barbara

Councillor:

Howard Stone
(01/19 - 12/22)
Princeton Univ

Secretary/Treasurer:

Jeffrey Morris
(11/18 - 10/21)
The City College of New York

Member-at-Large:

Jeff Eldredge
(11/16 - 10/19)
Univ of California, Los Angeles

Member-at-Large:

Katherine Prestridge
(11/16 - 10/19)
Los Alamos Natl Lab

Member-at-Large:

David Saintillan
(11/17 - 10/20)
Univ of California - San Diego

Member-at-Large:

Sarah Waters
(11/17 - 10/20)
Univ of Oxford

Member-at-Large:

Emilie Dressaire
(11/18 - 10/21)
Laboratoire de Physique Statistique

Member-at-Large:

Petia Vlahovska
(11/18 - 10/21)
Northwestern Univ

COMMITTEES

NOMINATING

COMMITTEE
8 MEMBERS, STAGGERED
2-YEAR TERMS

Elisabeth Guazzelli
(12/19)
Chair

Mike Plesniak
(12/20)
Vice-Chair

Paolo Luzzatto-Fegiz
(12/19)

Anne Juel
(12/19)

Anne De Wit
(12/19)

Gareth McKinley
(12/20)

Carlos Hidrovo
(12/20)

Pavlos Vlachos
(12/20)

PROGRAM COMMITTEE
8 MEMBERS, STAGGERED
3-YEAR TERMS

Minami Yoda
(12/19)
Chair

Shelley Anna
(12/19)
Vice-Chair

Rui Ni
(12/20)

Dennice Gayme
(12/20)

Jean Hertzberg
(12/20)

David Richter
(12/21)

Marcus Herrmann
(12/21)

Dana Dabiri
(12/20)
LOC'19

Alberto Aliseda
(12/20)
LOC'19

FELLOWSHIP
COMMITTEE
8 FELLOWS, STAGGERED
2-YEAR TERMS

Shelley Anna
(12/19)
Chair

Minami Yoda
(12/19)
Vice-Chair

Beverly McKeon
(12/19)

John Dabiri
(12/19)

Colm-cille Caulfield
(12/20)

Guowei He
(12/20)

Fernando Grinstein
(12/20)

Paul Steen
(12/20)

EXTERNAL AFFAIRS
COMMITTEE
8 MEMBERS, STAGGERED
3-YEAR TERMS

Stephen Morris
(12/19)
Chair

Satish Kumar
(12/20)
Vice-Chair

Meredith Metzger
(12/19)

Arvind Santhanakrishnan
(12/20)

Hassan Masoud
(12/20)

Arindam Banerjee
(12/21)

Kiran Bhaganagar
(12/21)

Kirti Sahu
IIT Hyderabad

FLUID DYNAMICS PRIZE
SELECTION COMMITTEE
8 MEMBERS, STAGGERED
2-YEAR TERMS

Detlef Lohse
(12/19)
Chair

Leslie Smith
(12/20)
Vice-Chair

Rama Govindarajan
(12/19)

Alban Sauret
(12/19)

Keith Moffatt
(12/19)
2018 Award Winner

Todd Squires
(12/20)

Ellen Longmire
(12/20)

Rajat Mittal
(12/20)

CORRSIN AWARD
SELECTION COMMITTEE
8 MEMBERS, STAGGERED
2-YEAR TERMS

Karen Daniels
(12/19)
Chair

Roberto Verzicco
(12/20)
Vice-Chair

Sungyon Lee
(12/19)

Eva Kanso
(12/19)

Amir Riaz
(12/19)

Paul Durbin
(12/20)

Kausik Sarkar
(12/20)

Peko Hosoi
2018 Award Winner

ACRIVOS AWARD
SELECTION COMMITTEE
7 MEMBERS, STAGGERED
2-YEAR TERMS

Arezoo Ardekani
(12/19)
Chair

Daniel Bodony
(12/20)
Vice Chair

Pascale Garaud
(12/19)

Alain Pumir
(12/19)

Duan Z. Zhang
(12/20)

Irmgard Bischofberger
(12/20)

Eric Lauga
(12/20)

FRENKIEL AWARD
SELECTION COMMITTEE
7 MEMBERS, STAGGERED
2-YEAR TERMS

Nathalie Vriend
(12/19)
Chair

Diego Donzis
(12/20)
Vice-Chair

Christine Gilbert
(12/19)

Jeff Eldredge
(12/19)
Phys. Rev. Fluids liaison

Haecheon Choi
(12/20)

Federico Toschi
(12/20)

Thomas Cubaud
(12/20)

COMMITTEE ON MEDIA &
SCIENCE RELATIONS
6 MEMBERS, STAGGERED
2-YEAR TERMS

Roseanna Zia
(12/19)
Chair

Azar Eslam-Panah
(12/20)
Vice-Chair

David Hu
(12/21)

Ivan Marusic
(12/20)

Pirouz Kavehpour
(12/20)

Maysam Mousaviraad
(12/20)

Vivek Narsimhan
(12/21)
Ex-officio DFD web maint. &
Facebook, Twitter interfacing

Ken Kiger
Ex-officio Gallery of Fluid
Motion maint.

COMMITTEE ON
EDUCATIONAL & CAREER
OUTREACH
6 MEMBERS, STAGGERED
2-YEAR TERMS

Jesse Capecelatro
(12/19)
Chair

Megan Leftwich
(12/20)
Vice-Chair

Emilie Dressaire
(12/19)

Pratap Vanka
(12/19)

Devesh Ranjan
(12/20)

Adrian Sescu
(12/20)

COMMITTEE ON
DIVERSITY & INCLUSION
IN NOMINATIONS
8 MEMBERS, STAGGERED
3-YEAR TERMS

Claudia Cenedese
(12/19)
Chair

Raul Cal
(12/20)
Vice-Chair

Monica Martinez
(12/19)

Thomas Ward
(12/19)

Roberto Zenit
(12/20)

Petia Vlahovska
(12/20)

Luciano Castillo
(12/21)

P.K. Yeung
(12/21)