

40<sup>th</sup>

# International Heat Transfer Conference

**JUNE**  
**26-28**  
2023

**PALAZZO  
BERNABEI**  
ASSISI



A.D. 1308  
**unipg**

UNIVERSITÀ DEGLI STUDI  
DI PERUGIA

# WELCOME LETTER

Dear Conference Delegate, welcome to the 40<sup>th</sup> UIT Heat Transfer Conference, organized by the Department of Engineering at the University of Perugia (Italy) and held at Palazzo Bernabei, Assisi, on June 26-28, 2023.

The annual UIT Conference, which has grown over time, is held in Assisi for the first time. The scope of the conference covers a range of topics in computational fluid-dynamics and heat transfer, thermophysical properties, heat and mass transfer for sustainable energy systems, experimental techniques for heat and mass transfer, multiphase fluid-dynamics, natural, forced and mixed convection.

The Conference, in this 40<sup>th</sup> edition, includes three invited lectures by international recognised scientists: Ibrahim Dincer from Ontario Tech. University (Oshawa, Ontario) about the role of thermodynamics in integrated energy systems, on June 26<sup>th</sup>, Gary Neil Coleman from NASA Langley Research Center (Hampton, USA) about numerical studies of turbulent supersonic plane-channel flows, on June 27<sup>th</sup>, and Sauro Filippeschi from University of Pisa (Italy) about wickless two phase heat transfer devices, on June 28<sup>th</sup>.

The 2023 Conference will be attended by over 140 delegates and over 100 papers were contributed, articulated in three technical parallel oral sessions every day and a poster session on June 27<sup>th</sup>.

At the end of the first conference day, on June 26<sup>th</sup>, a guided tour at the Basilica di San Francesco d'Assisi is planned and at the end of the second conference day, on June 27<sup>th</sup>, the traditional social dinner will take place.

We hope this conference will be an occasion of meeting and knowledge sharing between scientists in the fields of thermo-fluid dynamics and heat transfer and to visit Assisi, one of the most beautiful art cities in Italy and in the world.

Special thanks go to all the people who contributed to the success of the event, the Organizing and Scientific Committees, and to all the Conference attendees.

**FRANCO COTANA** and **FEDERICO ROSSI**  
Chairs of 40<sup>th</sup> UIT Heat Transfer Conference

**CINZIA BURATTI**  
President of the Organizing Committee

# CONFERENCE DAY 1 | JUNE 26<sup>th</sup>, 2023

**09:30**

**CONFERENCE REGISTRATION**

**10:00**

**Opening Ceremony** (Great Hall/Room n. 4)

**MAURIZIO OLIVIERO**

(Rector of the University of Perugia)

**STEFANIA PROIETTI**

(Mayor of Assisi)

**ERMANNIO CARDELLI**

(Director of the Department of Engineering)

**SARA RAINIERI**

(President of UIT Association)

**CINZIA BURATTI**

(President of the Organizing Committee)

**11:30**

**COFFEE BREAK**

**12:00**

**Keynote Lecture:**

**prof. IBRAHIM DINCER**

Ontario Tech. University (CANADA)

*The Role of Thermodynamics in Integrated Energy Systems*

(Great Hall/Room n. 4)

**13:00**

**LUNCH BREAK**

**14:30**

**Technical session A1**

Computational fluid dynamics and heat transfer (Great Hall)

**Technical session C1**

Heat and mass transfer for sustainable energy systems (Room n. 4)

**Technical session D1**

Experimental techniques for heat and mass transfer (Room n. 2)

**16:10**

**COFFEE BREAK**

**16:40**

**Technical session A2**

Computational fluid dynamics and heat transfer (Great Hall)

**Technical session C2**

Heat and mass transfer for sustainable energy systems (Room n. 4)

**Technical session D2**

Experimental techniques for heat and mass transfer (Room n. 2)

**18:00**

**End Conference Work Day-1**

**18:45**

**GUIDED TOUR AT THE BASILICA DI SAN FRANCESCO**

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## CONFERENCE

### DAY 2 | JUNE 27<sup>th</sup>, 2023

**08:30**

**CONFERENCE REGISTRATION**

**9:00**

#### Technical session A3

Computational fluid dynamics and heat transfer  
(Great Hall)

#### Technical session B1

Conduction, radiation, thermophysical properties  
(Room n. 4)

#### Technical session E1

Multiphase fluid dynamics and heat transfer  
(Room n. 2)

**10:40**

**COFFEE BREAK**

**11:00**

#### Technical session A4

Computational fluid dynamics and heat transfer  
(Great Hall)

#### Technical session C3

Heat and mass transfer for sustainable energy  
systems (Room n. 4)

#### Technical session E2

Multiphase fluid dynamics and heat transfer  
(Room n. 2)

**12:00**

**Keynote Lecture:**

**dr. GARY COLEMAN**

Langley Research Center - NASA (USA)

*Numerical studies of turbulent supersonic  
plane-channel flows - Implications for  
modeling high-speed boundary layers*  
(Great Hall/Room n. 4)

**13:00**

**LUNCH BREAK**

**14:30**

#### Technical session A5

Computational fluid dynamics and heat transfer  
(Great Hall)

#### Technical session C4

Heat and mass transfer for sustainable energy  
systems  
(Room n. 4)

(Room n. 4)

#### Technical session F1

Natural, forced and mixed convection  
(Room n. 2)

**Poster session** (Room n. 3)

The posters will be exhibited on Monday 26<sup>th</sup>,  
Tuesday 27<sup>th</sup> and Wednesday 28<sup>th</sup>. Authors are  
requested to be present during the poster session  
(Tuesday, June 27<sup>th</sup>, 14:30 – 16:10)

**16:10**

**COFFEE BREAK**

**17:00**

**UIT Assembly** (Great Hall/Room n. 4)

**18:00**

**End Conference Work Day-2**

**20:00**

**SOCIAL DINNER AT WINDSOR SAVOIA  
IN ASSISI**

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## CONFERENCE

### DAY 3 | JUNE 28<sup>th</sup>, 2023

**08:30**

**CONFERENCE REGISTRATION**

**9:00**

#### Technical session E3

Multiphase fluid dynamics and heat transfer  
(Great Hall)

#### Technical session C5

Heat and mass transfer for sustainable  
energy systems (Room n. 4)

#### Technical session F2

Natural, forced and mixed convection  
(Room n. 2)

**10:40**

**COFFEE BREAK**

**11:10**

**Keynote Lecture:**

**prof. SAURO FILIPPESCHI**

University of Pisa (Italy)

*Wickless heat pipe applications: current  
advances and future perspectives*  
(Great Hall/Room n. 4)

**12:10**

**Closing Ceremony**

(Great Hall/Room n. 4)

**13:00**

**LIGHT LUNCH**



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## SECRETARIAT

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Full program here:



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[uit2023.it](http://uit2023.it)