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Politecnico  
di Bari



Be TOP Lab

2024

Bari

# XXVII AIPT

Associazione Italiana Proprietà Termofisiche

Politecnico di Bari

Talent Garden

Via Orabona n.4, Bari

## XXVII Convegno AIPT

Associazione Italiana Proprietà Termofisiche

20 settembre 2024

[PROGRAMMA](#)



**09.00 – 09.30** [Apertura dei lavori](#)

**09.30 – 10.30** [Assemblea Soci AIPT](#)

Comunicazioni  
Approvazione bilanci  
Rinnovo cariche sociali  
Analisi di consuntivo ECTP2023  
Varie ed eventuali

**10.30 – 11.00** [Pausa caffè](#)

[PREMIO ERMANNO GRINZATO \(Chair Umberto Berardi\)](#)

**11.00 – 11.20**

*Feliciano Falcone, Gianluca Coccia*

A NEW CORRELATION TO PREDICT THE VISCOSITY OF NANOFUIDS BASED ON WATER, ETHYLENE GLYCOL, AND PROPYLENE GLYCOL

**11.20 – 11.40**

*Eleonora Baccega, Laura Vallese, Michele Bottarelli*

ENHANCEMENT OF THERMAL CONDUCTIVITY OF PARAFFIN PCM WITH METAL FOAMS

**11.40 – 12.00**

*Davide Menegazzo, Giulia Lombardo, Laura Vallese, Sergio Bobbo*

EXPERIMENTAL COMPRESSED LIQUID DENSITY MEASUREMENTS AND CORRELATION OF THE BINARY MIXTURE {N-PENTANE (R601) + TRANS-1-CHLORO-3,3,3-TRIFLUORO-1-PROPENE (R1233ZD(E))}

**12.00 – 12.20**

*Giulia Lombardo, Davide Menegazzo, Laura Vallese, Michele De Carli, Fabio Poletto, Sergio Bobbo*

EXPLORING LOW-GWP ALTERNATIVES FOR HEAT PUMPS: A DROP-IN COMPARATIVE STUDY OF R1234YF/R600A AND R134A

**12.20 – 12.40**

*Hala Salhab, Mahdi Zanjani, Ines Belmir, Alberto Lagazzo, Sergio Nardini, Francesca Zanoni, Mona Sam, Saulo Rocha Ferreira, Antonio Caggiano*

GREEN MORTARS MADE WITH TES ENHANCED RECYCLED WOOD AGGREGATES

**12.40 – 13.45** [Intervallo pranzo](#)

[RELAZIONI SCIENTIFICHE \(Chair Giovanni Ferrarini\)](#)

**13.45 – 14.00**

*Nima Razmjoo, Alice Scolieri, Stefano Signorini, Manuele Gatti*

COMPARISON OF DIFFERENT CALIBRATION METHODS FOR VIBRATING TUBE DENSIMETER

**14.00 – 14.15**

*Pengyu Cheng, Sebastiano Tomassetti, Francesca Luzi, Pietro Forcellese, Tiziano Bellezze, Giovanni Di Nicola*

ANALYSIS OF SOLID-SOLID PHASE CHANGE MATERIALS FOR SOLAR THERMAL APPLICATIONS

**14.15 – 14.30**

*Paolo Bison, Giovanni Ferrarini, Stefano Rossi*

ON MEASURING THERMAL DIFFUSIVITY OF A THIN FOIL: PHOTOTHERMAL VARIATIONS

**14.30 – 14.45**

*Giampaolo D'Alessandro, Filippo de Monte, Stefano Sfarra*

OPTIMUM EXPERIMENTAL SET-UP FOR THERMAL CONDUCTIVITIES MEASUREMENT OF COMPOSITE MATERIALS

**14.45 – 15.00**

*Elena Campagnoli, Valter Giaretto*

ADAPTED LASER-FLASH METHOD FOR ESTIMATING THERMAL DIFFUSION PROPERTIES OF A POROUS MATERIAL SURROUNDED BY COMPACT LAYERS

**15.00 – 15.15**

*Francesco Anaclerio, Adriana Dammico, Nicola Pastore, Concetta I. Gasi*

CAN BIOFILM GROWTH AFFECT THE HEAT TRANSFER BEHAVIOUR IN FRACTURED MEDIA?

**15.15 – 15.30**

*Konstantin Samukov, Silvia Lasala*

CALCULATION OF THE THERMODYNAMIC PROPERTIES OF BINARY REACTIVE MIXTURE. AN APPLICATION TO  $N_2O_4 = 2 NO_2$

**15.30 – 15.45** [Pausa caffè](#)

**15.45 – 16.00**

*Mahdi Zanjani, Hala Salhab, Ines Belmir, Alberto Lagazzo, Sergio Nardini, Francesca Zanoni, Mona Sam, Saulo Rocha Ferreira, Antonio Caggiano*

MODELLING THE THERMAL ENERGY STORAGE OF GREEN MORTARS MADE WITH TES RECYCLED WOOD AGGREGATES

**16.00 – 16.15**

*Chiara Pezzoli, Francesca Zanoni, Donà Giulia, Jean Luc Dauvergne, Christina Strunz, Edurne Erkizi, Antonio Caggiano*

ANALYSIS OF GREEN ENCAPSULATION OF BIO-BASED PHASE CHANGE MATERIAL FOR THE PRODUCTION OF SMART MATERIALS FOR THE BUILDING SECTOR

**16.15 – 16.30**

*Gianmarco Sciurti, Alberto Muscio, Umberto Berardi*

THE ROLE OF THERMOPHYSICAL PROPERTIES IN THE ENERGY RETROFIT OF BUILDINGS WITH INTERMITTENT USE

**16.30 – 16.45**

*Laura Vallese, Giulia Lombardo, Davide Menegazzo, Laura Fedele, Sergio Bobbo*

COMBINING THERMOCHEMICAL AND PHASE CHANGE MATERIALS FOR THERMAL ENERGY STORAGE: THE ECHO PROJECT

**16.45 – 17.00**

*Umberto Berardi, Khaled Khaled*

HYDROTHERMAL SYNTHESIS AND CHARACTERIZATION OF VANADIUM DIOXIDE NANOPARTICLES FOR ARCHITECTURAL GLAZING APPLICATIONS

**17.00 – 17.15**

*Amanda Aguiar, Antonio Caggiano, Romildo Toledo Filho*

IMPACT OF WOOD BIO-AGGREGATE CONTENT ON THE THERMO-PHYSICAL PROPERTIES OF BIO-BASED COMPOSITES

**17.15 – 17.30** [Conferimento Premio "Ermanno Grinzato"](#)

**17.30 – 18.00** [Conclusione dei lavori](#)