



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 di Milano
W. Chakroun ASHRAE - **S. Yurek** AHRI
A. Voigt EPEE - **F. Polonara** UNEP TEAP - RTOC
M. Masoero Politecnico di Torino

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 - **S. 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 and Secretariat:

CENTRO STUDI GALILEO &
ASSOCIAZIONE TECNICI DEL FREDDO

To participate, please get in touch with us via:
conference@centrogalileo.it / 0142 452403

Subscription fee to the conference:

- Standard fee Euro 360 + VAT 22%
- ATF Members fee Euro 330 + 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 and Secretariat:

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