



UNITED NATIONS ENVIRONMENT PROGRAMME
INTERNATIONAL INSTITUTE OF REFRIGERATION
AREA EUROPEAN RAC ASSOCIATION
CENTRO STUDI GALILEO
ASSOCIAZIONE TECNICI DEL FREDDO
EUROPEAN ENERGY CENTRE

19th EUROPEAN CONFERENCE
THE LATEST TECHNOLOGY IN
REFRIGERATION AND AIR CONDITIONING

ENVIRONMENT, ENERGY, TRAINING, CERTIFICATION,
LEGISLATION, STANDARDS, SAFETY

Politecnico of Milan, De Donato Room
10 - 11 June 2021

In Association with Global Leading Researchers and Experts from:
United Nations Environment Programme (UNEP)
United Nations Industrial Development Organization (UNIDO)
European Commission DG Clima
International Institute of Refrigeration (IIR)
Association Française du Froid (AFF)
AREA - ASERCOM - ASHRAE - AHRI - EPEE
Politecnico of Milan, Turin
Universities of Ancona, Genoa, Padua
and all the AC&R European Associations



Politecnico di Milano
Piazza Leonardo Da Vinci, 32 - Milano (Italia)

GENERAL INTRODUCTION

F-Gas Regulation 517/2014 and alternative refrigerants.
New plants with reference to energy and environmental
optimization. World situation.

J. Curlin United Nations Environment Programme – UNEP
D. Coulomb International Institute of Refrigeration – IIR
M. Buoni Air Conditioning & Refrigeration Association – AREA

First Session

NEW REFRIGERANTS AND FUTURE PERSPECTIVES WITH
REFERENCE TO EU 517/2014, F-GAS REGULATION,
ENERGY SAVING

CHAIRPERSONS

A. Cavallini Università di Padova - IIR
J. Curlin United Nations Environment Programme– UNEP
D. Coulomb International Institute of Refrigeration – IIR
W. Chakroun ASHRAE - A. Voigt EPEE
C. Zilio, D. Del Col Università di Padova

New low GWP refrigerants. Developments, perspectives and
forecasts on new alternative refrigerants. New synthetic and
natural refrigerants, pure and mixtures HFC, R32, HFO-
1234yf/ze/za, HFO mixtures, CO2, ammonia, hydrocarbons;
secondary refrigerants; lubricants for synthetic refrigerants.

Speakers: A. Cavallini, D. Coulomb IIR - N. Kagawa JSRAE - W.
Chakroun ASHRAE - C. Zilio Università di Padova - D. Del
Col Università di Padova - P. de Larminat Johnson Controls -
B. Bella Emerson - J. De Bernardi Honeywell - N. Roberts
Chemours - C. Marotta General Gas - D. Barbierato
SandenVendo

Debate

With the participants in the conference

Buffet 1 pm – Coffee Break 11 am

Timetable 9 am – 1 pm / 2 pm – 6.30 pm

Second Session

NEW COMPONENTS & EQUIPMENT IN RELATION TO NEW
REFRIGERANTS, ENERGY SAVING AND ENVIRONMENTAL
ISSUES, RESULTS AND UPDATES IN NEW SYSTEMS

CHAIRPERSONS

E. Macchi, G. Lozza Politecnico of Milan
W. Chakroun ASHRAE - S. Yurek AHRI
A. Voigt EPEE - F. Polonara UNEP TEAP - RTOC
M. Masoero Politecnico of Turin

Energy issues in relation to the air conditioning and
refrigeration components and plants optimization; eco design,
eco-labelling, energy saving. Secondary refrigerant plants, CO2,
HC systems. Compressors and systems. Energy optimization.
New components for domestic, commercial and industrial
refrigeration and air conditioning. Process and design.

Speakers: E. Macchi, G. Lozza Politecnico di Milano - A. Voigt
EPEE - S. Filippini LU-VE Group - M. Dallai Officine Mario
Dorin - P. Trevisan Bitzer - M. Bassi Embraco - G. Borin
Mitsubishi Electric Europe - F. Fadiga GI Industrial Holding -
A. Hafner Norwegian University of Science & Technology - S.
Minetto CNR Padova - B. Lamanna Carel - E. Syngounas
Metro - M. Ascani Angelantoni Industrie

Debate

With the participants in the conference

Conference Organizer & Secretariat

CENTRO STUDI GALILEO &
ASSOCIAZIONE TECNICI DEL FREDDO

To participate, please get in touch with us:
conference@centrogalileo.it / +39\_0142 452403

Subscription fee to the conference:

- Early bird fee: Euro 180 + VAT (22%) – valid
until 31st December 2020
- ATF Members fee: Euro 330 + VAT (22%)
- Standard fee: Euro 360 + VAT (22%)

## PRESIDENTS & KEYNOTE SPEAKERS

**JIM CURLIN**, *Acting Head/Network and Policy Manager*  
United Nations Environment Programme, OzonAction – UNEP

**DIDIER COULOMB**, *Director General*  
**ALBERTO CAVALLINI**, *Honorary President*  
International Institute of Refrigeration – IIR

**OLE NIELSEN**, *Chief, Montreal Protocol Division*  
United Nations Industrial Development Organization – UNIDO

**NICCOLÒ COSTANTINI**, *Policy Officer*  
European Commission, Climate Action

**STEPHEN YUREK**, *President and CEO*  
Air Conditioning, Heating and Refrigeration Institute – AHRI

**WALID CHAKROUN**, *Vice President for the  
Publishing and Education Council*  
The American Society of Heating, Refrigeration and Air  
Conditioning Engineers – ASHRAE

**WANGYANG HU**, *Deputy Secretary General*  
Chinese Association of Refrigeration

**Invited (tba)**  
Food and Agriculture Organization – FAO

**ANDREA VOIGT**, *Director General*  
European Partnership for Energy and the Environment – EPEE

**MARCO BUONI**, *President*  
Air conditioning and Refrigeration European Association – AREA

**WOLFGANG ZAREMSKI**, *President of the Association of  
European Refrigeration Component Manufacturers – ASERCOM*

**FRANCESCO SCUDERI**, *Deputy Secretary General*  
European Industry Association – Eurovent

**GERALD CAVALIER**, *President*  
CEMAFROID | Association Française du Froid – AFF

**Invited (tba)**, *President*  
Associazione costruttori sistemi climatizzazione – Assoclisma

**ENNIO MACCHI**, *Professor Emeritus*  
**GIOVANNI LOZZA**, *Professor Energy Dept*  
Politecnico di Milano

**MARCO MASOERO**, *Director Energy Dept. & VicePresident*  
Politecnico di Torino | Associazione Tecnici del Freddo

**FABIO POLONARA**, *Co-chair TEAP RTOC & Director Industrial  
Engineering Dept.*, Università Politecnica delle Marche

**LUCA TAGLIAFICO**, *Professor*  
Università di Genova

9 am **Friday** – 11 June 2021

## INTRODUCTION

**J. Curlin** United Nations Environment – UNEP  
**D. Coulomb** International Institute of Refrigeration – IIR

### Third Session

**F-GAS REGULATION 517/2014,  
EUROPEAN AND INTERNATIONAL PHASE DOWN,  
CERTIFICATION AND LICENCES**

#### CHAIRPERSONS

**A. Cavallini** Università di Padova - IIR  
**J. Curlin** UNEP - **N. Costantini** EU Commission  
**S. Yurek** AHRI - **A. Voigt** EPEE  
**W. Zaremski** ASERCOM - **F. Scuderi** Eurovent

**The Kigali Amendment: HFC Phase-down, flammable refrigerants' standards, illegal refrigerants, inspections, logbook, maintenance. Containment, recovery and recycling. Training and certification in Europe and Italy. Products' and components' certification. Mobile air conditioning.**

**Speakers: N. Costantini** EU Commission DG Clima - **A. Voigt** EPEE - **W. Zaremski** ASERCOM - **F. Scuderi** Eurovent - **S. Yurek** AHRI - **F. Walravens** EIA - **M. Buoni** AREA - **M. Creamer** IOR

Conclusions on the latest TEAP-RTOC Report (**Polonara, Malvicino**)

### Fourth Session

**NEW CONTROL TECHNOLOGIES, THE COLD CHAIN,  
COLD STORAGE AND TRANSPORT,  
FOOD CONSERVATION**

#### CHAIRPERSONS

**D. Coulomb**, **A. Cavallini** IIR - **O. Nielsen** UNIDO  
(tba) FAO - **N. Costantini** EU Commission  
**G. Cavalier** AFF - **M. Masoero** Politecnico of Turin

**New technology in the cold chain: vehicles, trains, ships, cold storages; food preservation; applications in commercial and domestic refrigeration, supermarkets and industry. Energy saving optimization. Solar refrigeration. Insulation; environmental control in food processes, safety control in the cold chain ATP.**

**Speakers: D. Coulomb** IIR - (tba) FAO - **O. Nielsen** UNIDO - **E. Campagna** Rivoira - **G. Cavalier** AFF - **M. Masoero** ATF & Politecnico of Turin - **M. Sakandé** U-3ARC - **D. Tairis** Hellas Union Fgas

2 pm **Friday** – 11 June 2021

## Fifth Session

### EFFICIENCY AND RENEWABLE COOLING

#### CHAIRPERSONS

**M. Masoero** Politecnico of Turin  
**J. Curlin** UNEP - **D. Coulomb** IIR - **N. Kagawa** JSRAE  
**O. Nielsen** UNIDO - (tba) Assoclisma  
**L. Tagliafico** Università di Genova

**Energy efficiency in plants. Heat pumps, cooling with absorption and adsorption plants. Renewable energy and chemistry in air conditioning and refrigeration. Evaporative cooling, district cooling and magnetic cooling.**

**Speakers: (tba)** Assoclisma - **T. Funder-Kristensen** Danfoss - **K. Berglöf** ClimaCheck - **L. Tagliafico** Università di Genova - **P. Mattavelli** Errecom

### Debate

With the participants in the conference

## CONCLUSIONS AND RECOMMENDATIONS

### SOLUTIONS TO OBLIGATIONS DUE TO NEW REGULATIONS AND TECHNOLOGY, CLIMATE CHANGE

**D. Coulomb** International Institute of Refrigeration – IIR  
**J. Curlin** United Nations Environment Programme – UNEP  
**M. Buoni** Air Conditioning and Refrigeration Association – AREA

### Conference Organizer & Secretariat

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