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.
**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 Polettini, 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 enough
12:10 Discussion & Questions
12:30 Lunch

Chair: S. Consonni
S. Consonni - MatER/Politecnico di Milano
N.I. Themels - Columbia University, USA
M. Pozzi - Optit Srl, Cesena
M.L. Venuta - Cattolica University
M. Scungio - University of Cassino and Southern Lazio

Session 2.1: Economic regulation of waste management

14:00 Guests Presentation & Round Table Introduction
14:15 Rates regulation of access to the waste treatment plants: an overview
14:25 Round Table Discussion: AGCM (Italian Competition Authority) - UTILITALIA - ATERSIR
Emilia Romagna - HERAMBIENTE
15:25 Closure by the Italian Minister of the Environment
15:45 Coffee break - Poster Session

Chair: A. Massarutto
A. Massarutto - Un. degli studi di Udine
A. Moretto - Ente di Bacino Padova 2
C. Benassi - C. Desogus (AGCM), A. Spaziani (UTILITALIA), V. Belladonna (ATERSIR Emilia Romagna), F. Brandolini (HERAMBIENTE)
Gian Luca Galletti - Ministro dell’Ambiente e della Tutela del Territorio e del Mare

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 Environmental impacts of the different schemes for the management of municipal waste in Galicia
17:10 A Methodology To Estimate Benefits From WEEE Recycling - Ecodom Case Study
17:35 Discussion & First day closing

Chair: L. Rigamonti
Costas Velis - University of Leeds, UK
M.T. Moreira - Un. of Santiago de Compostela, Spain
L. Campadello - Ecodom, Saronno

19:15 Meeting Point @ Piazza della Cittadella - Main entrance of Palazzo Farnese
19:45 Guercino Exhibition & Palazzo Farnese main galleries GUIDED TOUR
20:45 Aperitivo & GALA DINNER @ Palazzo Farnese, Piacenza

May 23rd 2017

Session 3: Processes and technologies for energy recovery

9:30 KEYNOTE LECTURE
10:00 Wood combustion ash for the upgrading of biogas from anaerobic digestion
10:25 Anaerobic fermentation laboratory test to evaluate the efficiency of biogas production from biowaste
10:50 Mass Balance And Economic Performance Of A Green Waste Composting Plant – Case Study Of Rodengo Saiano Plant
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 Neu bacher - UVP GmbH, Vienna, Austria
L. Lombardi - Niccolò Cusano University, Roma
M. Soldano - CRPA, Research Centre on Animal Production, Reggio Emilia
A. Carrara, E. Vitollo - Linea Energia SpA
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 waste' 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 Böni - KEZO WTE plant Director, Hinwil, CH
R. Bellopede - Politecnico di Torino
M. Limburg - RWTH Aachen University, Germany
A. Confalonieri - CIC, Monza Brianza
G. Zanotti - Politecnico di Torino
A. Abbà - University of Pavia

The MatER Meeting 2017 is SPONSORED by:

MatER Study Center (Materials and Energy from Refuse) is a project undertaken by LEAP s.c.a.r.l. with the scientific support of DICA and the Energy Department of the Politecnico di Milano, with the coordination of Utilitalia.

MatER Study Center c/o LEAP s.c.a.r.l. - Via Nino Bixio 27/C - 29121 Piacenza tel. 0523.356886 - fax. 0523.625087 e-mail: mater@polimi.it - www.mater.polimi.it

The key objective of MatER is to provide a rigorous representation of technologies and policies adopted for the recovery of materials and energy from waste, helping to identify the most effective choices for a sustainable waste management.

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.

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<thead>
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<th>SESSION</th>
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<th>Authors</th>
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<td>Environmental Sustainability Of Food Waste Management Strategies At Regional Level</td>
<td>G. Feijoo - University of Santiago de Compostela, Spain M. Ragazzi - University of Trento C. Magrini - University of Bologna</td>
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<td>Ruolo Della Respirometria Applicata Ai Rifiuti Secondo La Prospettiva Della Economia Circolare In Unione Europea</td>
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<td>Optimization of waste collection systems: development and application of a decision model</td>
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<td>S.2</td>
<td>Techno-Economic Assessment Of The Municipal Solid Waste Management System In The Context Of The Circular Economy: The Case Study Of Brescia, Italy</td>
<td>L. Manili - A2A Ambiente S.p.A., Brescia M. Castaldi - The City College of New York, USA F. Tatàno - University of Urbino &quot;Carlo Bo&quot;</td>
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<td>Diversion Of Municipal Solid Waste From Landfills: Recycling And Waste-To-Energy Facilities</td>
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<td>Characterization And Evaluation Of The Generation And Separate Collection Of Restaurant Waste: A Case Study In Central Italy</td>
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<td>S.3</td>
<td>Combustion Optimisation On Moving Grates</td>
<td>D. Zibrat - Technikgruppe, Austria</td>
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<td>Combustion Grate As Completion Of Existing Rotary Kiln Wte Plants</td>
<td>M. Carollo - Forni Engineering srl, Milano</td>
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<td>Sludge disposal: what alternatives to agriculture</td>
<td>T. Vollmeier - TBF + Partner AG Consulting Engineers, CH</td>
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<td></td>
<td>The Bio2energy Project: Bioenergy, Biofuels And Bioproducts From Municipal Solid Waste And Sewage Sludge</td>
<td>I. Pecorini - University of Florence</td>
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<td></td>
<td>Life cycle assessment analysis of biomass lignocellulosic of s.a.ba.r. s.p.a.: from waste to resource</td>
<td>R. Spinelli - University of Modena and Reggio Emilia</td>
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<td></td>
<td>Stabilization of MSWI fly ash through a combined separation-immobilization method using sodium carbonate</td>
<td>E. Atanes - Universidad Politécnica de Madrid, Spain</td>
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**MONDAY MAY, 22ND - EVENING PROGRAM**

19:15  
Meeting point in the inner courtyard of **Palazzo Farnese** placed in Piazza della Cittadella 29, Piacenza.

19:45  
Start of the guided tour of the **Guercino Exhibition** and the visit of some of the **Civic Museums’ main galleries inside the palace** (Pinacoteca & Sala del Plastico)

20:45  
Aperitivo & GALA Dinner at **Anticamera del Trono – Sala XII** of Palazzo Farnese

22:30  
Musical entertainment

**MUSICAL ENTERTAINMENT PROGRAM**

**Joseph Haydn**  
*(1732/1809)*

*DIE LONDONER TRIOS I in C major*  
For two flutes and cello

*Allegro moderato, Andante, Finale Vivace*

**Georg Philipp Telemann**  
*(1681/1767)*

*QUARTETTO n. 5 TWV 43 in A minor*  
For two flutes, cello and harpsichord

*Andante, Vivace, Presto, Allegro*

**Executors: “Affinity of Souls”**

Marina Sartini – Flute  
Emanuela Goi – Flute  
Maria Paola Busconi – Cello  
Silvia Sesenna – Harpsichord

Affinity of Souls was born in 2010 and brings together artists associated with the passion for music especially in the Classico-Baroque period. Components find in the assembly the best expression of a group work by discovering that commitment needed to develop any creative project. The formation, composed by musicians graduated from the Conservatives of Milan, Piacenza and Mantua, is composed by a stable group of musicians to which are added other artists who accompanies and enrich the sound. Over the years they have collaborated with numerous chamber music and orchestral music formations. In addition to classical concerts, the ensemble organizes events in collaboration with actors and writers where the development of the musical part is based on a search for pieces of literature of the same era. On this occasion, the instrumental organ is composed of two flutes, cello and harpsichord.

[http://www.affinityofsouls.altervista.org](http://www.affinityofsouls.altervista.org)
**PALAZZO FARNESE**

Located in the northern part of the city, but separate from the inhabited area, it is still characterised by a sense of majestic severity. The palace was built in the 50ies and 60ies of the 16th century, upon will of the duchess Margaret of Austria, wife of Ottavio Farnese; it was located in the area of the Visconti Citadel, aiming to construct a stately residence for the dukes, which would have to symbolize the power of the Farnese family. The architect in charge of the project was Jacopo Barozzi, known as Vignola.

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**WEDNESDAY MAY, 24TH - POST MEETING**

FROM 9:00 TO 11:00 AM | **TECHNICAL VISIT TO THE WASTE-TO-ENERGY PLANT OF IREN AMBIENTE SPA (STR. BORGOFORTE 22, PIACENZA)**

**REGISTRATION IS REQUIRED**

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2 Waste-to-Energy lines

11.7 MWel of Net electric power

44.4 MWth of total thermal capacity

120,000 ton. of waste disposed per year
**Piacenza city center Map with the MatER17 main points of interest**

**MatER17 Main Parkings**

- **P1 Urban Center Parking**
  Stradone Farnese n°126
  Max Daily Price: 3.00 €

- **P2 Cavallerizza Parking**
  Stradone Farnese n°39
  Max Daily Price: 3.00 €

- **P3 Parking del Corso**
  v. Nova n°34
  8 hours = 9 € (then 1 € every hour)
**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**

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**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

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**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

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**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

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**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 (WTERT)**, 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:

www.easychair.org/smart-program/MatER-2017/index.html