

## Ireland

### Member of EUROTHERM

#### (1) Overview

(Greenwich Mean Time, GMT: UTC+0, Population: 4.9 million)

#### 1. Organisations

There are no organisations strictly related to heat and mass transfer, but rather the following general or Mechanical Engineering associations:

- Engineers Ireland (Irish Association of Professional Chartered Engineers)  
<https://www.engineersireland.ie/>
- Engineers Ireland, Mechanical and Manufacturing Division  
<https://www.engineersireland.ie/Mechanical-and-manufacturing>

#### 2. Major Meetings

There are no national meetings specifically focusing on heat transfer, however the annual Sir Bernard Crossland Symposium provides a national forum for postgraduate students in mechanical engineering to present their work in a paper and poster competition. The Sir Bernard Crossland Symposium is an “all-Ireland” event, open to participants from (the Republic of) Ireland and Northern Ireland (UK). The Symposium is organized on a rotating basis by members of the Council of Professors of Mechanical Engineering in Irish Universities (<https://www.ulster.ac.uk/conference/sbc22>, <https://www.ucd.ie/mecheng/sirbernardcrossland2018/>)

#### 3. Major Journals

There are no national journals on heat and mass transfer.

#### 4. Foundations of Scientific Research

Most State-funded research grants are administered by the following agencies:

- Science Foundation Ireland  
<https://www.sfi.ie/>
- Irish Research Council  
<https://research.ie/>
- Enterprise Ireland  
<https://www.enterprise-ireland.com/en/>
- Sustainable Energy Authority of Ireland  
<https://www.seai.ie/>

#### 5. Education

The Irish education system is made up of primary, second, third-level and further education. State-funded education is available at all levels.

- Primary (first-level) education: 6 years, starting at age 6
- Second-level education starts at age 12 and consists of a 3-year junior cycle followed by a 2-year or 3-year senior cycle depending on whether an optional Transition Year is taken following the Junior Certificate or Junior Cycle (JCPA) examination, which is taken at age 15.
- The optional Transition Year (age 16) follows the JCPA examination and is free from formal examinations. It allows students to experience a wide range of educational inputs, including work experience.
- During their final 2-3 years in the senior cycle (ages 16-18), students take one of 3 programmes, each leading to a State examination - the established Leaving Certificate, the Leaving Certificate Vocational Programme or the Leaving Certificate Applied.
- The established Leaving Certificate is the main basis upon which places in universities are allocated.
- Third-level education is made up of 7 universities, 3 technological universities (TUs) and 7 institutes of technology (ITs), substantially funded by the State.

- The [National Framework of Qualifications \(NFQ\)](#) is a system of 10 levels to classify the different standards. Third-level qualifications are Levels 6-10, and universities offer degree programmes at the Ordinary Bachelor's degrees (NFQ Level 7) or Honours Bachelor's degrees (NFQ Level 8), Masters (NFQ Level 9) and Doctorate level (NFQ Level 10).

#### 6. University System

The [Higher Education Authority](#) is the statutory agency overseeing the State funding of universities. It has an advisory role in relation to the whole sector of third-level education. Although universities in Ireland are State-funded, they are autonomous and self-governing bodies.

There are 7 universities in Ireland:

- The University of Dublin, Trinity College, generally known as [Trinity College Dublin \(TCD\)](#)
- The National University of Ireland (NUI) which is the umbrella university covering [University College Dublin \(UCD\)](#), [National University of Ireland, Galway](#), [University College Cork](#), and [National University of Ireland, Maynooth](#).
- The [University of Limerick \(UL\)](#)
- [Dublin City University \(DCU\)](#)

Most universities are organised with research activities clustered in research groups with laboratories usually headed by one or more full professors or chairs, associate professors, and assistant professors. Some assistant professors have tenure track positions.

The mandatory retirement age for public sector workers in Ireland is 70.

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

Much of the academic engineering research activity in Ireland is associated with one or more of the [Science Foundation Ireland Research Centres](#). The SFI Research Centres most relevant for heat and mass transfer are:

- [CONNECT](#) (SFI Research Centre for Future Networks & Communications),
- [AMBER](#) (SFI Research Centre for Advanced Materials and BioEngineering Research),
- [MaREI](#) (SFI Research Centre for Energy, Climate and Marine),
- [SSPC](#) (SFI Research Centre for Pharmaceuticals)

All these research centres are funded partly by the State and partly by a consortium of industry partners. In addition, there are other autonomous research institutes with relevance to heat and mass transfer:

- [Tyndall National Institute](#), a leading research centre in integrated ICT (Information and Communications Technology) hardware and systems,
- [CRANN](#) (Centre for Research on Adaptive Nanostructures and Nanodevices), Ireland's leading nanoscience institute,
- [ESRI](#) (Economic & Social Research Institute)

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