

**MatER Meeting 2019 | 27-28-29 May**  
**Innovations & Technologies in Waste Recovery**  
Piacenza Campus - Politecnico di Milano: via Scalabrini 76, Piacenza, Italy

**Monday, May 27<sup>th</sup> 2019**

**MORNING | PLENARY SESSION - AULA A**

**8:15 Participants Registration**

**Session 1: Strategies, Perceptions & Economics of Waste Management**

*Chairmen: prof. Stefano Consonni (Politecnico di Milano) & eng. Lorenzo Zaniboni (A2A Ambiente)*

**9:15 Welcoming Addresses & Introduction**

*Stefano Consonni - MatER/Politecnico di Milano*

**9:30 I KEYNOTE LECTURE**

*Giuseppe Bortone - Direzione ARPAE*

10:00 Urban waste management in Emilia-Romagna region: economical and technical evaluation in a Life Cycle Perspective

*Chiara Magrini - Un. Bologna*

10:25 Material recovery from MSW: actual recovery rates and environmental benefits

*Lidia Lombardi - Un. Niccolò Cusano, Roma*

**10:50 Coffee break - Poster Session**

**11:20 II KEYNOTE LECTURE** - The importance of communication in waste management

*Giovanni De Feo - Un. Salerno*

11:50 Thoughts about communication: successful development of international waste management

*Hedwig Vielreicher - WTERT Germany GmbH*

12:15 Economic regulation: defining an efficient benchmark of the gate fees of the treatment plants

*Anna Moretto - Bacino Padova 2*

**12:40 LUNCH**

**AFTERNOON | PARALLEL SESSIONS**

**Session 2.A: Plastics & Polymers Recovery - AULA A**

**14:20 Introduction & Focus on Plastics Recovery**

*Antonio Protopapa - R&D COREPLA*

14:40 Plastics and microplastics: an environmental and health problem, but above all a socio-cultural issue

*Federica Tommasi - Istituto Superiore Sanità*

15:00 POLYCE: Circular economy solutions for the recycling of plastics from WEEE

*Luca Campadello - ECODOM, Milano*

15:20 Modeling waste thermal treatment

*Tiziano Faravelli - Politecnico di Milano*

15:40 Recycled polymers in bituminous membranes: opportunities of circular economy for End-of-Life Tires

*Camillo Cardelli - MOPI srl, Pisa*

**AULA B - Session 2.B: Biogas & Biomethane**

**14:20 Introduction & Focus on biogas valorization**

*Manuele Gatti, LEAP/Politecnico di Milano*

14:40 Biogas-To-Biomethane: a review of upgrading techniques from a Life Cycle Perspective

*Giovanni Cardamone - Un. Campania*

15:00 "Power to Gas": Process monitoring of hydrogenotrophic methanogenesis to biomethane production

*Daniela Bona - Fondazione E. Mach, Trento*

15:20 Biomethane production from the MSW organic fraction with immision into the local gas network

*Gian Marco Malagoli - AIMAG spa, Modena*

15:40 Alternative scenarios of energy recovery from organic fraction of residual municipal waste in the Marche region

*Martina Di Addario - Un. Urbino*

**16:00 Coffee break - Poster Session**

**Session 2.C: Sludges & Sewage Recovery - AULA A**

**16:30 Introduction & Focus on Sludge treatment**

*Roberto Canziani - DICA, Politecnico di Milano*

16:50 Zürich mono-Incineration plant: Operation experiences

*Antonio Castorini - TBF, Switzerland*

17:10 High pressure and medium temperature sludge treatment

*Mattia Sbaffi - Agrosistemi, Piacenza*

17:30 Valorization of landfill leachate through ammonium sulphate production

*Gioia Garavini - EcoInnovazione Srl (ENEA)*

**AULA B - Session 2.D: Innovative Processes & Optimization**

**16:30 Introduction & Focus on innovative approach and experimental investigations in landfills**

*Marco J. Castaldi, City College NYC - USA*

16:50 iWaste: Evolution or revolution of automation for waste treatment

*Cord'Homme - CNIM, France*

17:10 Recent advances on waste logistics optimisation: from strategic design to short-term operations planning

*Matteo Pozzi - OPTIT, Cesena*

17:30 Optimization of multi-stage air pollution control systems in WtE plants via process data analysis and test runs

*Alessandro Dal Pozzo - Un. Bologna*

**17:50 Final Discussion & First Day Closing**

**EVENING | SOCIAL EVENT**

**18:45 Guided Tour @ RICCI ODDI Modern Art Gallery**

**20:15 Aperitivo & GALA DINNER @ Basilica Sant' Agostino, Piacenza**

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## MatER Meeting 2019 | 27-28-29 May

### Innovations & Technologies in Waste Recovery

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

## Tuesday May 28<sup>th</sup> 2019

MORNING | AULA A

### Session 3: Energy Recovery

Chairmen: *prof. Umberto Arena (Università degli Studi della Campania) & eng. Claudio Mazzari (IREN Ambiente)*

#### 9:30 KEYNOTE LECTURE

10:00 The role of Waste-to-Energy in the circular economy

10:25 The unsaid of the waste incineration BREF BAT-Conclusions

10:50 Mercury emissions in the Turin WtE plant: Management experiences

*Robert Van Kessel - PREWIN, Netherlands*

*Lorenzo Ceccherini - CEWEP, Brussels*

*Hubert de Chefdebien - CNIM, France*

*Giovanni Corti - TRM (IREN), Torino*

11:15

#### Coffee break - Poster Session

11:45 The actual impact of Waste-to-Energy plants on air quality: Case study for the Desio plant

12:10 Hot syngas cleaning performances of activated carbons of different size

*Alberto Cambiaghi - BEA, Desio (MB)*

*Francesco Parrillo - Un. Campania*

12:35

#### LUNCH

AFTERNOON | AULA A

### Session 4: Material Recovery

Chairmen: *prof. Michele Giugliano (Politecnico di Milano) & eng. Davide Alberti (LGH)*

14:30 KEYNOTE LECTURE: Material recovery, a priority for Europe: the contribution of ARPAE of Emilia-Romagna

15:00 Achievements and future challenges of the Italian organic waste recycling sector

15:25 Assessing the performances of paper vs. bioplastic bags for food waste delivered to anaerobic digestion

*Franco Zinoni - Direzione Tecnica ARPAE*

*Alberto Confalonieri - CIC, Roma*

*Giovanni Dolci - DICA, Politecnico di Milano*

15:50

#### Coffee break - Poster Session

16:20 SCOOTER - Fruit and vegetable wastes: opportunity in their reuse and energetic valorization

16:45 Microalgae production from digestate of dry anaerobic digestion of organic waste sequestering CO<sub>2</sub> from air

17:10 Natural and accelerated carbonation treatments for MSW incineration bottom ashes inertization

*Marco Trevisan - Un. Cattolica, Piacenza*

*Davide Papurello - Politecnico di Torino*

*Caterina Caviglia - Un. Torino*

17:35

#### Final Discussion & Meeting Closing

## POSTER Session

#1 Municipal waste management tools for the circular economy: an empirical study on the citizens' perception on separate collection and urban collection centers

*Mattia Belcastro - Un. La Sapienza, Roma*

#2 Economic regulation of waste management sector for WEEE, batteries and packaging in Europe

*Marinella Favot - Un. Udine*

#3 BMP evaluation of residual organic fraction and MBT organic outputs

*Fabio Tatàno - Un. Urbino*

#4 Environmental and economic evaluation of different biogas upgrading technologies

*Lidia Lombardi - Un. Niccolò Cusano, Roma*

#5 Waste management statistics and methodologies in the United States and the European Union

*Demetra Tsiamis - City College NYC, USA*

#6 Use of EAF steel slag as aggregate for concrete production: environmental and technical assessment

*Alessandra Diotti - Un. Brescia*

#7 Waste fat material as PCM for thermal storage system

*Davide Papurello - Politecnico di Torino*

#8 Biocatalytic aerobic digestion: opportunities of circular economy for biomasses

*Camillo Cardelli - MOPI srl, Pisa*

#9 Next generation of combustion controllers for forward moving reciprocating grates

*Damir Zibrat - Technikgruppe, Austria*

#10 Exergy-economic analysis of repowered Waste-to-Energy plants

*Maria L. Carneiro - PUC Rio de Janeiro, Brazil*

#11 RE-CAFFÈ: Circular coffee service for vending machines and bars | MatER Design challenge

*Juliana Campos & Maya Ivanova*

#12 WASTEVILLE: An interactive gaming experience for waste management learning | MatER Design challenge

*Barbara Viganò & Valentina Demarchi*

## Wednesday May 29<sup>th</sup> 2019

TECHNICAL VISIT

08:15 BUS Departure @ Palazzo Farnese - Piazza Cittadella, Piacenza

10:30 HERAmbiente Composting & Biomethane production plant VISIT @ Sant'Agata Bolognese (BO)

14:00 HERAmbiente Waste to Energy plant VISIT @ MODENA

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