3RD IIR Conference On Cold Applications
In Life Sciences
September 12-14, 2018
Saint Petersburg, Russia

Dr Ina Colombo
IIR Deputy Director General
The International Institute of Refrigeration (IIR)

Who we are...
Mission

Founded in 1908

The International Institute of Refrigeration (IIR) is the only independent intergovernmental science and technology based organisation which promotes knowledge of refrigeration and associated technologies that improve quality of life in a cost-effective and environmentally sustainable manner including.
Key Domains

The key domains of the IIR include:

- Food quality and safety from farm to consumer
- Comfort in homes and commercial building
- Use of non-ozone depleting and low global warming refrigerants in a safe manner
- Health products and services
- Low temperature technology and liquefied gas technology
- Energy efficiency
# Science and Technology Council (STC)

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The Network

58 member countries worldwide

over 400 experts

More than 500 corporate and private members
Key Figures

Roughly **3 billion** refrigeration, air-conditioning and heat pump systems in operation across the globe

Almost **12 million** people employed in the refrigeration sector worldwide

Global annual sales amount to approximately **300 billion USD**

Refrigeration consumes about **17%** of the overall electricity used worldwide.

7.8% of the global greenhouse gas (GHG) emissions are attributed to the refrigeration sector where **63%** are from indirect emissions and **37%** are from direct emissions

Source: 29th IIR Informatory Note: The Role of Refrigeration in the Global Economy, November 2015
35th IIR Informatory Note: The impact of the refrigeration sector on climate change, November 2017
SERVICES AND RESOURCES
Information Resources

Fridoc
The world’s most comprehensive refrigeration database **with over 100,000** references

E-International Journal of Refrigeration (IJR)
the peer reviewed scientific journal; the best in its field!

- IIR Newsletter
- Books and guides
- Informatory Notes
- International Dictionary of Refrigeration
- Expertise directories
- Statements
- E-alerts
Books and Guides

CO₂ as a Refrigerant
Editor: Dr A. B. Pearson

Handbook on Indirect Refrigeration and Heat Pump Systems
Editor: Åke Melinder
Informatory Notes

The IIR publishes Informatory Notes designed to meet the needs of decision-makers worldwide, on a regular basis. These notes summarize knowledge in key refrigeration-technology and refrigeration-application domains.

Some Informatory Notes:

- 35th Note: The impact of the refrigeration sector on climate change (November 2017)
- 34th Note: Solar Cooling (April 2017)
- 31st Note: Current long-term alternative refrigerants and their possible applications (April 2016)
- 29th Note: The Role of Refrigeration in the Global Economy (November 2015)
- 30th Note: Heat-Sensitive Health Products (January 2016)
- 22nd: Applications of Cryosurgery (July 2012)
ACTIVITIES AND EVENTS

Networking opportunities and more
Research Projects

A consortium partner in EU funded research projects since 2011:

- REAL Alternatives for LIFE
- CryoHub
- SuperSmart
  - ELICiT (ended December 2016)
  - COOL-SAVE (ended April 2015)
  - REAL Alternatives (ended 2015)
  - FRISBEE (ended August 2014)
Working Groups

- Whole-body Cryotherapy
- Careers in Refrigeration "CaRe"
- Cold Chain for Pharmaceutical Products
- Cold Chain in Hot Countries
- Magnetic Cooling
- Phase-Change Materials and Slurries for Refrigeration and Air Conditioning
- Refrigeration Safety
Conferences

- IIR-Gustav Lorentzen on Natural Refrigerants (GL)
- Sustainability and the Cold Chain (ICCC)
- Magnetic Refrigeration at Room Temperature (Thermag)
- Phase-Change Materials and Slurries for Refrigeration and Air Conditioning (PCM)
- Ammonia and CO2 Refrigeration Technologies
- Thermophysical Properties and Transfer Processes of Refrigerants (TPTPR)
- Compressors and Coolants
- Cryogenics
- Liquefied Natural Gas (LNG)

Various organisers:
25th IIR International Congress of Refrigeration 2019 – ICR 2019

ICR 2019 TOPICS
- Cryophysics & Cryoengineering
- Liquefaction & Separation of Gases
- Thermodynamics & Transfer Processes
- Refrigerating Equipment
- Cryobiology, Cryomedicine & Health Products
- Food Science & Engineering
- Refrigerated Storage
- Refrigerated Transport
- Air Conditioning
- Heat Pumps & Energy Recovery
- Sustainable and High-Performance Buildings

REFRIGERATION IN CANADA

Canadian as well as many other North American manufacturing and marketing companies specialize in refrigeration, heat pump and air conditioning efficient systems for residential, commercial and industrial applications. R&D is as prevalent in world renowned research centers, such as CANDAS Energy (Varennes, Ottawa, Vancouver) and the Hydro-Québec Research Institute (LTE Energy Technology Laboratory, Shawinigan, Québec), as it is in Canada’s Agri-Food Process Engineering, Science and Technology facilities (Québec, New Brunswick, Ontario) and academic organizations, such as École Polytechnique and École de Technologie Supérieure (ETS) of Montréal, and McGill, Toronto, Laval, and Sherbrooke Universities. R&D activity in these centres focuses on developing and promoting advanced refrigeration, heat pump and air conditioning technologies, making them more and more energy efficient, while reducing their environmental impacts and improving human quality of life. According to recent figures released by the publisher of the Canadian Refrigeration Journal, Canada is among the most prolific producers of scientific publications on refrigeration worldwide.

MONTREALERS KNOW WHAT COLD IS ALL ABOUT...
IN 2019 WE WILL GIVE YOU A HEART-WARMING EXPERIENCE!

MONTREAL

THE FUN COSMOPOLITAN CITY
WITH THE FRENCH FLAIR.
So accessible. So efficient. So connected. So safe.

THE 25TH
IIR INTERNATIONAL CONGRESS OF REFRIGERATION
August 24–30, 2019
Montréal, Québec, Canada

IMPORTANT DATES
- ABSTRACT SUBMISSION STARTS JANUARY 15, 2018
- ABSTRACT DUE DATE JUNE 28, 2018

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