



# NEWSLETTER

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**International Congress, XXV ICTAM, Milan 2020**

**IUTAM Home Page:**

**<http://www.iutam.org>  
or <http://www.iutam.net>**

**International Union of Theoretical and Applied Mechanics**

**N-2018-2**

**December 2018**

## President's Address

It was an exciting summer with the meetings of the General Assembly (GA) and Congress Committee (CC), as well as those of the Bureau and the Executive Committee of the Congress Committee (XCCC), held in Boston, MA on 22-25 July, 2018. While the meetings and banquet were organized on the campus of Northeastern University, the reception took place during a cruise on Boston Harbor. All of the 68 meeting participants and 18 accompanying guests made the meeting a memorable event.

Important decisions were made at the GA meeting, including the election of members of the Electoral Committee, Congress Committee and Symposia Panels, and the selection of IUTAM Symposia and Summer Schools for 2020/2021 with topics spanning numerous subfields of mechanics. Furthermore, changes of the IUTAM statutes concerning voting by electronic means were approved. We also had the pleasure of attending a presentation by Professor Daya Reddy, President of International Science Council (ISC). Professor Reddy presented the structure, objectives and strategic plan of ISC, of which IUTAM is a member organization. Recall that ISC is the new organization formed from the merger of ICSU (International Council for Science) and ISSC (International Social Science Council), which was decided in Taipei, Taiwan, on 23-26 October, 2017. ISC held its first General Assembly in Paris on 3-4 July, 2018, which I attended on behalf of IUTAM. A short summary of this historical meeting is included in this newsletter.

We are closing 2018 with the successful organization of fifteen IUTAM Symposia, and are looking forward to having eight more in 2019. Preparations are also continuing for the upcoming ICTAM 2020 in Milan. In particular, the XCCC decided at its meetings in Boston on the Congress' Opening and Closing Lecturers, the Sectional Lecturers, and the Co-Chairs of the Thematic Sessions. I am delighted to confirm that the prestigious Rodney Hill Prize in solid mechanics, sponsored by Elsevier, and the Batchelor Prize in fluid mechanics, sponsored by Cambridge University Press, will be awarded in Milan for the fourth time. By now, both 2020 prizes have been officially announced and nominations are invited (please check the IUTAM website for more details on how to submit a nomination). While there is still plenty of time, please keep in mind that the deadline for nominations is 31 May 2019.

This continues to be a very exciting time for IUTAM with mechanics at the core of fundamental advances as well as numerous applications, including emerging ones, and with the field further spreading among junior scientists and in all parts of the world. As we remain committed to attracting the next generation of diverse mechanicians and strengthening the relations between all of our colleagues from around the globe, I would like to take this opportunity to ask your help in further engaging your own global collaborators in IUTAM and its activities, as well as bringing to our attention the possibility of new associate, adhering and affiliated organizations.

Let me now end by thanking all of you for your contributions which made 2018 another successful year for IUTAM. I look forward to continuing our efforts together, and wish you and your families a wonderful holiday season and a very happy New Year.

Nadine Aubry  
President of IUTAM  
Boston, MA

## **Short Report on the General Assembly meeting, July 2018**

*(The complete summary record of the General Assembly meeting will be published in the IUTAM Report 2018)*

The IUTAM General Assembly meeting was held in two sessions on 23 and 24 July 2018 at Northeastern University, Boston, USA. Among the items discussed and decided upon at the meeting were the following:

### ***Matters concerning Adhering Organizations***

The Czech Society for Mechanics became the new Czech Adhering Organization of IUTAM, after its merger with the Czech National Committee of Theoretical and Applied Mechanics.

The newly-founded Sociedad Española de Mecánica Teórica y Aplicada (SEMATA) was admitted by the General Assembly as the new Spanish Adhering Organization of IUTAM.

### ***Matters concerning Associate Organizations***

The Cyprus Mathematical Society was encouraged to apply for full membership as an Adhering Organization. The General Assembly did not agree to extend the Associate membership of Cyprus by an additional four-year period beyond the ending eight-year period indicated in the IUTAM Statutes.

### ***Election of members of the Electoral Committee***

The General Assembly elected unanimously the following persons as the members of the Electoral Committee:

Professors Nadine Aubry (USA, chair, *ex officio*), Ben Freund (USA), Timothy Pedley (UK), Werner Schiehlen (Germany), Wei Yang (China).

### ***Election of members of the Congress Committee***

The General Assembly re-elected five members and elected six new members to the Congress Committee, which is reported in more detail by the Secretary of the Congress Committee later in this Newsletter. The new membership of the Congress Committee is recorded on the IUTAM website.

***Election of members of the Symposia Panels***

The General Assembly elected the following members of the Symposia Panels for the period 2018 to 2022:

Professor Rama Govindajaran (India, reappointed to the Fluid Mechanics Panel), Professor Ann Karagozian (USA, appointed to the Fluid Mechanics Panel), Professor Tianjian Lu (China, reappointed to the Solid Mechanics Panel), Professor Leslie Banks-Sills (Israel, appointed to the Solid Mechanics Panel).

***IUTAM Symposia 2019, 2020 and 2021***

The General Assembly agreed on fourteen IUTAM Symposia to be held in the years 2020 and 2021. It was recommended that one of them be changed into an IUTAM Special Event because of its exceptional nature. The General Assembly also agreed on one IUTAM Symposium to be held in August 2019. These Symposia are listed hereafter in the present Newsletter. The Bureau assigned the members of the Scientific Committees according to their expertise in the fields of the Symposia and based on their geographical distribution.

***IUTAM Summer Schools 2019 and 2020***

The General Assembly agreed on one IUTAM-CISM Summer School to be held in 2019 and another one to be held in 2020. More information on these Summer Schools is given hereafter in the present Newsletter.

***Change of Statutes concerning voting by electronic means***

The General Assembly voted in favour of an amendment to the IUTAM Statutes which explicitly permits the General Assembly to vote by electronic means on matters that arise between the General Assembly meetings.

***Date and venue of the next General Assembly meeting***

The General Assembly agreed to hold its next meeting during the 25<sup>th</sup> ICTAM in Milan, Italy, on Tuesday, August 25, and on Wednesday, August 26, 2020.

Henryk Petryk  
Secretary-General of IUTAM

## Short Report on the Congress Committee meeting, July 2018

The Congress Committee (CC) met twice during the IUTAM General Assembly in Boston, Massachusetts, USA in July 2018. In addition the Executive Committee of the Congress Committee (XCCC) met just before and just after this General Assembly, and had previously met in Milan in June 2017. The following are some highlights of these XCCC and CC meetings:

### *Items from the XCCC meetings in Milan in June 2017:*

- **ICTAM2020 Minisymposia**

Themes have been identified and chairs have been invited and confirmed for six minisymposia. These minisymposia are identified in this Newsletter below along with their Co-Chairs. This information is also listed on the ICTAM2020 website.

- **Appointment of the International Papers Committee**

All six members of the IPC for ICTAM2020 identified as the top choices have been invited and have accepted. The IPC will meet in March or April 2020 at a location in Italy to be determined.

- **Final list of Thematic Sessions**

The list of Thematic Sessions was fine tuned to obtain its final form, given in this Newsletter below and at the ICTAM2020 website.

- **Proceedings of ICTAM**

The XCCC decided that proceedings of ICTAM will be produced in the form of a pdf archived on the IUTAM website and retained as permanent items there, accessible online. It will contain 4 page summaries from the authors of invited plenary (i.e. opening and closing) and sectional lecturers, and 2 page summaries from all other presenters at ITAM2020.

- **Format of ICTAM submissions**

The XCCC recommended, and the Congress Committee later confirmed, that submissions to ICTAM2020 will consist of a single document in the form of a 2 page description of the material to be presented, commencing with an abstract of length 3 to 5 lines. However, the Opening, Closing and Sectional Lecturers will be required to provide a 4 page description.

***Items from the CC and XCCC Meetings in Boston in July 2018:***

- **Opening and Closing lectures at ICTAM2020**

Based on 17 nominations received from around the world, the XCCC made two proposals to the CC. One proposal was that an Italian researcher in the area of solids should be invited to give the opening lecture. This was endorsed by the CC and Professor Nicola Pugno of the University of Trento was invited and has accepted. The second proposal was that the CC should vote to select the closing lecturer from nominees in the areas of fluids. The outcome of this ballot was that Professor Elisabeth Guazzelli of the University of Aix-Marseille was selected. She was invited and has accepted.

- **Sectional lectures at ICTAM2020**

Based on a list of 115 nominees the CC selected 16 individuals to give Sectional Lectures. These persons are

Bala Balachandran (USA, dynamics)  
Alessandro Bottaro (Italy, fluids)  
Vikram Deshpande (UK, solids)  
Antonio De Simone (Italy, solids)  
Frederic Dias (Ireland, fluids)  
Xi-Qiao Feng (China, solids)  
Genta Kawahara (Japan, fluids)  
Ellen Kuhl (USA, solids)  
Eric Lauga (UK, fluids)  
Jean-Baptiste Leblond (France, solids)  
Christian Niordson (Denmark, solids)  
Clarence Rowley (USA, fluids)  
Miles Rubin (Israel, solids)  
Cameron Tropea (Germany, fluids)  
Roberto Verzicco (Italy, fluids)  
Emmanuel Villermaux (France, fluids)

Subsequent to the meetings, all sectional lecturers were invited and all have accepted.

***Decisions re Congress Committee membership:***

- The Nominations Subcommittee of the CC recommended that all members completing a first term on the CC on 31<sup>st</sup> October 2018 and eligible for a second term be re-elected without contest. These members are:

Davide Bigoni (Italy)  
Michael Gilchrist (Ireland)  
Paul Linden (UK)  
Sanjay Mittal (Italy)  
Jianxiang Wang (China)

The CC endorsed this recommendation to the General Assembly, which accepted it and unanimously re-elected the above slate.

The following members retired from the CC on 31<sup>st</sup> October 2018 having served 2 full 4 year terms on the committee.

Renato Cotta (Brazil)  
Peter Eberhard (Germany)  
Gertjan van Heijst (The Netherlands)  
Ravi Ravi-Chandar (USA)  
Howard Stone (USA)  
Kazuo Tanishita (Japan)

IUTAM thanks them for their dedicated service, their hard work and their wisdom in their contributions to the CC.

- In a competitive election the General Assembly selected the following 6 new members to join the CC:

Alan Cocks (UK)  
Anne De Wit (Belgium)  
Anne Juel (UK)  
Detlef Lohse (Netherlands)  
Shu Takagi (Japan)  
Wei-Chung Wang (China-Taipei)



***Expressions of Interest re ICTAM2024***

- The set of preliminary expressions of interest presented before the CC at its second meeting in July 2018 in Boston was felt to be adequate for identifying a suitable congress venue in 2024. Preliminary expressions of interest have been submitted by Brazil (Venue: Rio de Janeiro), Germany (Aachen), India (Hyderabad), Japan (Tokyo) and Vietnam (Venue unspecified).

Robert McMeeking  
Secretary of the Congress Committee

## **Brief Report on the International Science Council Founding General Assembly Paris, France, 3-5 July 2018**

The International Science Council (ISC) is the new organization formed from the merger of ICSU (International Council for Science) and ISSC (International Social Science Council), which was decided in Taipei, Taiwan, on 23-26 October, 2017. ISC is a non-governmental organization with a membership of more than 180 organizations, including scientific unions and associations, national scientific bodies, and affiliated members. ISC held its inaugural General Assembly on 3-4 July, 2018, which was attended by Nadine Aubry, IUTAM President. The two-day meeting, hosted by the French Académie des Sciences and held in the historical building of the Maison des Océans in Paris, was chaired by Gordon McBean, President of the International Council for Science (ICSU) and Alberto Martinelli, President of the International Social Science Council (ISSC) until the election of the ISC Incoming President took place. After the election, Daya Reddy, ISC Incoming President, chaired the meeting. The meeting was well attended with 421 participants.

The **first day** was dedicated to a membership meeting, with the agenda consisting of a) an overview of the key achievements since the 2017 meeting in Taipei, b) discussions on potential new initiatives for ISC to consider, c) a briefing from the Elections Committee to prepare the membership for the important elections of the new President and Governing Board to take place the next day, and d) time for networking and side meetings.

The founding General Assembly of ISC took place on the **second day**. Alberto Martinelli opened the GA by inviting Catherine Bréchnac, Permanent Secretary of the French Académie des Sciences and former ICSU President, to make introductory remarks. Catherine Bréchnac praised the creation of ISC, stating the importance of collaboration among the natural and social sciences to address today's most challenging issues. Gordon McBean welcomed all participants, recognizing Walter Munk, one of the most prominent oceanographers and geophysicists, and H.S.H. Albert II, Sovereign Prince of Monaco, who were present. H.S.H. Albert II delivered an address around the importance of both the voice of science and the universality of science, referring to a quote from Louis Pasteur "La science n'a pas de patrie, parce que le savoir est le patrimoine de l'humanité, le flambeau qui éclaire le

monde,” which translates to “Science has no homeland, because knowledge is the heritage of humanity, the torch that illuminates the world.”

The highlight of the GA was elections of the ISC Governing Board. It is a pleasure to report that our colleague, Daya Reddy, a mechanician from South Africa, was elected President. Others elected were Peter Gluckman from New Zealand (President-Elect), Elisa Reis from Brazil (Vice President), Jinghai Li from China (Vice President), Alik Ismail-Zadeh from Russia (Secretary), and Renée van Kessel from the Netherlands (Treasurer).

The following candidates for Ordinary Members were elected: G. Boulton (UK), M.B. Burkins (USA), S. Cooper (South Africa), A. Davies (Ireland), P. Dykstra (the Netherlands), S. Fernando (Sri Lanka), R. Fincher (Australia), J.C. Liao (China-Taipei), N. Tarasova (Russia), and M. Visbeck (Germany).

Incoming President Daya Reddy delivered his incoming presidential address, which focused on the global challenges facing humanity and the crucial role that science plays to address them. He expressed his support for established outstanding programmes such as CROP (the Comparative Research Programme on Poverty) and WCRP (the World Climate Research Programme) that ISC should continue and further build on. He also emphasized the necessity of building capacity in developing regions of the world, the importance of (existing and new) collaborations with other science organizations and United Nations agencies, and the need for engaging young scientists. In addition, he stressed his desire to have ISC define and focus on long-term, rather than short-term, projects in order to maximize its impact. He also stated that fundraising efforts were going to be important for the new Council.

There were two bids for holding the next ISC General Assembly in 2021, one from Canada and one from Oman. Representatives from these two countries made presentations and answered questions. The GA elected Oman as the location of the second ISC General Assembly.

There was also a formal resolution adopted regarding the ISC membership of the two organizations: i) China Association for Science and Technology and ii) China: Academy of Sciences in Taipei.

The **third day** consisted of a public launch event of the new Council, ISC, with keynote addresses and roundtable discussions.

Respectfully submitted,  
Nadine Aubry  
President of IUTAM  
Boston, MA

## IUTAM Symposia 2019

### 19-1 = GA.16-20 IUTAM Symposium on Phase transformation in shape memory materials: modeling and applications

Place: Austin, USA  
Date: April 28 – May 2, 2019  
Chairman: **Prof. C. Landis**  
University of Texas  
210 East 24<sup>th</sup> street, 78712 Austin, Texas, USA  
Email: [landis@utexas.edu](mailto:landis@utexas.edu)

Co-Chairman: **Prof. S. Kyriakides**  
University of Texas  
210 East 24<sup>th</sup> street, 78712 Austin, Texas, USA  
Email: [skk@utexas.edu](mailto:skk@utexas.edu)

Co-Chairman: **Prof. D. Lagoudas**  
Texas A&M University  
3141 TAMU, College Station TX 77843-3141, USA  
Email: [lagoudas@aero.tamu.edu](mailto:lagoudas@aero.tamu.edu)

IUTAM Representative on Scientific Committee: Prof. H. Petryk

### 19-2 = GA.16-10 IUTAM Symposium on Physics and mechanics of sea ice

Place: Espoo, Finland  
Date: June 3 – June 7, 2019  
Chairman: **Prof. J. Tuhkuri**  
Aalto University, School of Engineering  
Dept. of Mechanical Engineering  
P.O. Box 14300  
FI-00076 Espoo, Finland  
Email: [jukka.tuhkuri@aalto.fi](mailto:jukka.tuhkuri@aalto.fi)

IUTAM Representative on Scientific Committee: Prof. R.M. McMeeking

**19-3 = GA.16-03 IUTAM Symposium on Computational modelling of instabilities and turbulence in separated two-phase flows**

Place: Dublin, Ireland  
Date: June 10 – June 12, 2019  
Chairman: **Prof. L. O’Naraigh**  
University College Dublin  
Belfield  
D04 V1W8 Dublin, Ireland  
Email: [onaraigh@maths.ucd.ie](mailto:onaraigh@maths.ucd.ie)  
Website: <https://maths.ucd.ie/cfd2019>

IUTAM Representative on Scientific Committee: Prof. J. Magnaudet

**19-4 = GA.16-04 IUTAM Symposium on Vortex dynamics in science, nature and technology**

Place: San Diego, USA  
Date: June 24 – June 28, 2019  
Chairman: **Prof. S. Llewellyn Smith**  
University of California, San Diego  
Dept. of Mathematical and Aerospace Engineering  
9500 Gilman Dr  
92093-0411 La Jolla, USA  
Email: [sgls@ucsd.edu](mailto:sgls@ucsd.edu)

IUTAM Representative on Scientific Committee: Prof. L.G. Leal

**19-5 = GA.18-05 IUTAM Symposium on Fluid-structure interaction –  
in honour of Michael Paidoussis**

Place: Montreal, Canada  
Date: August 12 – August 15, 2019  
Chairman: **Prof. M. Amabili**  
McGill University  
Department of Mechanical Engineering  
817 Sherbrooke Street West  
H3A 0C3 Montreal, Canada  
Email: [marco.amabili@mcgill.ca](mailto:marco.amabili@mcgill.ca)  
Co-Chairman: **Dr. K. Karazis**  
Framatome Ltd  
Lychburg, USA  
Email: [kostas.karazis@framatome.com](mailto:kostas.karazis@framatome.com)  
Website: <http://fsi.symposium.mcgill.ca>

IUTAM Representative on Scientific Committee: Prof. T.J. Pedley

**19-6 = GA.16-01 IUTAM Symposium on Laminar turbulent transition**

Place: London, UK  
Date: September 2 – September 6, 2019  
Chairman: **Prof. P. Schmid**  
Imperial College London  
Dept. of Mathematics  
South Kensington Campus  
SW7 2AZ London, UK  
Email: [pjschmid@imperial.ac.uk](mailto:pjschmid@imperial.ac.uk)  
Website: <http://www.iutamtransition2019.org>

IUTAM Representative on Scientific Committee: Prof. T.J. Pedley

**19-7 = GA.16-07 IUTAM Symposium on Viscoplastic flows: from theory to application**

Place: Cambridge, UK  
Date: September 16 – September 20, 2019  
Chairman: **Prof. G. McKinley**  
MIT  
Room 3-254  
77 Massachusetts Avenue  
MA 02139 Cambridge, USA  
Email: [gareth@mit.edu](mailto:gareth@mit.edu)  
Co-Chairman: **Prof. I. Wilson**  
University of Cambridge  
Cambridge, UK  
Email: [diw11@cam.ac.uk](mailto:diw11@cam.ac.uk)  
Website: <https://vpf8.ceb.cam.ac.uk>

IUTAM Representative on Scientific Committee: Prof. N. Aubry

**19-8 = GA.16-19 IUTAM Symposium on Mechanics of advanced composites joining for structural applications**

Place: Limerick, Ireland  
Date: December 4 – December 6, 2019  
Chairman: **Prof. C. McCarthy**  
University of Limerick  
Plassey, Castletroy  
V94 T9PX Limerick, Ireland  
Email: [conor.mccarthy@ul.ie](mailto:conor.mccarthy@ul.ie)

IUTAM Representative on Scientific Committee: Prof. N.A. Fleck



## IUTAM Symposia 2020

### 20-1 = GA.18-11 IUTAM Symposium on Turbulent structure and particles-turbulence interaction

Place: Lanzhou, China  
Date: June 26 – June 29, 2020  
Chairman: **Prof. X.J. Zheng**  
Xidian University  
710126 Xi'an, Shaanxi, China  
Email: [xjzheng@xidian.edu.cn](mailto:xjzheng@xidian.edu.cn)  
Co-Chairman: **Prof. S. Balachandar**  
University of Florida  
Department of Mechanical & Aerospace Engineering  
231 MAE-A, P.O. Box 116250  
Gainesville, FL 32611, USA  
Email: [balals@ufl.edu](mailto:balals@ufl.edu)

IUTAM Representative on Scientific Committee: Prof. H.K. Moffatt

### 20-2 = GA.18-01 IUTAM Symposium on Particles, drops and bubbles in stratified environments

Place: Toulouse, France  
Date: 2020, *no exact dates available yet*  
Chairman: **Prof. J. Magnaudet**  
CNRS & Toulouse University  
Institut de Mécanique des Fluides de Toulouse  
Allée Camille Soula  
31400 Toulouse, France  
Email: [magnau@imft.fr](mailto:magnau@imft.fr)

IUTAM Representative on Scientific Committee: Prof. A.P.S. Freire

**20-3 = GA.18-02 IUTAM Symposium on Interface mechanics of complex flows and soft matter**

Place: Beijing, China  
Date: 2020, *no exact dates available yet*  
Chairman: **Prof. H. Duan**  
Peking University  
Department of Mechanics and Engineering Science  
No.5 Yiheyuan Road, Haidian District  
100871 Beijing, China  
Email: [hlduan@pku.edu.cn](mailto:hlduan@pku.edu.cn)  
Co-Chairman: **Prof. C. Sun**  
Tsinghua University  
Beijing, China  
Email: [chaosun@tsinghua.edu.cn](mailto:chaosun@tsinghua.edu.cn)

IUTAM Representative on Scientific Committee: Prof. G. McKinley

**20-4 = GA.18-03 IUTAM Symposium on Dynamics and interface phenomena of bubbles and droplets at multiple scales**

Place: Tokyo, Japan  
Date: 2020, *no exact dates available yet*  
Chairman: **Prof. S. Takagi**  
The University of Tokyo  
7-3-1, Hongo, Bunkyo-ku  
113-8656 Tokyo, Japan  
Email: [takagi@mech.t.u-tokyo.ac.jp](mailto:takagi@mech.t.u-tokyo.ac.jp)

IUTAM Representative on Scientific Committee: Prof. A.P.S. Freire

**20-5 = GA.18-07 IUTAM Symposium on Ultralarge-scale topology optimization**

Place: Kongens Lyngby, Denmark  
Date: 2020, *no exact dates available yet*  
Chairman: **Prof. O. Sigmund**  
Technical University of Denmark  
Nils Koppels Allé, building 404  
2800 Kongens Lyngby, Denmark  
Email: [sigmund@mek.dtu.dk](mailto:sigmund@mek.dtu.dk)

IUTAM Representative on Scientific Committee: Prof. V. Tvergaard

**20-6 = GA.18-13 IUTAM Symposium on Optimal guidance and control for autonomous systems**

Place: Honolulu, USA  
Date: 2020, *no exact dates available yet*  
Chairman: **Prof. D. Azimov**  
University of Hawai'i at Manoa  
2540 Dole Street, Holmes 202  
96822 Honolulu, USA  
Email: [azimov@hawaii.edu](mailto:azimov@hawaii.edu)

IUTAM Representative on Scientific Committee: Prof. P. Eberhard

## IUTAM Symposia 2021

### 21-1 = GA.18-06 IUTAM Symposium on Computational methods for large-scale and complex wave problems

Place: Tokyo, Japan  
Date: 2021, *no exact dates available yet*  
Chairman: **Prof. K. Kishimoto**  
Tokyo Institute of Technology  
2-12-1 Oookayama, Meguro  
152-8552 Tokyo, Japan  
Email: [kkishimoto@ocean.zaq.jp](mailto:kkishimoto@ocean.zaq.jp)

IUTAM Representative on Scientific Committee: Prof. N. Aubry

### 21-2 = GA.18-12 IUTAM Symposium on Data-driven mechanics

Place: Paris, France  
Date: 2021, *no exact dates available yet*  
Chairman: **Prof. F. Chinesta**  
Arts et Metiers  
151 Boulevard de l'Hopital  
75013 Paris, France  
Email: [Francisco.Chinesta@ensam.eu](mailto:Francisco.Chinesta@ensam.eu)

IUTAM Representative on Scientific Committee: Prof. N.A. Fleck

## IUTAM Symposia 2020/2021

### **2X-1 = GA.18-08 IUTAM Symposium on Generalized continua emerging from microstructures**

Place: Paris, France  
Date: 2020/2021, *no exact dates available yet*  
Chairman: **Prof. S. Forest**  
Mines ParisTech CNRS  
60 Boulevard Saint-Michel  
75006 Paris, France  
Email: [samuel.forest@mines-paristech.fr](mailto:samuel.forest@mines-paristech.fr)

IUTAM Representative on Scientific Committee: Prof. N.A. Fleck

### **2X-2 = GA.18-09 IUTAM Symposium on Computational fracture mechanics in multi-field problems**

Place: Siegen, Germany  
Date: 2020/2021, *no exact dates available yet*  
Chairman: **Prof. M. Ortiz**  
California Institute of Technology  
Pasadena, CA 91125, USA  
Email: [ortiz@caltech.edu](mailto:ortiz@caltech.edu)

IUTAM Representative on Scientific Committee: Prof. B.A. Schrefler

**2X-3 = GA.18-10 IUTAM Symposium on Mechanics of smart and tough gels**

Place: Austin, USA  
Date: 2020/2021, *no exact dates available yet*  
Chairman: **Prof. R. Huang**  
University of Texas at Austin  
210 E 24th Street, C0600  
78712-1221 Austin, USA  
Email: [ruihuang@mail.utexas.edu](mailto:ruihuang@mail.utexas.edu)

Co-Chairman: **Prof. X. Zhao**  
Massachusetts Institute of Technology  
Boston, USA  
Email: [zhaox@mit.edu](mailto:zhaox@mit.edu)

IUTAM Representative on Scientific Committee: Prof. N.A. Fleck

**2X-4 = GA.18-14 IUTAM Symposium on Multiphysics analysis of wave propagation in electronic device structures**

Place: Ningbo, China  
Date: 2020/2021, *no exact dates available yet*  
Chairman: **Prof. J. Wang**  
Ningbo University  
School of Mechanical Engineering and Mechanics  
818 Fenghua Road  
315211 Ningbo, China  
Email: [wangji@nbu.edu.cn](mailto:wangji@nbu.edu.cn)

IUTAM Representative on Scientific Committee: Prof. H. Gao

**2X-5 = GA.18-15 IUTAM Symposium on Mechanics of liquid crystal elastomers**

Place: Houston, USA  
Date: 2020/2021, *no exact dates available yet*  
Chairman: **Prof. P. Sharma**  
University of Houston  
N207 Engineering Building 1  
77204-4503 Houston, USA  
Email: [psharma@Central.UH.EDU](mailto:psharma@Central.UH.EDU)

IUTAM Representative on Scientific Committee: Prof. B.A. Schrefler

**IUTAM Special Event 2020****20-S = GA.18-04 Fluid mechanics in the spirit of G. K. Batchelor**

Place: Cambridge, UK  
Date: 2020, *no exact dates available yet*  
Chairman: **Prof. P.F. Linden**  
University of Cambridge  
DAMTP  
Centre for Mathematical Sciences  
Wilberforce Road  
CB3 0WA Cambridge, UK  
Email: [pfl4@cam.ac.uk](mailto:pfl4@cam.ac.uk)

IUTAM Representative on Scientific Committee: Prof. T.J. Pedley

## IUTAM Summer Schools

### 2019 IUTAM-BICTAM Summer School on Violent flows with a free surface

Place: Shanghai, China  
Event dates: June 2 – June 8, 2019  
Coordinator: **Prof. H. Liu**  
Shanghai Jiao Tong University  
800 Dong Chuan road  
200240 Shanghai, China  
Email: [hliu@sjtu.edu.cn](mailto:hliu@sjtu.edu.cn)  
Website : <http://bictam.org.cn/iutam2019>

### 2019 IUTAM-CISM Summer School on Plant biomechanics

Place: Udine, Italy  
Event dates: July 8 – July 12, 2019  
Coordinators: **Prof. C. Eloy**  
IRPHE, Aix-Marseille University  
49 rue Joliot Curie  
13013 Marseille, France  
Email: [eloy@irphe.univ-mrs.fr](mailto:eloy@irphe.univ-mrs.fr)  
**Prof. Y. Forterre**  
CNRS/Aix-Marseille University  
5 rue Enrico Fermi  
13453 Marseille cedex 13, France  
Email: [yoel.forterre@univ-amu.fr](mailto:yoel.forterre@univ-amu.fr)  
Website : <http://www.cism.it/courses/C1908>



**2020**                      **IUTAM-CISM Summer School on Instability and bifurcation of solids including coupled field phenomena**

Place:                      Udine, Italy  
Event dates:              June 2020, *exact dates not available yet*  
Coordinator:              **Prof. R. Ogden**  
                                    University of Glasgow  
                                    School of Mathematics and Statistics  
                                    University Place  
                                    G12 8SQ Glasgow, UK  
                                    Email: [Raymond.Ogden@glasgow.ac.uk](mailto:Raymond.Ogden@glasgow.ac.uk)

**IUTAM Endorsed Event**

**2020**                      **Joint IMSD/ACMD Conference on Multibody System Dynamics**

Place:                      New Delhi, India  
Date:                        November 1 – November 5, 2020  
Chairman:                **Prof. Subir Saha**  
                                    Email: [saha@mech.iitd.ac.in](mailto:saha@mech.iitd.ac.in)



## The Batchelor Prize in Fluid Mechanics

founded and sponsored by the *Journal of Fluid Mechanics* (awarded under the auspices of IUTAM)

The Batchelor Prize is presented once every four years at the International Congress of Theoretical and Applied Mechanics (ICTAM), the next occasion being in Milan in August 2020. The prize winner will be announced late in 2019. The Prize of \$25,000 is awarded to a single scientist, for outstanding research in fluid dynamics. The research so recognised by the Prize shall normally have been published during the ten-year period prior to the announcement of the award (i.e. during the period 2009-present). The intention is thus that younger researchers should be as eligible for consideration as those who are more established, and that the work should be of great current interest (representing, for example, an emerging field of application of fluid mechanics or a significant breakthrough in an established branch of the subject).

The Prize winner will be determined by a small committee whose members are internationally distinguished in fluid mechanics. It is expected that the Prize winner will deliver a lecture at ICTAM 2020 and that this lecture will also be published in the *Journal of Fluid Mechanics* and be made freely available on the Cambridge Journals website.

The nomination process is open to everyone. If you would like someone to be considered for the Batchelor Prize please nominate this person using the procedure outlined below:

1. The nomination should include a brief curriculum vitae of the candidate nominated.
2. A list of his/her publications during the period 2009-present with up to 10 of particular distinction being marked by an asterisk (there is no requirement that the research was published in the *Journal of Fluid Mechanics*).
3. A brief (one page) statement of the case for making the award.

To submit a nomination, please email [jfmprize@cambridge.org](mailto:jfmprize@cambridge.org) with the above information. The deadline for nominations is 31st May 2019.

Conditions concerning the award of the Batchelor Prize:

- Self-nominations will NOT be accepted.
- All nominations must be in English.
- The decision of the Committee shall be final. Previous winners are not eligible.

Past winners of the Batchelor Prize:

2016 Raymond E. Goldstein

2012 Detlef Lohse

2008 Howard Stone



The Rodney Hill Prize  
in Solid Mechanics

## The Rodney Hill Prize in Solid Mechanics

founded and sponsored by Elsevier (awarded under the auspices of IUTAM)

The Rodney Hill Prize is presented once every four years at the International Congress of Theoretical and Applied Mechanics (ICTAM), the next occasion being in Milan in August 2020. The Prize winner will be announced late in 2019. The Prize of \$25,000 is awarded to a single scientist, for outstanding research in solid mechanics. The research so recognised by the Prize shall normally have been published during the ten-year period prior to the announcement of the award (i.e. during the period 2009-2018). The intention is thus that younger researchers should be as eligible for consideration as those who are more established, and that the work should be of great current interest (representing, for example, an emerging field of application of solid mechanics or a significant breakthrough in an established branch of the subject).

The Prize winner will be determined by a small committee whose members are internationally distinguished in solid mechanics. It is expected that the Prize winner will deliver a lecture at ICTAM 2020 and that this lecture will also be published in the Elsevier Journal of the winner's choosing and be made freely available on the journal website.

The nomination process is open to everyone. If you would like someone to be considered for the Rodney Hill Prize please nominate this person using the procedure outlined below:

1. The nomination should include a brief curriculum vitae of the candidate nominated.
2. A list of his/her publications during the period 2009-2018 with up to 10 of particular distinction being marked by an asterisk (there is no requirement that the research was published in an Elsevier Journal).
3. A brief (one page) statement of the case for making the award.

To submit a nomination, please email [j.coca@elsevier.com](mailto:j.coca@elsevier.com) with the above information. The deadline for nominations is 31st May 2019.

Conditions concerning the award of the Rodney Hill Prize:

- Self-nominations will NOT be accepted.
- All nominations must be in English.
- The decision of the Committee shall be final. Previous winners are not eligible.

Past winners of the Rodney Hill Prize:

2016 Raymond Ogden

2012 Huajian Gao

2008 Michael Ortiz

**XXV International Congress  
of Theoretical and Applied Mechanics  
23-28 August 2020, Milan, Italy  
ICTAM 2020**

The International Congresses of Theoretical and Applied Mechanics (ICTAM), organized every four years by IUTAM, bring together scientists from all over the world for the purpose of exchanging information about recent developments in the field. Participation is unrestricted.

**For further information see ICTAM home page,**  
<http://www.ictam2020.org>

**or please contact:**

Professor Robert McMeeking  
Secretary of the IUTAM Congress Committee  
University of California, Santa Barbara  
Email: [rmcm@engineering.ucsb.edu](mailto:rmcm@engineering.ucsb.edu)

***Opening and Closing Lecturers***

*Opening Lecturer:* Professor Nicola Pugno (Italy)

*Closing Lecturer:* Professor Elisabeth Guazzelli (France)

***Sectional Lecturers***

Bala Balachandran (USA)  
Alessandro Bottaro (Italy)  
Vikram Deshpande (UK)  
Antonio De Simone (Italy)  
Frederic Dias (Ireland)  
Xi-Qiao Feng (China)  
Genta Kawahara (Japan)  
Ellen Kuhl (USA)  
Eric Lauga (UK)  
Jean-Baptiste Leblond (France)

Christian Niordson (Denmark)  
Clarence Rowley (USA)  
Miles Rubin (Israel)  
Cameron Tropea (Germany)  
Roberto Verzicco (Italy)  
Emmanuel Villermaux (France)

### ***Minisymposia***

#### ***Modeling and Controlling Turbulent Shear Flows***

Co-Chairs                      Professor Ivan Marusic (Australia)  
   Professor Beverley McKeon (USA)

#### ***Local Mechanics of Climate Processes***

Co-Chairs                      Professor Eberhard Bodenschatz (Germany)  
   Professor John Wettlaufer (USA)

#### ***Biological Fluid-Structure Interaction at the Microscale***

Co-Chairs                      Professor Prosenjit Bagchi (USA)  
   Professor Anne-Virginie Salsac (France)

#### ***Nonlinear Dynamics for Design***

Co-Chairs                      Professor Remco Leine (Germany)  
   Professor Stefano Lenci (Italy)

#### ***Mechanics of Additive Manufacturing***

Co-Chairs                      Professor Ferdinando Auricchio (Italy)  
   Professor Matthew Begley (USA)

#### ***Mechanics of C-Allotropic Materials and Structures***

Co-Chairs                      Professor Julia Greer (USA)  
   Professor Roberto Paroni (Italy)

### ***Thematic Sessions***

#### ***Fluids Topics***

FM01 Biological Fluid Mechanics

FM02 Boundary Layers  
FM03 Combustion and Flames  
FM04 Compressible Flows  
FM05 Convection  
FM06 Drops, Bubbles and Interfaces  
FM07 Multiphase and Particle-Laden Flows  
FM08 Flow Instability and Transition  
FM09 Thin Film Flows  
FM10 Geophysical and Environmental Fluid Dynamics  
FM11 Low-Reynolds-Number Flows and Suspensions  
FM12 Micro- and Nano-Fluidics  
FM13 Non-Newtonian and Complex Fluids  
FM14 Computational Fluid Dynamics  
FM15 Turbulence  
FM16 Vortex Dynamics  
FM17 Waves in Fluids  
FM18 Electro- and Magneto- Hydrodynamics  
FM19 Other Topics in Fluid Mechanics

*Solids Topics*

SM01 Biomechanics and Biomaterials  
SM02 Tribology - Contact and Friction  
SM03 Damage Mechanics  
SM04 Elasticity  
SM05 Fracture Mechanics  
SM06 Geophysics and Geomechanics  
SM07 Impact Mechanics and Wave Propagation  
SM08 Multi-component, Composite and Hierarchical Materials  
SM09 Phase Transformations and Thermomechanical Phenomena  
SM10 Sizescale Effects in Materials  
SM11 Multibody and Vehicle Dynamics  
SM12 Nanostructures and MEMS  
SM13 Plasticity, Viscoplasticity and Creep  
SM14 Stability and Instability of Materials and Structures  
SM15 Computational Solid Mechanics  
SM16 Vibrations and Control of Structures  
SM17 Soft Materials and Extremely Deformable Structures  
SM18 Metamaterials  
SM19 Other Topics in Solid Mechanics



*Solids/Fluids Topics*

FS01 Acoustics

FS02 Exascale Computing

FS03 Experimental Methods in Mechanics

FS04 Nonlinear Dynamics and Pattern Formation

FS05 Porous Media

FS06 Fluid Structure Interactions

FS07 Smart Actuating Systems

FS08 Granular Materials and Flows

FS09 Foams and Cellular Materials

FS10 Optimization for Solids and Fluids

FS11 Inverse Problems in Solids and Fluids

FS12 Education in Mechanics

**Notice on IUTAM Symposia**

The IUTAM Symposia are reserved to invited participants. Those wishing to participate in an IUTAM Symposium are therefore advised to contact the Chairman of the Scientific Committee in due time in advance of the meeting.

As of January 2018, if the organizers of an IUTAM Symposium decide to publish proceedings, the recommended route of publication is the IUTAM Bookseries by Springer. Chairpersons of Symposia can contact the Secretary-General of IUTAM for the terms and conditions of publication in this series.

Acceptable forms for proceedings are also special issues of high-quality journals or other forms previously approved by the Bureau of IUTAM.

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<https://council.science>

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<http://iutam.org/publications/newsletters>

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<http://www.iutam.org>

or <http://www.iutam.net>