

## Italy

### Member of ICHMT, AIHTC, EUROTHERM

#### (1) Overview

(Italian Standard Time, PST: UTC+1, Population: 60 million)

#### 1. Organizations

There are two national organizations related to heat and mass transfer:

**UIT (Italian Union of Thermal-Fluid Dynamics).** UIT is a non-profit organization. The UIT mission is to bring together Italian researchers, engineers and people interested in thermal and fluids problems and applications, to link them with each other and with their peers in Europe and worldwide, fostering cooperation and promoting new generations of researchers.  
<https://www.uitonline.it>

**ATI (Italian Association of Heat Transfer and Thermal Management).** Officially founded in 1947, but active since 1918, ATI is a non-profit organization which promote the applied thermal engineering in the scientific, technical and industrial fields. It handles also committees and technical regulations in the field.  
<https://www.atinazionale.it>

Other two national organizations are devoted to energy management and design of HVAC systems:

**AIGE (Italian Association of Energy Management)** spreads studies, research, experiences and activities carried out in academic, industrial and public administration environments, in the field of energy management and energy policies.  
<http://www.aigeaconca2021.univpm.it/>

**AICARR (Italian Association of Air Conditioning Heating and Refrigeration)** promotes production and dissemination of the culture of sustainable comfort and energy savings in HVAC systems.  
<https://www.aicarr.org>



#### 2. Major meetings

The heat transfer community is gathered yearly during the following conferences; the meeting are participated by many foreign scientist and experts.

- UIT Heat Transfer Conference (yearly , since 1983)
- ATI National Conference (yearly , since 1946)
- AICARR Conference (yearly , since 1969)
- AIGE Conference (yearly , since 2007)

#### 3. Major journals

“La Termotecnica” is the monthly journal of ATI, in Italian, devoted to divulgation of latest technological progresses and national codes and regulations.

There exists a Journal on HVAC system design: AICARR Journal (Journal of the Italian Association of Air Conditioning Heating and Refrigeration) [https://www.aicarr.org/Pages/EN/Resources and Publications/AiCARR\\_Journal.aspx](https://www.aicarr.org/Pages/EN/Resources and Publications/AiCARR_Journal.aspx)

In addition, an on-line UIT Newsletter is published and sent monthly by email to the members of the association.

#### 4. Foundations of Scientific Research

Ministry of University and Research MUR (Ministero dell'Università e della Ricerca)  
<https://www.mur.gov.it>

#### 5. Education (Undergraduate/Graduate School)

Elementary School, 5 years; Junior High School, 3 years; High School, 5 years.  
Most of undergraduate school education is carried out by using Italian textbooks.

The Italian higher education system is in compliance with the Bologna Process guidelines (see [https://ec.europa.eu/education/policies/higher-education/bologna-process-and-european-higher-education-area\\_en](https://ec.europa.eu/education/policies/higher-education/bologna-process-and-european-higher-education-area_en)), which introduced an European Credit Transfer System (ECTS) in study cycles, ERASMUS mobility mechanisms, diploma supplement.

Higher education is organized on three cycles of studies, leading to the academic degrees of bachelor, master and philosophy doctor.

- First cycle, 3 years, Bachelor's degree (Universities and Polytechnic Schools)
- Second cycle, 2 years, Master's degree (Universities and Polytechnic Schools)
- Third cycle, 3 years, Doctor's degree (Universities)

Courses are generally held in Italian or in English for specific paths.

#### 6. University System

Italian higher education system is articulated in public and private institutions. The private higher education institutions have to obtain prior recognition of the Ministry with the authority of the Higher Education. There is no difference between University schools and Polytechnics for the engineering education.

Both University and Polytechnic education are guided by a perspective of applied research and development, aimed at understanding and solving practical and technical problems and at providing a solid cultural and technical training at the higher level, developing the capacity for innovation and critical analysis. Scientific knowledge of theoretical and practical nature, for the scope of professional activities, also provided.

There are more than 96 public universities in Italy. Most of them offer courses in Physics and in different branches of Engineering (Civil, Industrial and Computer/Electronics).

#### 7. Major Public/Private Research Institutes

CNR – National Research Council (Consiglio Nazionale delle Ricerche).  
<https://www.cnr.it/en>

ENEA - Italian National Agency for New Technologies, Energy and Sustainable Economic Development (Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile)  
<https://www.enea.it/en>

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