



# WASTE-TO-ENERGY

October 1 and 2, 2018 Vienna Marriott Hotel | Parkring 12a | 1010 Vienna, Austria

INTERNATIONAL DEVELOPMENT EU Policies and Legislation • Strategy • Country Reports • Projects

WASTE INCINERATION

Technologies of Waste Incineration • Optimisation and Efficiency **Example Plants and Experiences in the Plant Construction and Operation** Boiler Cleaning • Experience with Materials and Corrision • Sewage Sludge Flue Gas Treatment • Processing of Incinerator Bottom Ash

**ALTERNATIVE WASTE-TO-ENERGY PROCESSES** Mechanical-Biological Treatment • Energy Recovery from Solid Recovered Fuels Hydrothermal Carbonisation, Pyrolysis and Gasification





















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Vienna University of Technology, Institute of Chemical, Environmental & Biological Engineering, Austria Professor Ing. Dagmar Juchelková, Ph.D.

Technical University of Ostrava (VŠB-TUO), Energy Engineering Department, Czech Republic

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	Plenary Session	
9:00	Welcome Address	
	Professor DiplIng. Dr. techn. Franz Winter, Vienna University of Technology, Austria <b>Opening Remarks</b>	
	Elisabeth Thomé-Kozmiensky, M.Sc.	
EU Polici	ies and Legislation	
PRESENTAT	ION: PROFESSOR DIPLING. DR. TECHN. FRANZ WINTER	
9:15	The Impact of New EU Legislation on Waste-to-Energy	р. З
	Dr. Ella Stengler, Managing Director CEWEP – Confederation of European Waste-to-Energy Plants e.V., Brussels, Belgium	
9:45	Best Available Techniques (BAT) Reference Document (BREF)	p. 15
	for Waste Incineration – Status and Last Steps of the Review	
	Dr. Frederik Neuwahl European IPPC Bureau (EIPPCB), European Commission, Joint Research Centre, Seville,	Spain
10:15	Environmental Policies Point of View on the EU Legislation on Waste	- 1
	Julika Dittrich, LL.M., Deputy Director EU-Umweltbüro, Vienna, Austria	
10:45	Coffee Break	
PRESENITAT	ION: PROFESSOR ING. PH.D. DAGMAR JUCHELKOVÁ	
11:15	The Role of Waste-to-Energy	p. 25
	in the EU's Long-term Greenhouse Gas Emissions Reduction Strategy	
	Patrick Clerens, Secretary General European Suppliers of Waste to Energy Technology (ESWET), Brussels	
Strategy	and Perspectives	
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	– For a Better Environment in China:	P. 57
	BEHL and EEW Realize First Chinese-German Energy from Waste Project – DiplPhys. Karl-Heinz Müller	
	Chief Operating Officer of EEW Energy from Waste GmbH, Helmstedt, Germany	
12:15	International Perspectives of Energy from Waste – Challenges and Trends – Tech.Lic. Inge Johansson, Researcher, Division Built Environment – Energy and Circular E	<b>p. 47</b>
	RISE Research Institutes of Sweden, Borås, Sweden	
42.45	Leader of IEA Bioenergy Task Integrating Energy recovery into solid waste managemen	t systems
12:45	Lunch Break	
Country	Reports	
PRESENTAT	ION: DR. ELLA STENGLER, ATTORNEY DR. TOBIAS FABER	
14:00	Current Status, Waste Management Strategies and Planning in Finland	p. 97
14:10	DiplIng. Mika Pekkinen, Managing Director of Tammervoima Oy, Tampere, Finland Waste Management in Bosnia and Herzegovina –	p. 109
14.10	Current Situation and Perspectives	p. 105
	Mehmed Cero, Ph.D., Assistant Minister on Environment Federal Ministry on Environment and Tourism, Sarajevo, Bosnia and Herzegovina	
14:20	The New National Action Plan for Waste Management 2016 to 2023	p. 119
	of the Republic of Turkey Professor Dr. Ing. Oktav Tabasaran, University of Stuttgart, Germany	-
14:30	Professor DrIng. Oktay Tabasaran, University of Stuttgart, Germany Current Status, Waste Management Strategies and Planning in Kuwait	p. 127
	DiplIng. Manfred Graf, Head Project Management	P=:
14:40	EVN Umweltholding und Betriebs-GmbH, Maria Enzersdorf, Austria Municipal Solid Waste Management in India – A Critical Assessment	p. 137
14.40	Dr. Atul N. Vaidya, Chief Scientist & Head, Solid & Hazardous Waste Management	•
14.50	CSIR – National Environmental Engineering Research Institute (NEERI), Nagpur, Maharash	ntra, India
14:50	Future Development of Waste Management in China According to the Current Five-Year Plan	p. 149
	Professor Dr. Rundong Li,	•
	Director for Institute of Clean Energy & Environmental Engineering (ICEEE) Shenyang Aerospace University, China	
15:00	Panel Discussion	
16:00	Coffee Break	
Projects		
PRESENTAT	ION: DRING. STEPHANIE THIEL	
16:30	Worldwide Waste-to-Energy Market – Where are the Upcoming Projects? Amedeo C. Vaccani, Managing Partner, Practice Leader Sustainability and Waste	
	A. Vaccani & Partner AG, Zurich, Switzerland	
17:00	Why Major Projects Fail – a Snapshot on Deal Killers, Disruption of Projects	р. 63
	and Project Related Dispute Resolution Attorney Dr. Tobias Faber, Hogan Lovells International LLP, Frankfurt am Main, German	v
17:30	Energy-from-Waste Project Development	, p. 77
	EPC Contractor & O&M Contractor as One-Stop-Shop? Christophe Cord'homme, Business & Products Development Director, Environment Sec	tor
	CNIM Constructions Industrielles de la Méditerranée S.A., Paris, France	
18:00	Open Bar	
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October 2, 2018	
Incineration	
Optimisation und Efficiency	
PRESENTATION: PROFESSOR DIPLING. DR. TECHN. HARALD RAUPENSTRAUCH	
8:30 Problems with Biodegradable Wastes – Potential in Myanmar and Other Asian Countries for Combination of Drying and Waste Incineration Maw Maw Tun, M.Sc., Energy Engineering Department Technical University of Ostrava (VŠB-TUO), Czech Republic	p. 163 _
9:00 Capacity, Efficiency and Emissions: Pushing the Limits of Waste-to-Energy Plants Dr. Reto Strobel, Senior Process Engineer Design Hitachi Zosen Inova AG, Zurich, Switzerland	p. 177
9:30 Waste Heat Recovery for District Heating – A Hot Topic at a Low Temperature Marcus Whitworth, Product Sales Director Europe, FGC & Fuel Flexibility Solutions GE Power AG, Stuttgart, Germany	p. 187
<b>10:00</b> Generation 4.0 of Incineration Optimisation Systems for Moving Grates DiplIng. Matthias Lukic, CEO and owner, DiplIng. Damir Zibrat TG GmbH, Premstätten, Austria	
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PRESENTATION: DIPLING. KLAUS-GÜNTHER ZINK	
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ZEVO Malesice, Prague, Czech Republic DiplIng. Norbert Eickhoff, Senior Vice President, Projects and Acquisition Martin GmbH für Umwelt- und Energietechnik, Munich, Germany	
11:30Technical Concept and Energy Management of the Tampere Waste-to-Energy Plant in Finland DiplIng. Mika Pekkinen, Managing Director of Tammervoima Oy, Tampere, Finland	p. 219
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12:00 Mining Incinerator Bottom Ash for Heavy Non-ferrous Metals and Precious Metals Dr. Jan-Peter Born, Manager Business Development Energy N. V. HVC, Alkmaar, Netherlands	p. 275
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PRESENTATION: DR. IR. ROBERT VAN KESSEL	
14:00 Methods for Optimized Online Cleaning DiplIng. Franziska Graube, DrIng. Sebastian Grahl Professor DrIng. Michael Beckmann, DiplIng. Matthias Reiche Technical University Dresden, Germany	p. 231
14:15 Boosting Boiler Efficiency and Availability through Fouling Management	p. 245
Martin Ellebro, Chief Technology Officer Wave Impact Heat Management AB, Sundbyberg, Sweden	
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<ul> <li>Wave Impact Heat Management AB, Sundbyberg, Sweden</li> <li>14:30 Automated Radiation Pass Cleaning in Waste Incineration Plants         <ul> <li>Experience from More Than Seventy Shock Pulse Generator Installations – Kaspar Ninck, M.Sc., DiplIng. Christian Mosbeck</li> <li>Explosion Power GmbH, Lenzburg, Switzerland</li> </ul> </li> <li>14:45 Mobile Industrial Dust Collector Risk Management         <ul> <li>Dr. Michael W. Seitz, CEO of BlueSky Global – Industrial Air Cleaners</li> </ul> </li> </ul>	p. 257 p. 267
<ul> <li>Wave Impact Heat Management AB, Sundbyberg, Sweden</li> <li>14:30 Automated Radiation Pass Cleaning in Waste Incineration Plants         <ul> <li>Experience from More Than Seventy Shock Pulse Generator Installations –</li> <li>Kaspar Ninck, M.Sc., DiplIng. Christian Mosbeck</li> <li>Explosion Power GmbH, Lenzburg, Switzerland</li> </ul> </li> <li>14:45 Mobile Industrial Dust Collector Risk Management</li> </ul>	

# **Experience with Materials and Corrosion**

PRESENTATI	ION: ASSOCIATE PROFESSOR DR. SC. PATRIK YRJAS, DR. RER. NAT. WOLFGANG SPIEGEL	
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	Laboratory of Inorganic Chemistry Johan Gadolin Process Chemistry Centre	
	Åbo Akademi University Finland Rikard Norling, Ph.D., Business Developer, Project Coordinator	
	Swerea KIMAB, Stockholm, Sweden	
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	Lorenzo Zaniboni, Technical Director, Ing. Simone Malvezzi, Ing. Maurizio Rossi A2A Ambiente S.p.A., Brescia, Italy	
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	Ildefonso Goikoetxea, Director de Explotacion y Desarollo Zabalgarbi, S.A., Bilbao, Spain	
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	DiplIng. Markus Horn, Managing Director of Jünger+Gräter GmbH, Schwetzingen, Germa	any
9:45	New Silicon Nitride-Bonded Silicon Carbide Tile System for p. Waste-to-Energy Boilers – Implemented Optimisations in	519
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	Jos van der Hoeff Managing Director of Van der Hoeff Refractories BV, Limmen, Netherlands	
	DiplIng. Karl-Ulrich Martin Managing Director of DETACK GmbH, Ludwigsburg, Germany	
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	wandschneider + gutjahr ingenieurgesellschaft mbh Hamburg, Germany Professor DrIng. Johannes Müller-Schaper	
	PFI Planungsgemeinschaft GmbH & Co. KG, Hanover, Germany	
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	DiplIng. Dr. mont. Andreas Schönberg, Owner S-PEC e.U., Graz, Austria	
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• 14:00	ION: PROFESSOR DIPLING. DR. MONT. ROLAND POMBERGER  Location Based Solutions for Thermal Sewage Sludge Utilisation  p. 4	407
	and Phosphorus Recovery – Current Projects at EVN / WTE / S2E – DiplIng. Dr. techn. Thomas Gröbl EVN Wärmekraftwerke GmbH, Zwentendorf an der Donau, Austria	
14:30	Sewage sludge – fluidized bed incineration as a reliable and proven p.	433
	treatment process DrIng. Josef Langen, Combustion Systems Engineering	
	Standardkessel Baumgarte GmbH, Bielefeld, Germany Felix Wyss	
45.00	General Manager of Raschka Engineering Ltd, Liestal, Switzerland	
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	www.IRRC-Waste-to-Energy.com	

# Alternative Waste-to-Energy Processes

# Mechanical(-Biological) Waste Treatment and Energy Recovery from Solid Recovered Fuels

and Ene	rgy Recovery from Solid Recovered Fuels	
PRESENTAT	ION: DIPLING. DR. MONT. RENATO SARC	
8:30	Mechanical-Biological Waste Treatment Plants in Croatia Irena Relic, Ministry of Environment and Energy, Republic of Croatia DiplIng. Dr. mont. Renato Sarc, Montanuniversität Leoben, Austria	p. 313
9:00	<b>Return of Experience in Two RDF Waste-to-Energy Plants in Italy</b> Agostino Calcagno, Chief Executive Officer Eng. Davide Rao, Engineering Department, Ruths S.p.A., Genova, Italy	p. 337
9:30	<b>Possibilities of Waste Derived Fuels Use in the Energy Sector in Poland</b> Assistant Professor DrIng. Piotr Krawczyk Professor Krysztof Badyda, Ph.D, D.Sc., Eng., Director, Institute of Heat Engineering Warsaw University of Technology, Poland	p. 349
10:00	Mercury Removal System Using a Splitted Preheater – First Experiences in the Cement Industry – DiplIng. Holger Reinhold, Process Engineer Industrial Minerals Industry Scheuch GmbH, Aurolzmünster, Austria	p. 359
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11:00	<b>Converted Local Biomass – Processing Biomass to a Valuable Solid Fuel</b> DiplIng. Hannes Bieler, Tendering Mitsubishi Hitachi Power Systems Europe GmbH, Duisburg, Germany	
11:30	Alternative Thermal Treatment technologies for Municipal Solid Waste – Overview of Gasification and Pyrolysis Processes, Their Status and Performance – Frans Lamers, M.Sc., Principal Consultant DNV GL Group, Arnheim, Netherlands	p. 303
	Flue Gas Treatment	
12:00	History of Flue Gas Treatment for Waste Incineration Plants Since 1981 to the Present Fons Doms, Directeur, Milieucoördinator IVOO Intergemeentelijke Vereniging voor het afvalbeheer voor Oostende en Ommela Oostende, Belgium	<b>p. 533</b> Ind,
12:30	Lunch Break	
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14:00	Influence of New Best Available Techniques Reference Document (BREF) on Future Concepts for Flue Gas Treatment – What Will Change? DiplIng. Ruediger Margraf Managing Director of LUEHR FILTER GmbH, Stadthagen, Germany	p. 541
14:15	Improved SNCR Performance by Means of Innovative Control Concepts DrIng. Wolfgang Schüttenhelm, Senior Vice President Business Development & Tech ERC Emissions-Reduzierung-Concepte GmbH, Buchholz i.d.N., Germany	<b>p. 559</b> inology
14:30	Integrated Technology for NO <sub>x</sub> and Dioxine Removal Inside the Boiler Dr. Frank Tabaries, Directeur Services CNIM / LAB SA, La Seyne Sur Mer, France	
14:45	Bromine-enhanced Mercury Emissions Control at Divers Waste Incineration Plants in Germany and France Professor DrIng. Bernhard W. Vosteen Vosteen Consulting GmbH, Cologne, Germany Ingénieur Xavier Chaucherie, M.Sc., Expert SARPI-Veolia, Direction du Développement Industriel, de l'Innovation et de la Recherc Limay, France	<b>p. 575</b>
15:00	Discussion	
15:30	Final Coffee Break	

# **Books**



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# Expert Forum – October 3, 2018

# REMOVAL, TREATMENT AND UTILISATION OF WASTE INCINERATION BOTTOM ASH

Basics • Best Practice • Lighthouse Projects • Vivid Exchange of Information

The expert forum will be held by international experts from different European countries with long tradition in the treatment of municipal solid waste (MSW) incineration bottom ashes (IBA). Besides the everywhere profitable metal recovery, the utilisation of the mineral residues as secondary raw material underlies contrary legal and political frameworks in the different countries.

The idea of the expert forum is to give interested persons the opportunity to get in touch with this issue in a proper way and in a group with a manageable size of persons. Therefore, a concerted programme with a central theme and with sufficient time for discussion and query is going to be composed.

Following five main sections will be pursued:

- 1. General Introduction
- 2. Dry Removal and Treatment
- 3. Semi-Dry Treatment Trains
- 4. Wet Treatment Trains
- 5. Utilisation of the Mineral Residues Prospects and Limitations

Dr. rer. nat. Franz-Georg Simon, BAM – German Federal Institute for Materials Research and Testing, will do the moderation.

Contributions to the expert forum and/or the accompanied technical book will be given by Prof. Rainer Bunge, HSR – University of Applied Science Rapperswil (Switzerland), Dr.-Ing. Leo Simon Morf, Chair of technical advisory board of ZAR (Switzerland), Michal Syc, Ph.D., Institute of Chemical Process Fundamentals of AS CR (Czech Republic), Dipl.-Ing. Gerhard Stockinger, Brantner Environment Group GmbH (Austria), Arjan Kok, B.Sc., Boskalis Environmental B.V. (The Netherlands), Dr. Jiri Hyks and Ole Hjelmar, M.Sc., both Danish Waste Solutions ApS (Denmark).



**Registration Form for the Expert Forum** 

# Please note: There is a limited number of places!

The registrations will be processed based on the chronological order of arrival.

# Registration deadline: Friday September 14, 2018

# **Congress fees**

590,- EUR + VAT. Regular fee

□ I am a registered participant of the **IRRC Waste-to-Energy** and get a discount of **20 %** on the registration fees.

# The fee comprises:

- Attendance at all presentations
- Coffee breaks and luncheons
- Congress documents: 1 book, certificate of participation, final programme, list of speakers and participants

If you are unable to attend the expert forum, your registration can be delegated to a substitute person. Cancellation requests must be received in writing on or before the cancellation deadline of September 3, 2018. Written notifications are accepted via email, post or fax. **Cancellations** received on or before **September 3**, **2018** will receive a refund of the paid fees minus an administration fee of 50,– EUR + 20 % VAT. Cancellations received after the deadline will not be issued a refund. Any unpaid congress fees are due and payable to Thomé-Kozmiensky Verlag GmbH. Congress documents will be send to registered attendees, who were unable to participate.

# **Payment details**

The fee is due before the start of the IRRC. However, please do not pay the registration fee until you have received your invoice. Write the invoice number and the name of the delegate legibly on the money transfer form. Name / First Name / Title

Company / Organisation

Department

Address

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  - \* Your approval is mandatory for participating at the event

Date, Signature

# **Conditions of Participation and Services**

### Congress fees

890,- EUR + 20 % VAT.	Regular fee for participants from the EU-15 and EFTA countries, and overseas
450,- EUR + 20 % VAT	Reduced fee for participants from other EU-member states or from low and middle income economies
390,- EUR + 20 % VAT	Reduced fee for full-time professionals of licensing or regulatory agencies or universities
100,- EUR + 20 % VAT	Reduced fee for full-time students

The organisers offer a **reduced registration fee** for participants from economically weaker countries, including the new EU-member states (countries that joined the EU in the year 2004 or later). The organisers define the *low and middle income economies* in the same way as the World Bank.

**Students Please Note:** With regard to the reduced registration fee, students are defined as those without a permanent employment (at an organization or a university), those with only marginal employment or a comparable low scholarship.

**Visa Letter:** A letter of invitation can be provided upon request for the registered congress participants. Please contact the TK Verlag, if you require an invitation letter.

The congress fee comprises: Attendance at all presentations; Coffee breaks and luncheons for both days; Networking dinner on October 1, 2018; Congress documents: 1 book, proof-ofentry, final programme, list of speakers and participants.

If you are unable to attend the congress, your registration can be delegated to a substitute person. Cancellation requests must be received in writing on or before the cancellation deadline of September 1, 2018. Written notifications are accepted via email, post or fax. **Cancellations** received on or before **September 1, 2018** will receive a refund of the paid fees minus an administration fee of 50,– EUR + 20 % VAT. Cancellations received after the deadline will not be issued a refund. Any unpaid congress fees are due and payable to Thomé-Kozmiensky Verlag GmbH. Congress documents will be send to registered attendees, who were unable to participate.

### **Complementary programme**

For those of you that want to delve more into the field of waste-to-energy we are offering two alternative options for October 3, 2018.

**1. EXPERT FORUM** on Removal, Treatment and Utilisation of Waste Incineration Bottom Ash

## **Registration Fee**

590,- EUR + 20 % VAT. Regular fee

Participants of the IRRC Waste-to-Energy that register for the forum will get a discount of 20 % on the two registration fees.

**The fee comprises:** Attendance at all presentations; Coffee breaks and luncheons; Congress documents: 1 book, certificate of participation; Final programme, list of speakers and participants

2. EXCURSION to waste treatment plants in Vienna Registration Fee

40,- EUR + 20 % VAT.	Regular fee for registered partici- pants of the IRRC 2018 (approx. 9 am to 3 pm)
50,- EUR + 20 % VAT.	Security deposit which will be returned to the participant, if he/she attends the excursion.

**The fee comprises:** Pick up and return from Vienna Marriott Hotel (approx. 9am to 3pm); Transportation between waste disposal sites; Guided tour at each site in English

### Please note: There is a limited number of places!

### Payment details

The congress fee is due before the start of the IRRC. However, please do not pay the congress or excursion fee until you have received your invoice. Write the invoice number and the name of the delegate legibly on the money transfer form.

# **Registration Form for the IRRC Waste-to-Energy**

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I submit my binding application to attend the IRRC Waste-to-Energy on October 1 and 2, 2018 in Vienna. I will pay the following congress fees + 20 % VAT. in due time after receiving my invoice:

□ 890,- EUR regular fee □ 450,- EUR reduced fee

- □ 390,- EUR reduced fee □ 100,- EUR student fee
- **0**,– **EUR** I will attend the evening event
- on October 1, 2018.
- □ I am a registered participant of the **Expert Forum** and get a discount of **20 %** on the registration fees.

### Excursion on October 3, 2018

□ 40,- EUR + 50,- EUR deposit payment + 20 % VAT. I will attend the guided tour to waste disposal (only for registered participants of the IRRC 2018).

### I am interested in further information about

- sponsorship/advertising opportunities
- □ future conferences on waste management
- -----
- □ With the registration you acknowledge the terms and conditions (AGB) of Thomé-Kozmiensky Verlag GmbH as binding and you agree that your data will be processed and used in accordance with our privacy policy, which is visible on www.vivis.de.\*
  - \* Your approval is mandatory for participating at the event

Please tick interest points

	Sewage Sludge	Flue Gas Treatment
Experience wit	h Materials and Corro	sion
Alternative Wa	aste-to-Energy Process	ies

Name / First Name / Title

Company / Organisation

Department

Address

Post Code / City / Country

Phone / Fax

Email

Please tell us, if you have a different invoicing address.

Date, Signature

# **Congress Venue**

# Congress venue Vienna Marriott Hotel

Parkring 12a • A-1010 Vienna Tel. +43.1-515.18-52 Fax +43.1-515.18-87.20 Internet: www.viennamarriott.com Single Room for 255,- EUR per night Limited offer reserved until July 22, 2018

# **IMPORTANT**

Organise your overnight stay as early as possible. Vienna is a very popular city and there are a number of other events taking place in that time.

# It pays to compare:

Also use online portals like www.hrs.de and www.booking.com, which often offer very cheap special deals

If you want to make use of the **limited group rate at the Vienna Marriott Hotel**, please visit our website www. vivis.de, go to *Veranstaltungen -> IRRC*, then to *congress venue* and follow the link to book the *group rate*. You will be directed to a page of the Vienna Marriott Hotel, which was created only for the participants of the IRRC.

# Sponsoring, Exhibition and Books

Companies can engage in the IRRC as a sponsor, who is entitled to a number of services: e.g. the company logo is not only displayed on the programme flyer and on our homepage, it will also be visible throughout the congress, sponsors get a company booth and two advertisements in the book Waste Management Vol. 8.

Alternatively you can book the company booth and the advertisement in the book also individually:



# **Company Booth**

During the IRRC Waste-to-Energy 2018 there is an exhibition (with a limited number of company booths).

# Advertising

We invite companies to present themselves in the two companion hardcover books

Waste Management Vol. 8 and/or Removal, Treatment and Utilisation of Waste Incineration Bottom Ash.

# Please contact us for further information.

# Networking

Besides an interesting programme about the current issues of the European industry, the IRRC offers also a great opportunity to meet experts of the industry, from politics, science and technology. The exchange of experiences, ideas, and concepts will give impulses for cooperation and is going to promote development particularly in the new EU-member states.

Throughout the congress there will be sufficient time for networking in a pleasent atmosphere: During the coffee and lunch breaks, at the dinner on October 1 or even parallel to the lectures.



Partners



# **Guided Tour to Waste Treatment Plants in Vienna**

On October 3, 2018 we offer a tour to selected waste treatment plants in and around Vienna, starting of the Vienna Marriott Hotel.

Delegates of the IRRC Waste-to-Energy have the possibility to participate in that excursion. Registered participants will receive a guided tour at each site.

# Schedule

8:30 – 9:00 10:00 12:00 around 14:00

Meeting Point in front of the Vienna Marriott Hotel Waste Incineration Plant Spittelau Biogas Plant and Waste Logistics Center Return to the Vienna Marriott Hotel

# SPITTELAU WASTE INCINERATION PLANT DESIGNED BY HUNDERTWASSER

The waste incineration plant Spittelau was constructed from 1969 till 1971. A few years later, in 1987, a large fire destroyed most of the facility. Instead of tearing down the plant, Helmut Zilk – the mayor at the time – decided to rebuilt it in accordance with the highest standards regarding the technology and the environment protection. But even that was not enough. In addition to the technological improvements, it became an artwork. The environmentalist, nature lover and artist Friedensreich Hunderwasser created the unique design, for which it is worldfamous today.

From 2012 to 2015, after an operation time of more than 40 years, the waste incineration plant Spittelau had to undergo a complete refurbishment.

Today, it incinerates around 250.000 tonnes of houshold waste per year. With an installed overall performance of 400 MW, an average production rate of 120 GWh of electricity as well as 500 GWh of heat, this plant is the second biggest generation site in the district heating system of Wien Energie. An it provides annually more than 60.000 households with its eco-friendly heat.



# **BIOGAS PLANT**

The biogas plant went into operation in 2007 and is run by the Vienna Municipal Department for Waste Management, Street Cleaning and Vehicle Fleet (MA 48). The facility processes about 22,000 tons of kitchen waste every year – mainly the contents of organic waste containers in Vienna's inner-city districts, as well as leftover food from restaurants, canteens and industrial kitchens, market waste and expired food. The moisture content of these materials is high enough to allow for fermentation.



# WASTE LOGISTICS CENTRE

Simmering waste logistics centre (German acronym "ALZ"): the most recent element of the comprehensive waste disposal system of Vienna is provided by the new Pfaffenau waste logistics centre in the 11<sup>th</sup> municipal district Simmering. This high-tech installation adjacent to the Pfaffenau waste incineration plant serves for the processing and interim storage of residual and bulky waste. If necessary, the pre-treated, compacted waste is wrapped in airtight bales and stored until incineration without releasing unpleasant odours. This ensures at waste incineration plants. The facility ensures that all waste collected can be properly disposed of, irrespective of the waste volume or capacity utilisation of Vienna's waste incineration plants.



# **Speakers and Presenters**



Dr.-Ing. Ales Blaha



Julika Dittrich, LL.M



Dipl.-Ing. Franziska Graube



Professor Dipl.-Ing. Dr. techn. Karl E. Lorber



Dr.-Ing Margit Löschau



Dr.-Ina Wolfgang Schüttenhelm



Flisabeth Thomé-Kozmiensky, M.Sc



Felix Wyss



Dr Jan-Peter Born





Dipl.-Ing. Martin Gutjahr



Dipl.-Ing. Matthias Lukic

Professor

Dipl.-Ing. Dr. mont. Roland Pomberger

Dr.

Michael W. Seitz

Maw Maw Tun,

M.Sc.

Associate Professor

Dr. Sc. Patrik Yrjas



Dr

Eoin Butler

Dipl.-Ing.

Markus Horn

Eddie Marcarian

Professor Dipl.-Ing.

Dr. techn.

Dr. rer. nat.

Wolfgang Spiegel

Amedeo C

Vaccani







Tech.Lic Inge Johansson



Dipl.-Ing. Ruediger Margraf



Dipl.-Ina. Holger Reinhold



Ella Stengler



Atul N Vaidya



Klaus-Günther Zink

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Dipl.-Ing. Markus Gleis



Drs. Frans Lamers Dagmar Juchelková



Dr. Frederik Neuwahl



Antonios G. Sakalis





van Kessel





Dipl.-Ing.

Professo Dipl.-Ing. Dr. techn. Franz Winter











Dr. mont. Renato Sarc



Dr.-Ing. Stephanie Thiel







Professor Ing. Ph.D.

Dipl.-Phys.







Professor Dr.-Ing.

Dr.

Reto Strobel

Jos van der Hoef

Wolfgang Rommel

Dr.







Additional Speakers: Dipl.-Ing. Dr. Thomas Gröbl Assistant Professor Dr.-Ing. Piotr Krawczyk Irena Relic Dr. Thomas Sonntag-Rösing



Patrick Clerens

Ildefonso Goikoetxea

Dr.-Ing. Josef Langen



Professor Dr. Rundong Li

Christophe

Cord'homme

Dipl.-Ing. Manfred Graf

