

# INTERNATIONAL UNION OF THEORETICAL AND APPLIED MECHANICS (IUTAM)

## Activities Report - Year 2017

**Emilio F. Campana**

### 1. Introduction

Since 1948, the International Union of Theoretical and Applied Mechanics (IUTAM) publishes annual reports with detailed information on its activities. They can be consulted, together with the latest 2015 Report, at the following link: <http://iutam.org/publications/annual-reports/>

The bi-annual publication of the newsletters informs also about the upcoming Symposia and Summer Schools and about news on the International Congress of Theoretical and Applied Mechanics (ICTAM) <http://iutam.org/publications/newsletters/>

### 2. Main activities carried on by the Union during 2017 relevant for Italy and for CNR

Some of the events organized by the IUTAM in 2017 are the following:

- 17-1 = GA.14-07 IUTAM Symposium on Computational mechanics of particle-functionalized fluid and solid materials for additive manufacturing and 3D printing processes Place: Berkeley, USA Date: May 30 – May 31, 2017 Chairman: Prof. T. Zohdi University of California, Berkeley 6117 Etcheverry Hall, Department of Mechanical Engineering, UC Berkeley 94720-1740 Berkeley, United States
- 17-2 = GA.14-05 IUTAM Symposium on Dynamics and topology of vorticity and vortices Place: Carry-le-Rouet, France Date: June 13 – June 16, 2017 Chairman: Prof. M. Brøns Technical University of Denmark Department of Applied Mathematics and Computer Science 2800 Kongens Lyngby, Denmark
- 17-3 = GA.14-13 IUTAM Symposium on Multi-scale fatigue, fracture and damage of materials in harsh environments Place: Galway, Ireland Date: August 28 – September 1, 2017 Chairman: Prof. P. O'Donoghue National University of Ireland Galway University Rd Galway, Ireland
- 17-4 = GA.14-02 IUTAM Symposium on Wind waves Place: London, UK Date: September 4 – September 8, 2017 Chairman: Prof. R. Grimshaw University College London Department of Mathematics Gower Street WC1E 6BT London, UK
- 17-5 = GA.16-12 IUTAM Symposium on Intelligent multibody systems – dynamics, control, simulation Place: Sofia, Bulgaria Date: September 11 – September 15, 2017 Chairman: Prof. E. Zahariev Bulgarian Academy of Sciences Institute of Mechanics Acad. G. Bonchev St., bl 4, 1113 Sofia, Bulgari
- 17-6 = GA.14-06 IUTAM Symposium on Co-simulation and solver coupling – Recent developments in theory and application Place: Darmstadt, Germany Date: September 18 – September 20, 2017 Chairman: Prof. B. Schweizer Department of Mechanical Engineering Institute of Structural Dynamics Technische Universität Darmstadt Petersenstrasse 30 64287 Darmstadt, Germany

### 3. Activities carried on as Italian Delegate within the Union during 2017 and impact on the Italian scientific community

There were no special requested activities except those of dissemination of workshops and advanced training schools.

#### **4. Evaluation of the participation of CNR to IUTAM in terms of benefits and membership cost**

The evaluation of participation is interlocutory. IUTAM plays a role in promoting the classic topics of engineering and physics, but the initiatives are not particularly new, either in format or in substance.

#### **5. Evaluation of Italians' attendance to events and actions to improve interest and involvement**

The next ICTAM (International Congress of theoretical and Applied Mechanics) 2020, to be held in Milan, is the scientific congress of IUTAM and may represent an opportunity for scientific exchange to activate collaborations.

##### Events Carried out in Italy in 2017:

The summer meeting 2017 of the IUTAM Presidency office, held in Milan on 10 and 11 June.

##### Events Approved in 2016 to be held in 2018 in Italy:

For 2018 the following Symposium in Italy was approved:

18-1 = GA.16-02 IUTAM Symposium on Motile cells in complex environments

Place: Udine, Italy

Dates: 2018, no exact dates available yet

Chairman: Prof. C. Marchioli University of Udine

Via delle Scienze 206 33100 Udine, Italy

Email: [marchioli@uniud.it](mailto:marchioli@uniud.it)

#### **6. Italian experts with important roles within the Union or within related Commissions and Programs**

- Maria Salvetti (Italy) member of the Congress Committee elected during the GA ICTAM 2016 see page. 7 of Newletters N-2016-2
- Alberto Corigliano, as ICTAM2020 President, member of the Congress Committee appointed as a member ex officio for the period 2016 to 2020, see page 7 of Newletters N-2016-2
- Umberto Perego, as ICTAM2020 Secretary-General, will be invited to attend meetings of the Executive Committee as a guest and observer see page 8 of Newletters N-2016-2

#### **7. If Association with CNR Commission, short summary about the 2017 CNR Commission activities**

There is no Commission for IUTAM

#### **8. Conclusions**

I suggest continuing to monitor these activities, and in the future take a strong initiative to involve the network of researchers in the IUTAM/ICTAM events, or to renounce participation.

Website: <http://www.ictam2020.org>

Emilio Fortunato Campana

Rome, June 17<sup>th</sup>, 2018