



NEWSLETTER

President's Address
From the Office of the Secretary-General
Meeting of the International Papers Committee
IUTAM Symposia 2020 and 2021
IUTAM Special Event 2021
IUTAM Summer School 2021
IUTAM Endorsed Events 2020 and 2021
International Congress, XXV ICTAM, Milan 2021

IUTAM Home Page:

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

President's Address

Let me begin by expressing my deepest concern and appreciation for you all during these very challenging times, and I hope that you and your loved ones are well and healthy. As we continue to navigate this global crisis caused by the COVID-19 pandemic, it is clear that we must prioritize the health of our community while continuing IUTAM's important mission. More than ever, it is crucial for us to continue to address existing and emerging challenges that the world faces, bring together scientists and organizations in all branches of mechanics and related sciences, and collaborate across geographical and cultural boundaries.

The pandemic has caused disruption in our lives and in the operations of organizations around the world, including our own. President Alberto Corigliano and his local organizing committee made the difficult decision earlier this spring to postpone by one year the 25th International Congress of Theoretical and Applied Mechanics (ICTAM). Plans are being made to hold the Congress, now referred to as ICTAM2020+1, on 22-27 August 2021 at the same location in Milan, Italy. Please join me in thanking our Italian colleagues for their hard work and resilience in light of the unprecedented difficulties they are dealing with due to the crisis, and please make sure to regularly check the Congress website at <https://www.ictam2020.org/> for important updates and new deadlines.

I am also grateful to the members of the International Paper Committee (IPC), who worked diligently throughout the past few months and met virtually to complete the monumental task of reviewing all 3,098 submitted abstracts. ICTAM President Alberto Corigliano reported that all decisions made by the IPC have now been communicated to the authors. This spring, the Electoral Committee held its meetings remotely as well, carefully took into account all the suggestions made by the General Assembly (GA) voting members and observers, and submitted nominations for the seven open Bureau positions to Secretary-General Henryk Petryk.

Meanwhile, the Bureau decided to hold the IUTAM General Assembly meeting on the original dates of 25-26 August 2020, albeit virtually (via the Zoom platform), as allowed by changes to the IUTAM Statutes approved by an electronic vote of the General Assembly. I would like to encourage those of you who are members or observers of the General Assembly to attend this

important meeting as we will continue to address crucial issues to ensure that IUTAM remains a vibrant and impactful global organization. We are planning for a full agenda, including:

- brief reports by Secretary-General Henryk Petryk, Treasurer Peter Eberhard, and Secretary of the Congress Committee Bob McMeeking;
- decisions on annual dues, matters regarding adhering, associate and affiliated organizations, and future IUTAM Symposia and Summer Schools;
- elections of the new Members of the Bureau, Congress Committee, and Symposia Panels and the new Members-at-Large; and
- decisions on the registration of IUTAM as a new legal entity.

The Congress Committee (CC) will also meet virtually around the same dates. For those of you who are interested but have not done so already, please submit (or encourage your colleagues to submit) a bid for the 26th International Congress of Theoretical and Applied Mechanics (ICTAM2024) to Secretary of the Congress Committee Bob McMeeking (rmcm@engineering.ucsb.edu) by the deadline of 30 June 2020. ICTAM2024 will be exciting because we will be celebrating the 100th anniversary of the First International Congress of Applied Mechanics, which took place in 1924 in Delft. All bids will be given full consideration, and the final proposal will be selected at the upcoming Congress Committee meeting in August.

Lastly, while I am disappointed that we will not be meeting in person to spend time together and exchange the latest advances in the field of mechanics this summer in Milan, I remain optimistic that we will be able to do so in 2021. In the meantime, I would like to express my sincere indebtedness to all of you for your remarkable commitment to IUTAM during this formidable crisis.

With my very best wishes of safety and health to you and your loved ones in these difficult times,

Nadine Aubry
President of IUTAM

Provost and Senior Vice President
Tufts University
Medford, MA, U.S.A.

From the Office of the Secretary-General

Postponement of ICTAM 2020 and other IUTAM events due to the COVID-19 pandemic

The outbreak of the COVID-19 pandemic and uncertain worldwide situation this year have seriously influenced the IUTAM activities in 2020. The 25th International Congress of Theoretical and Applied Mechanics has been postponed by President Alberto Corigliano and his local organizing committee to 22-27 August 2021 and renamed ICTAM 2020+1. Detailed information can be found [on the Congress website](#). For the same reasons, 7 IUTAM Symposia, the IUTAM-CISM Summer School and the IUTAM Special Event, all scheduled for the first half of 2020, have also been postponed by their Chairs and local organizers until 2021. New dates, if available, have been announced on the IUTAM website and in the present IUTAM Newsletter.

Summer 2020 meetings of the IUTAM General Assembly, Bureau, Congress Committee, and Executive Committee of the Congress Committee

The summer 2020 meetings of the IUTAM bodies planned to be held from 23 to 28 August 2020 during ICTAM 2020 in Milan, Italy, will be organized remotely by electronic means. The General Assembly will have a virtual meeting on the same dates as were scheduled for the cancelled in-person meeting, namely on Tuesday, August 25, and on Wednesday, August 26, 2020. The agenda of the meeting will encompass the usual items as indicated in the President's Address, but the duration of the meeting may possibly be shortened.

Call for proposals for IUTAM Symposia and Summer Schools 2022-2023

The online submission of proposals for IUTAM Symposia and IUTAM Summer Schools for the years 2022 and 2023 closed on 31 March 2020. In total, 19 proposals for IUTAM Symposia and 2 proposals for IUTAM Summer Schools have been received. The submissions have been evaluated by the IUTAM Symposia Panels, and the final decisions will be made by the General Assembly of IUTAM during its virtual meeting on 25-26 August 2020.

IUTAM Report 2019

The IUTAM Report 2019 is now available online:

<https://iutam.org/wp-content/uploads/2020/06/Annual-Report-2019.pdf> .

Printed versions are freely available upon request.

Symposia proceedings

Since 2018, if the organizers of an IUTAM Symposium decide to publish proceedings, the recommended form of publication is the IUTAM Bookseries by Springer. Five volumes (nos. 33–37) of the Series have already been published since 2018. One further volume has been contracted.

June 2020

Henryk Petryk
Secretary-General of IUTAM
Warsaw, Poland

**Meeting of the International Papers Committee
for the 25th ICTAM, held online.
26th to 30th March, 2020**

The International Papers Committee (IPC) in charge of paper selection for presentation at the 25th International Congress of Theoretical and Applied Mechanics, convened online due to the covid-19 pandemic. The IPC meeting was organized by Professor Alberto Corigliano, President of the 25th ICTAM, together with AIM Group International, the professional conference organizer supporting the Congress.

The Congress will be held in Milan from 22nd to 27th August, 2021, a one-year delay due to the covid-19 pandemic.

The IPC consists of 3 members from fluids and 3 members from solids, plus the Secretary of the Congress Committee and the President of the 25th ICTAM, Alberto Corigliano, both in attendance online to support the work of the IPC. The Committee was also fortunate to have Ilaria Cereda from AIM Group International present online when necessary to ensure the smooth running of the meeting.

The preparatory work of AIM in setting up the computerized system and the spreadsheet for record-keeping and decision-making greatly expedited the work of the IPC. The committee dealt with a total of 3,098 submissions, and, to handle such a large number of abstracts, met online in joint fluids-solids and separate fluids and solids meetings from 26th to 30th March, 2020.

The submissions can be broken down into 184 keynote, invited lectures in Mini-Symposia and Thematic Sessions, plus 2,914 contributed abstracts. The 3,098 submissions consisted of 1,351 abstracts in the fluids area, 1,334 in the solids fields and 413 falling into fluids-solids topics. In addition to the above there are 20 plenary and semi-plenary submissions (*i.e.* Opening Lecturer, Closing Lecturer, Batchelor Prize Lecturer, Hill Prize Lecturer and 16 Sectional Lecturers) whose presentations are invited.

The IPC had received recommendations and reviews on all submitted papers from the Chairs of the Mini-Symposia and Thematic Sessions. In addition, eight large countries had review committees formed by their national associations, and these provided input in the form of recommendations on

submissions coming from their respective countries. Additionally, each Mini-Symposium and Thematic Session was authorized to have a maximum of 4 keynote, invited speakers, with their submissions accepted automatically by the IPC. In the great majority of contributed abstracts the IPC honored the recommendations of Chairs and national review committees. It is only the recommendations of the Chairs and national review committees, plus the prior very extensive efforts of members of the IPC, that made it possible for the Committee to deal with 3,098 abstracts in a few online meetings spread over 5 days.

The IPC was pleased with the high quality of the submissions, and had great difficulty selecting papers for acceptance. The final numbers of papers accepted, including invited keynote speakers in Mini-Symposia and Thematic Sessions, are 1226 fluids papers, 1262 solids ones and 382 in fluids-solids topics. In addition, there are 4 plenaries and 16 sectional lectures. These numbers are further broken down into 1,870 papers that were given full oral presentation slots, including invited keynote speakers, plus 1000 that are to be presented in the format of a short presentation of a few minutes accompanied by a poster, an approach that is designated “Short Talk and Poster.”

As noted above, the IPC met online in a 5 days period and performed an enormous amount of work, both before the meeting and during the online sessions. IUTAM is extremely grateful for the contribution made by the IPC, and notes that ICTAM would not be successful, or be of such high quality and impact, without the Committee’s contributions.

Robert McMeeking
Secretary to the IUTAM International Papers Committee
Secretary of the IUTAM Congress Committee
Santa Barbara, California, USA

Alberto Corigliano
President of the 25th International Congress of Theoretical and Applied
Mechanics
Milan, Italy

IUTAM Symposia 2020

20-1 = GA.18-09 IUTAM Symposium on Computational fracture mechanics in multi-field problems

Place: Bad Honnef, Germany
Date: November 2 – November 6, 2020
Chair: **Prof. M. Ortiz**
California Institute of Technology
Pasadena, CA 91125, USA
Email: ortiz@caltech.edu

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

IUTAM Symposia 2020/2021

2x-1 = 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.*
Chair: **Prof. J. Wang**
Ningbo University
School of Mechanical Engineering and Mechanics
818 Fenghua Road
315211 Ningbo, China
Email: wangji@nbu.edu.cn

IUTAM Representative on Scientific Committee: Prof. H. Gao

IUTAM Symposia 2021

21-1 = GA.18-07 IUTAM Symposium on Ultralarge-scale topology optimization

Place: Kongens Lyngby, Denmark
Date: May 17 – May 19, 2021
Chair: **Prof. O. Sigmund**
Technical University of Denmark
Nils Koppels Allé, building 404
2800 Kongens Lyngby, Denmark
Email: sigmund@mek.dtu.dk

IUTAM Representative on Scientific Committee: Prof. V. Tvergaard

21-2 = GA.18-10 IUTAM Symposium on Mechanics of smart and tough gels

Place: Austin, USA
Date: May 23 – May 27, 2021
Co-Chair: **Prof. R. Huang**
University of Texas at Austin
210 E 24th Street, C0600
78712-1221 Austin, USA
Email: ruihuang@mail.utexas.edu

Co-Chair: **Prof. X. Zhao**
Massachusetts Institute of Technology
Boston, USA
Email: zhaox@mit.edu

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

21-3 = GA.18-02 IUTAM Symposium on Interface mechanics of complex flows and soft matter

Place: Beijing, China
Date: June 21 – June 24, 2021
Co-Chair: **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

Co-Chair: **Prof. C. Sun**
Tsinghua University
Beijing, China
Email: chaosun@tsinghua.edu.cn

Website: <http://iutam2020.pku.edu.cn>

IUTAM Representative on Scientific Committee: Prof. G. McKinley

21-4 = GA.18-06 IUTAM Symposium on Computational methods for large-scale and complex wave problems

Place: Tokyo, Japan
Date: June 25 – June 28, 2021
Chair: **Prof. K. Kishimoto**
Tokyo Institute of Technology
2-12-1 Ookayama, Meguro
152-8552 Tokyo, Japan
Email: kkishimoto@ocean.zaq.jp

IUTAM Representative on Scientific Committee: Prof. N. Aubry

21-5 = GA.18-11 IUTAM Symposium on Turbulent structure and particles-turbulence interaction

Place: Lanzhou, China
Date: July 2 – July 5, 2021
Co-Chair: **Prof. X.J. Zheng**
Xidian University
710126 Xi'an, Shaanxi, China
Email: xjzheng@xidian.edu.cn
Co-Chair: **Prof. S. Balachandar**
University of Florida
Department of Mechanical & Aerospace Engineering
231 MAE-A, P.O. Box 116250
Gainesville, FL 32611, USA
Email: bala1s@ufl.edu

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

21-6 = GA.18-08 IUTAM Symposium on Generalized continua emerging from microstructures

Place: Paris, France
Date: July 19 – July 23, 2021
Chair: **Prof. S. Forest**
Mines ParisTech CNRS
60 Boulevard Saint-Michel
75006 Paris, France
Email: samuel.forest@mines-paristech.fr

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

21-7 = GA.18-01 IUTAM Symposium on Particles, drops and bubbles in stratified environments

Place: Toulouse, France
Date: 2021, *no exact dates available yet.*
Chair: **Prof. J. Magnaudet**
CNRS & Toulouse University
Institut de Mécanique des Fluides de Toulouse
Allée Camille Soula
31400 Toulouse, France
Email: magnau@imft.fr
Website: <https://iutam-imft-2020.sciencesconf.org/>

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

21-8 = GA.18-03 IUTAM Symposium on Dynamics and interface phenomena of bubbles and droplets at multiple scales

Place: Tokyo, Japan
Date: 2021, *no exact dates available yet.*
Chair: **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

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

21-9 = GA.18-12 IUTAM Symposium on Data-driven mechanics

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

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

21-10 = GA.18-13 IUTAM Symposium on Optimal guidance and control for autonomous systems

Place: Honolulu, USA
Date: 2021, *no exact dates available yet.*
Chair: **Prof. D. Azimov**
University of Hawai'i at Manoa
2540 Dole Street, Holmes 202
96822 Honolulu, USA
Email: azimov@hawaii.edu
Website: <https://manoa.hawaii.edu/ISOGCAS2020/>

IUTAM Representative on Scientific Committee: Prof. P. Eberhard

21-11 = GA.18-15 IUTAM Symposium on Mechanics of liquid crystal elastomers

Place: Houston, USA
Date: 2021, *no exact dates available yet.*
Chair: **Prof. P. Sharma**
University of Houston
N207 Engineering Building 1
77204-4503 Houston, USA
Email: psharma@Central.UH.EDU

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

IUTAM Special Event 2021**21-S = GA.18-04 Fluid mechanics in the spirit of G. K. Batchelor**

Place: Cambridge, UK
Date: March 2021, *no exact dates available yet.*
Chair: **Prof. P.F. Linden**
University of Cambridge
DAMTP
Centre for Mathematical Sciences
Wilberforce Road
CB3 0WA Cambridge, UK
Email: pfl4@cam.ac.uk
Website: <http://www.damtp.cam.ac.uk/events/batchelorcentenary/>

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

IUTAM Summer School 2021

2021

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

Place:

Udine, Italy

Event dates:

June 21 – June 25, 2021

Coordinators:

Prof. R. Ogden

University of Glasgow

School of Mathematics and Statistics

University Place

G12 8SQ Glasgow, UK

Email: Raymond.Ogden@glasgow.ac.uk

Prof. L. Dorfmann

Tufts University

Department of Civil and Environmental Engineering

200 College Avenue

Medford, MA 02155, USA

Email: Luis.Dorfmann@tufts.edu

Website:

<http://www.cism.it/courses/C2008/>

IUTAM Endorsed Events 2020 and 2021

2020

InterPore2020 Conference

Place: Online conference
Date: August 31 – September 4, 2020
Co-Chair: **Prof. Rainer Helmig**
Email: rainer.helmig@iws.uni-stuttgart.de
Co-Chair: **Prof. Hadi Hajibeygi**
Email: H.Hajibeygi@tudelft.nl
Website: <https://events.interpore.org/event/23/>

2020

International Symposium on Co-Simulation and Solver Coupling in Dynamics

Place: Ferrol, Spain
Date: October 4 – October 7, 2020
Co-Chair: **Dr. Francisco J. González**
Email: f.gonzalez@udc.es
Co-Chair: **Prof. Javier Cuadrado**
Email: javier.cuadrado@udc.es
Website: <http://lim.ii.udc.es/events/cosim2020>

2020

6th Joint International Conference on Multibody System Dynamics and 10th Asian Conference on Multibody Dynamics

Place: New Delhi, India
Date: November 1 – November 5, 2020
Chair: **Prof. Subir Saha**
Email: saha@mech.iitd.ac.in
Website: <http://imsdacmd2020.iitd.ac.in/>

2020 **18th International Congress on Rheology**

Place: Rio de Janeiro, Brazil
Date: December 13 – December 18, 2020
Chair: **Prof. Paulo R. de Souza Mendes**
 Email: pmendes@puc-rio.br
Website: <http://icr2020.com>

2020/2021 **1st BICTAM-CISM Symposium on Dispersed
Multiphase Flows: from Measuring to Modeling**

Place: Beijing, China
Date: 2020/2021, *no exact dates available yet.*
Co-Chair: **Prof. Jiachun Li**
 Email: jcli05@imech.ac.cn
Co-Chair: **Prof. Cristian Marchioli**
 Email: cristian.marchioli@uniud.it
Website: <http://158.110.32.35/BICTAM-CISM>

**XXV International Congress
of Theoretical and Applied Mechanics
22-27 August 2021, Milan, Italy
ICTAM 2020+1**

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.

Due to the COVID-19 pandemic, the Congress has been postponed by President Alberto Corigliano and his local organizing committee to 22-27 August 2021 at the same location. For current information see the ICTAM home page, <http://www.ictam2020.org>

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 Scalescale 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>

Notice on availability of IUTAM Newsletter

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