

May 22nd - 23rd 2017

Politecnico di Milano

Campus PIACENZA

via Scalabrini 76



POLITECNICO
MILANO 1863

3rd MATER MEETING

INNOVATION & TRENDS IN WASTE MANAGEMENT

May 22nd, 2017

Session 1: **STRATEGIES AND PERCEPTIONS ON WASTE MANAGEMENT**

Stefano Consonni, Dip. di Energia - Politecnico di Milano

Session 2.1: **ECONOMIC REGULATION OF WASTE MANAGEMENT**

Antonio Massarutto, Università degli Studi di Udine

Session 2.2: **CLOSING THE LOOP: POTENTIALITY AND CRITICAL ISSUES**

Lucia Rigamonti, DICA - Politecnico di Milano

May 23rd, 2017

Session 3: **PROCESSES AND TECHNOLOGIES FOR ENERGY RECOVERY**

Federico Viganò, Dip. di Energia - Politecnico di Milano

Session 4: **PROCESSES AND TECHNOLOGIES FOR MATERIAL RECOVERY**

Mario Grosso, DICA - Politecnico di Milano

INFO & REGISTRATIONS

www.mater.polimi.it

ORGANIZATION COMMITTEE:

✉ mater@polimi.it

☎ +39.0523.356886

📄 [MatER_StudyCenter](#)

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The event arises from the fundamental goal of MatER that is providing a thorough, objective representation of technologies and policies for **material and energy recovery from waste**, thereby contributing to move toward sustainable waste management. The Meeting aims at being an update on latest trends in **Sustainable Waste Management**, dealing with regulatory, strategic and technical-scientific aspects.

*The event is organized with the scientific support of **DICA (Department of Civil and Environmental Engineering) and Energy Department of the Politecnico di Milano.***

WITH THE SUPPORT OF:



SPONSORED by:



MatER Study Center
via Nino Bixio 27/C,
29121, Piacenza, Italy

SCIENTIFIC COMMITTEE:

SESSION CHAIRMEN



PROF. STEFANO CONSONNI
Energy Dept. - Politecnico di Milano

Chair of Session 1 **"Strategies and perceptions on waste management"**



ENG. LUCIA RIGAMONTI
DICA (Dept. of Civil and Environmental Engineering) - Politecnico di Milano

Chair of Session 2 **"Closing the loop: potentialities and critical issues"**



ENG. FEDERICO VIGANÒ
Energy Dept. - Politecnico di Milano

Chair of Session 3 **"Processes and technologies for energy recovery"**



PROF. MARIO GROSSO
DICA (Dept. of Civil and Environmental Engineering) - Politecnico di Milano

Chair of Session 4 **"Processes and technologies for material recovery"**

OTHER MEMBERS

- Umberto Arena, *Seconda Università degli Studi di Napoli*
- Thomas Fruergaard Astrup, *Technical University of Denmark (DK)*
- Giorgio Buonanno, *Università degli Studi di Cassino*
- Ennio Carnevale, *Università degli Studi di Firenze*
- Marco J. Castaldi, *The City College of New York City (US)*
- Stefano Cernuschi, *Politecnico di Milano*
- Raffaello Cossu, *Università degli Studi di Padova*
- Domenico Laforgia, *Università del Salento*
- Michele Giugliano, *Politecnico di Milano*
- Bettina Kamuk, *Ramboll Group (DK)*
- Ennio Macchi, *Politecnico di Milano*
- Antonio Massarutto, *Università degli Studi di Udine*
- Ange Nzihou, *École des mines d'Albi-Carmaux (FR)*
- Antonio Perdichizzi, *Università degli Studi di Bergamo*
- Alessandra Poletti, *Sapienza - Università di Roma*
- Peter Quicker, *RWTH Aachen University*
- Marco Ragazzi, *Università degli Studi di Trento*
- Piero Salatino, *Università degli Studi di Napoli*
- Fabio Tatano, *Università degli Studi di Urbino*
- Nicholas J. Themelis, *Columbia University (US)*
- Giuseppe Tipaldo, *Università degli Studi di Torino*
- Costas Velis, *University of Leeds (UK)*
- Gaspare Viviani, *Università degli Studi di Palermo*

MatER Meeting 2017 - May 22nd & 23rd

INNOVATION AND TRENDS IN WASTE MANAGEMENT

SESSION CHAIRMEN: S. Consonni, L. Rigamonti, A. Massarutto, F. Viganò, M. Grosso

Piacenza Campus - Politecnico di Milano: Aula A, via Scalabrini 76, Piacenza, Italy

May 22nd 2017

8:15 Participants Registration

Session 1: Strategies and perceptions on waste management

9:15 Welcoming Addresses & Introduction

9:30 An underestimated technology for Renewable Energy and Climate Control

09:55 Waste logistics optimisation: from collection of MSW to treatment and disposal flow management

10:20 Circular Economy Principles and Waste Management System of Brescia

10:45 Coffee break - Poster Session

11:15 Lung cancer risk assessment at receptor site of an incinerator plant in Italy

11:40 KEYNOTE LECTURE: To maximise EfW delivery, simple public acceptance of EfW isn't good enough

12:10 Discussion & Questions

12:30 Lunch

Chair: S. Consonni

S. Consonni - MatER/Politecnico di Milano
N.J. Themelis - Columbia University, USA

M. Pozzi - Optit Srl, Cesena

M.L. Venuta - Cattolica University

M. Scungio - University of Cassino and Southern Lazio
Paul Davison - Proteus Environmental Communications, Oxford, UK

Session 2.1: Economic regulation of waste management

14:00 Guests Presentation & Round Table Introduction

14:15 Una panoramica sulla regolazione delle tariffe di accesso agli impianti di trattamento rifiuti

Round Table Discussion: AGCM (Italian Competition Authority) - AEEGSI (Italian Regulatory Authority for Electricity Gas and Water) - UTILITALIA - ATERSIR Emilia Romagna - HERAMBIENTE - CONAI

15:25 Closure by the Italian Minister of the Environment

15:45 Coffee break - Poster Session

Session 2.2: Closing the loop: potentiality and critical issues

16:15 KEYNOTE LECTURE: Complex value optimization for resource recovery: A novel analytical framework and tool for circular economy

16:45 Mass Balance And Economic Performance Of A Green Waste Composting Plant - Case Study Of Rodengo Saiano Plant

17:10 Environmental impacts of the different schemes for the management of municipal waste in Galicia

17:35 A Methodology To Estimate Benefits From WEEE Recycling - Ecodom Case Study

18:00 Discussion & First day closing

Chair: A. Massarutto

A. Massarutto - Un. degli studi di Udine
A. Moretto - Ente di Bacino Padova 2

C. Benassi (AGCM), A. Biancardi (AEEGSI), A. Spaziani (UTILITALIA), V. Belladonna (ATERSIR Emilia Romagna), F. Brandolini (HERAMBIENTE), CONAI (tbc)

Gian Luca Galletti - Ministro dell'Ambiente e della Tutela del Territorio e del Mare

Chair: L. Rigamonti

Costas Velis - University of Leeds, UK

A. Carrara - Linea Energia SpA

M.T. Moreira - Un. of Santiago de Compostela, Spain

L. Campadello - Ecodom, Saronno
5-10 min

19:30 Guercino Exhibition Guided Tour @ Palazzo Farnese, Piacenza

20:30 GALA DINNER @ Palazzo Farnese, Piacenza

May 23rd 2017

Session 3: Processes and technologies for energy recovery

9:30 KEYNOTE LECTURE

10:00 A Life Cycle Assessment of a waste-to-biomethane production

10:25 Wood combustion ash for the upgrading of biogas from anaerobic digestion

10:50 Anaerobic digestion laboratory test to evaluate the efficiency of biogas production from biowaste

11:15 Coffee break - Poster Session

11:45 Technical Assessment Of Gasification Technologies In The Usa

12:10 Modeling gasification of waste-derived fuels in a rotary kiln converter operated with oxygen staging

12:35 Discussion & Questions

12:45 Lunch

Chair: F. Viganò

Franz Neubacher - UVP GmbH, Vienna, Austria
U. Arena - University of Campania, Caserta
L. Lombardi - Niccolò Cusano University, Roma
M. Soldano - CRPA, Research Centre on Animal Production, Reggio Emilia

M. Castaldi - The City College of New York, USA

C. Tregambi - University of Napoli Federico II

Session 4: Processes and technologies for material recovery

14:30 KEYNOTE LECTURE: Thermo-Recycling - Implementing a new recycling strategy

15:00 Sludge from mining and processing stone: strategies to improve resource efficiency and promote recycling according to the pillars of the european commission

15:25 Challenges in carbon-fiber disposal and recycling

15:50 Coffee break - Poster Session

16:20 Future challenges for the Italian biowaste recycling sector

16:45 Glass waste³ recovery: new technologies for corks and plastic separation

17:10 The reuse of solid residues from mass-burning and fluidized-bed reactors for concrete production

17:35 Final Discussion & Meeting Closing

Chair: M. Grosso

Daniel Boeni - KEZO WtE plant Director, Hinwil, CH

R. Bellopede - Politecnico di Torino

M. Limburg - RWTH Aachen University, Germany

M. Centemero - CIC, Monza Brianza

G. Zanotti - Politecnico di Torino

A. Abbà - University of Pavia

5-10 min

The MatER Meeting 2017 is SPONSORED by:



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**Info & REGISTRATION
details at the website:
www.mater.polimi.it**

POSTER SESSIONS

The allocation of the abstracts submitted was undertaken by the Organizing Committee according to their scientific quality, innovation and relevance of the subject, together with the need to preserve a balance of topics within the 4 Sessions.

Some works will be illustrated during the Oral Sessions and the rest will be presented **in 4 Poster Sessions, distributed among the 2 days, that will take place during the coffee breaks of 30 minutes each.**

The works that have been selected as Posters have been divided as well according to the affinity to the topics of each session, but they will be shown and will remain available during the 2 days of the Meeting, independently from the scheduling of each session.

SESSION Topic	13 POSTER Presentations	
S.1	Environmental Sustainability Of Food Waste Management Strategies At Regional Level Ruolo Della Respirimetria Applicata Ai Rifiuti Secondo La Prospettiva Della Economia Circolare In Unione Europea Optimization of waste collection systems: development and application of a decision model	G. Feijoo - University of Santiago de Compostela, Spain M. Ragazzi - University of Trento C. Magrini - University of Bologna
S.2	Techno-Economic Assessment Of The Municipal Solid Waste Management System In The Context Of The Circular Economy: The Case Study Of Brescia, Italy Diversion Of Municipal Solid Waste From Landfills: Recycling And Waste-To-Energy Facilities Characterization And Evaluation Of The Generation And Separate Collection Of Restaurant Waste: A Case Study In Central Italy	L. Manili - A2A Ambiente S.p.A., Brescia M. Castaldi - The City College of New York, USA F. Tatàno - University of Urbino "Carlo Bo"
S.3	Combustion Optimisation On Moving Grates Combustion Grate As Completion Of Existing Rotary Kiln Wte Plants Sludge disposal: what alternatives to agriculture The Bio2energy Project: Bioenergy, Biofuels And Bioproducts From Municipal Solid Waste And Sewage Sludge Life cycle assessment analysis of biomass lignocellulosic of s.a.ba.r. s.p.a.: from waste to resource	D. Zibrat - Technikgruppe, Austria M. Carollo - Forni Engineering srl, Milano T. Vollmeier - TBF + Partner AG Consulting Engineers, CH I. Pecorini - University of Florence R. Spinelli - University of Modena and Reggio Emilia
S.4	Magaldi Ecobelt® WA - Dry Waste Bottom Ash Handling System Stabilization of MSWI fly ash through a combined separation-immobilization method using sodium carbonate	D. Ricci - Magaldi Power S.p.A., Salerno E. Atanes - Universidad Politécnica de Madrid, Spain

REGISTRATION

APPLY NOW! Fill in the online registration form at THIS LINK!

MATER17 REGISTRATION FEES:

PARTICIPANTS	Registration Fee	
	2 Days	1 Day Only
Standard	€ 450,00 + VAT 22%	€ 300,00 + VAT 22%
AIAT associates	€ 400,00 + VAT 22%	€ 250,00 + VAT 22%
MatER's Partners	€ 350,00 + VAT 22%	€ 200,00 + VAT 22%
Authors** (Oral presentations & Posters)	€ 200,00 + VAT 22%*	
Member of Scientific Committee	€ 200,00 + VAT 22%*	
Students***	€ 150,00 + VAT 22%*	

* The fee is independent from the number of participation days. "GALA DINNER & Guided Tours" pack included.

** The "author's fee" is one per work. It only applies to one among the authors indicated in the submitted abstract. (This could be for example the main speaker or the corresponding author).

*** Valid only for university students currently enrolled in a Graduate or Undergraduate degree program. Students will have to give proof of their enrolment to the MatER17 administrative secretariat.

THE REGISTRATION FEES INCLUDE:

- Participation to Meeting's sessions
- Proceedings, conference bag and Meeting's material
- Italian – English simultaneous translation service
- Wi-Fi access to the Politecnico di Milano network
- Coffee breaks and lunches
- Transportation and technical visit to the WtE Plant (Post Meeting – Wedn. 24th May)
- Guercino Exhibition & Main Galleries of Palazzo Farnese Guided Tour
- GALA dinner @ Palazzo Farnese, Piacenza (included only with the 2 days registration fee)

POST MEETING: **TECHNICAL VISIT TO THE** **TECNOBORGO WTE PLANT OF** **IREN AMBIENTE**

2 Waste-to-Energy lines

11.7 MWeI of Net electric power

44.4 MWth of total thermal capacity

120,000 ton. of waste disposed per year



GALA DINNER & GUIDED TOURS

The GALA Dinner of Monday, May 22nd will be held in Palazzo Farnese and will be accompanied by a musical entertainment. Before, it will comprise the guided tour of the **Guercino Exhibition** and the visit of some of the **Civic Museums' main galleries inside the palace.**

The GALA Dinner & the guided tours in Palazzo Farnese are included in the 2 days registration fees. Nevertheless, it's also available the "***GALA Dinner & Guided tours***" option, that can be added separately in the registration form for a total cost of **€ 60,00 + VAT 22% per person.**

HOW TO REACH THE CONFERENCE VENUE

The 3rd MatER Meeting will be held in the "**AULA A**" at the Piacenza Campus of the **Politecnico di Milano**, located in via Scalabrini 76 in the city center of Piacenza.

BY TRAIN

The MatER Meeting 2017 is very easy to reach by walk from the Piacenza railway station.

The Meeting venue is 600m far from the city's railway station - 8/10 min. on foot.

You simply need to exit the station, cross Piazzale Marconi square and walk always straight down to Via dei Mille, which continues to via Tibini and finally to via Neve. You will get to via Scalabrini and you will find the entrance on your right.

Piacenza is very close to **Milano, approximately 45min - 1hour by train.** It is also not far from Bologna, about 1,5 - 2 hours by train. You can arrange your travel and buy the train tickets directly at the **TRENITALIA Official web site.**

BY CAR

Follow the directions to the city center and then to the Railway Station or to the adjacent parking lots of Stradone Farnese.

MAIN PARKINGS:

- **P1 - Urban Center Parking:** (*Stradone Farnese 126*) - 400m from the Campus - Max Daily Price: 3.00 €
- **P2 - Cavallerizza Parking:** (*Stradone Farnese 39*) - 750m from the Campus - Max Daily Price: 3.00 €
- **P3 - Autorimessa del Corso Parking:** (*via Nova 34*) - 1,2 km from the Campus - Price: 8hours= 9€ (then 1€ every hour)

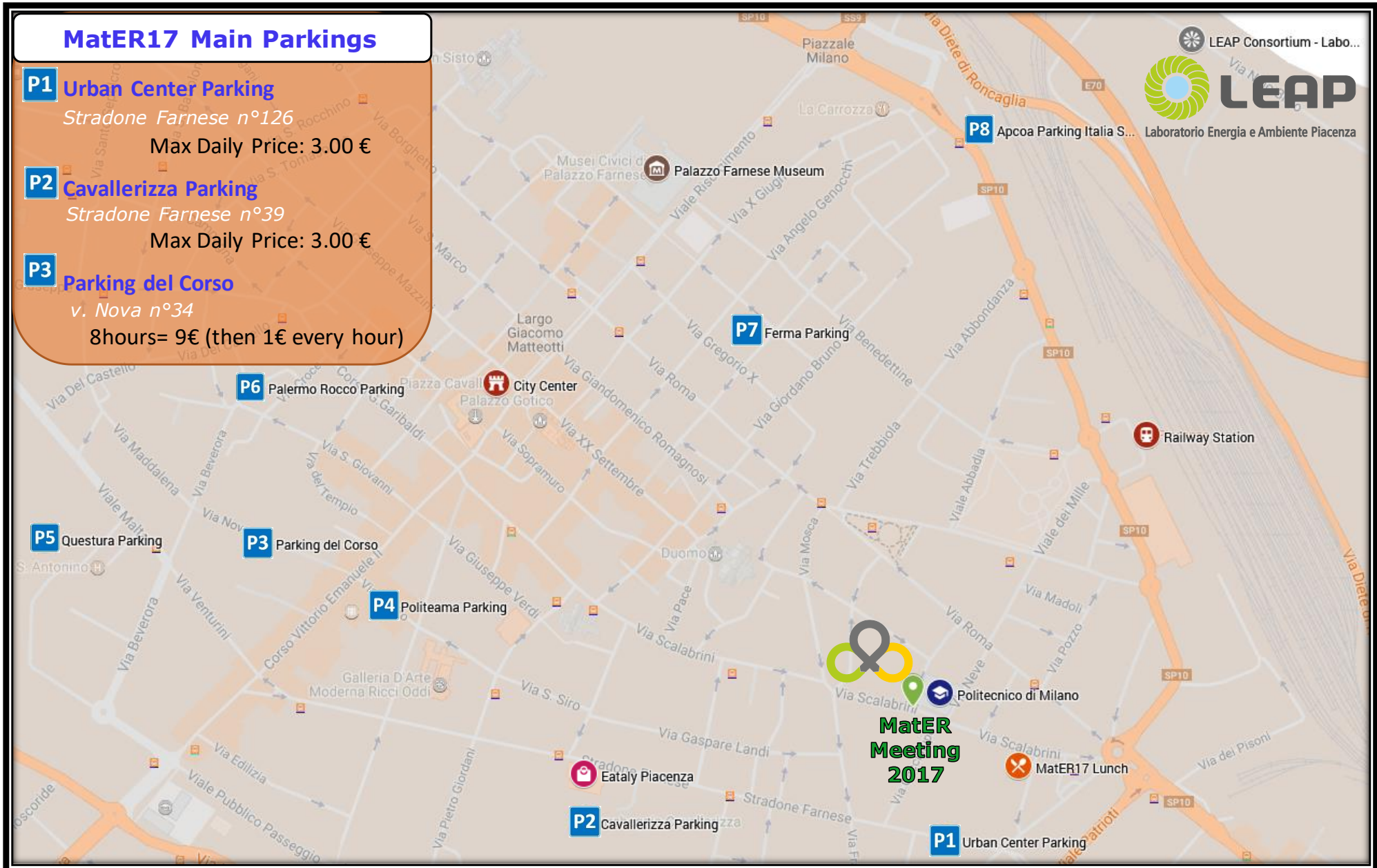
BY PLANE

The closest airports to Piacenza are:

- **Milan Linate** (*map*) - www.milanolate-airport.com
- **Milan Malpensa** (*map*) - www.milanomalpensa-airport.com
- **Bergamo** (*map*) - Orio al Serio airport www.sacbo.it
- **Bologna** (*map*) - G.Marconi airport www.bologna-airport.it



PIACENZA CITY CENTER MAP WITH THE MATER17 MAIN POINTS OF INTEREST



WHERE TO STAY IN PIACENZA

In order to facilitate your **accommodation** during the conference days, we have selected **four of the main hotels in Piacenza**, establishing with each one a special reduced rate exclusively for the MatER Meeting 2017.

Below you can find the main info of each Hotel. Please visit the dedicated page in the Meeting website at this [LINK](#) for the procedure to follow in order to benefit of the discount stipulated. Where indicated, you can use the dedicated **booking code**, otherwise you simply need to contact the hotel and specify that your reservation is related to the **MatER Meeting 2017**. All rates you will find are intended per room & per night, including VAT.

[CLICK HERE TO SEE THE MATER MEETING 2017 HOTEL MAP](#)



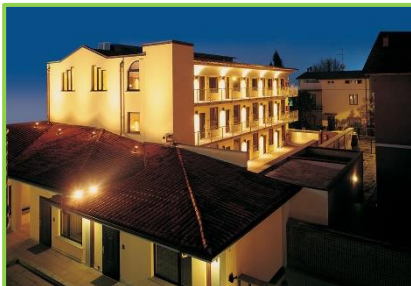
[GRANDE ALBERGO ROMA](#)

BOOKING CODE: *"MATER17"* – 15% Discount on daily rate

Address: Via Cittadella 14, 29121 Piacenza PC

Phone: 0523.323201

Email: info@grandealbergoroma.it



[HOTEL OVEST](#)

BOOKING CODE: *"32718"* - Lower fixed price until availability

Address: Via Primo Maggio 82, 29121 Piacenza PC

Phone: 0523. 712222

Email: info@hotelovest.it



[BEST WESTERN PARK HOTEL](#)

DIRECT CONTACT: *Reduced rates with locked price until May 7th*

Address: Str. Val Nure 7, 29122 Piacenza PC

Phone: 0523. 712600

Email: info@parkhotelpiacenza.it



[HOTEL CITY](#)

DIRECT CONTACT: *Reduced rates with locked price until availability*

Address: Via Emilia Parmense 54, 29100 Piacenza PC

Phone: 0523. 579752

Email: info@hotelcitypc.it

OUR MISSION:

The MatER Study Center aims at establishing a sound scientific bases for the many issues related to recovery from waste, without being influenced by any ideological or political consideration, independently of the expectations of any interest group. The ultimate goal is to give a rigorous scientific definition of the technologies and the policies which can be adopted for **material and energy recovery**, contributing to identify the most effective options for **sustainable, economically viable waste management practices**. This goal is pursued through the following actions:

- Identifying and analysing best available technologies for the recovery of material and energy from waste.
- Establishing links and collaborations between academic institutions, public and private organisations, business operators and technology providers.
- Promoting and undertaking studies and researches concerning material and energy recovery from waste.
- Organizing courses and events (conferences, seminars, workshops) to promote and divulge accurate scientific information.
- Monitoring the evolution of processes, technologies and practices for the recovery of material and energy from waste.
- Reviewing and promoting the improvement of legislation on waste management, recovery from waste and waste treatment.

OUR PARTNERS:



MatER is a member of the **Global Waste-to-Energy Research and Technology Council (GWC)**, an international network of research centres which carry out activities concerning the sustainable management of waste. The network includes the representatives of the **Waste-to-Energy Research and Technology Council (WERT)**, founded in 2002 by Earth Engineering Center (EEC) of Columbia University, and of its sisters' organizations nowadays operative in several other nations.



ORGANIZATION COMMITTEE



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**PLEASE VISIT THE DEDICATED MATER MEETING 2017 WEBSITE FOR ALL
THE NEWS & UPDATES ABOUT THE CONFERENCE.**