



BIOGAS SCIENCE INTERNATIONAL CONFERENCE

17-19 September 2018

Lingotto Conference Center, via Nizza 280, Torino

Tentative agenda

Monday 17th September, 2018

8:00 - 9:00	Registration and placement of posters
9:00 – 12:30	Plenary session, opening ceremony & keynotes (Londra hall)
9:00 – 9:30	Chairs: t.b.a.
9:30 – 10:00	<ul style="list-style-type: none"> Opening: Bartolomeo Biolatti, IT (vice-rector of the University of Torino), Ivo Zoccarato (Head of the Department of Agriculture, Forest and Food Sciences, University of Torino), Monica Bassanino (Regione Piemonte)
10:00 – 10:30	<ul style="list-style-type: none"> Keynote: Stefanie Königsberger (European Biogas Association) “Status and perspectives of the European biogas and biomethane sector: the benefiting contributions to reach EU targets” Keynote: Malcolm McDowell (European Commission) “How the new Renewable Energy Directive will support biogas in the EU beyond 2020”
10:30 – 11:00	Coffee break and poster session
11.00– 12.30	Plenary session, keynotes (Londra hall)
11:00 – 11:30	<ul style="list-style-type: none"> Keynote: Lorella Rossi (Italian Biogas Consortium) “Biogas refinery: agriculture, research, innovation, decarbonisation”
11:30 – 12:00	<ul style="list-style-type: none"> Keynote: Fabrizio Mazzetto (University of Bolzano) “Ideas for the advanced integrated management of biogas systems in the era of Industry 4.0”
12:00 – 12:30	Discussion
12:30 – 13:30	Lunch break and poster session
13:30 – 14:30	Plenary session, warm up lectures (Londra hall)
	Thematic area 1, Thierry Ribeiro (FR) “Codigestion, a necessity for anaerobic digestion of agricultural byproducts?”
	Thematic area 2, Sergio Piccinini (IT) “Biomethane and Power to Gas as the future of Biogas Chain”
	Thematic area 3, Helmut Döhler (D) “The role of processing technology for a more sustainable biogas production”

14:30 -16:00**Parallel Sessions****SUBSTRATES FOR AD
Thematic area 1***Room: Madrid
Chair: tba***14:30 – 14:45**The role of inoculum's origin on the methane yield of different substrates in BMP tests (**Koch Konrad**)**14:45 – 15:00**Studies on the influence of moulded feedstocks on the biogas process and the mycotoxicological status of digestates (**Mathias Hartel**)**15:00 – 15:15**Consideration of the influence of seasonally available sugar beets after appropriate storage in mono- and co-ensiling with straw for biogas production (**Andrade Diana**)**15:15 – 15:30**Influence of mycotoxins from maize and wheat during anaerobic digestion (**Bochmann Günther**)**15:30 – 15:45**Anaerobic digestion of deoxynivalenol contaminated wheat: methane production efficiency and mycotoxin decrease in digestate (**Soldano Mariangela**)**15:45 – 16:00**Understanding the role of trace elements on the hydrolytic stage towards the improvement of biogas production in agricultural residues (**Ezieke Arinze**)**GAS TECHNOLOGY
Thematic area 2***Room: Lisbona
Chair: tba*Continuous hydrogen production from acid hydrolysates of Agave tequilana bagasse (**Buitron Germán**)Development of measurement standards and standardised test methods for biogas and biomethane assessment (**Li Jianrong**)Demonstration scale studies of biogas upgrading with wood ash (**Nordberg Åke**)Towards biological removal of volatile siloxanes in biogas by endogenous microbiota (**Ortiz Andres**)Membrane technology for the mobile usage of biogas upgrading (**Spitzer Simone**)In situ biological biogas upgrading in anaerobic batch reactors: the influence of hydrogen to carbon ratio and temperature (**Wahid Radziah**)**PROCESS TECHNOLOGY
Thematic area 3***Room: Londra
Chair: tba*Increased gas production and reduction of GHG emissions by up-front reduction and recovery of methane (**MØLLER Henrik B.**)Strategies for biogas stabilization in an industrial waste treatment plant in view of BioRoburPlus project (**Negro Viviana**)Demand-oriented biological methanation in an anaerobic thermophilic trickle bed reactor (**Strubing Dietmar**)Efficient and reliable biogas processes with less mixing (**Gerber Mandy**)Demand driven biogas production – Implementation of different discontinuous feeding strategies (**Lizasoain Javier**)Hydrodynamic cavitation and acidification reactor as sequential pretreatments for anaerobic digestion of agricultural feedstock (**Garuti Mirco**)**16:00 – 16:45****Coffee break and poster session****16:45 -17:45****Parallel Sessions****SUBSTRATES FOR AD
Thematic area 1***Room: Madrid
Chair: tba***16:45 – 17:00**Development of small biogas plants for the exploitation of fruit, vegetables and citrus residues (**Mapelli Sergio**)**17:00 – 17:15**Study of a full-scale anaerobic digestion plant 100% powered by pitted olive pomace (**Bianchi Biagio**)**17:15 – 17:30**Different storage conditions of inoculum in Biochemical Methane Potential Test (**Soldano Mariangela**)**17:30 – 17:45**Anaerobic co-digestion of macroalgal biomass with cattle manure under high salinity conditions (**Tsapekos Panagiotis**)**PROCESS TECHNOLOGY
Thematic area 3***Room: Londra
Chair: tba*Microbial growth lag implementation in a complex bioconversion model (**Kovalovszki Adam**)Energy-efficient ultrasonication of waste activated sludge using an innovative flatbed reactor (**Lippert Thomas**)DEMOSOFC Project: Results from an Industrial-Size Biogas-Fed SOFC plant (**Gandiglio Marta**)Prediction of biogas production rate in batch test (**Dandikas Vasilis**)**LIFE-OPTIMAL PROJECT***Room: Lisbona
Chair: tba*

The Life-OPTIMAL project

OB-Slurless 100 for digestate post treatment (**Bonadei Elena**)A high-precision and low emission spreader for digestate application in mountain areas (**Gioelli Fabrizio**)The potential of liquid and solid digestate produced in a biogas plant to enhance soil and plant quality (**Valentinuzzi Fabio**)**20:00 – 23:00****Social dinner at Borgo Medioevale (Torino, Parco del Valentino)**

Tuesday 18th September, 2018

9:00 – 10:00	<p>Plenary session, warm up lectures (Londra hall)</p> <p>Thematic area 4, Georg Guebitz (A): “Microbes and enzymes: the key to convert ‘difficult’ substrates?”</p> <p>Thematic area 5, Marco Fiala (IT): “The environmental sustainability of anaerobic digestion: where are we?”</p> <p>Thematic Area 6, Carlo Grignani (IT): “Agronomic value of a renewable resource: digestate can increase biogas value”.</p>
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10:00 -11:00 Parallel sessions



MICROBIOLOGY Thematic area 4

Room: Madrid

Chair: tba

10:00 – 10:15

Investigation on biogas-producing microbial community in biomass (**Conti Fosca**)

10:15 – 10:30

The potential of anaerobic fungi for the conversion of lignocellulosic biomass to energy (**Dollhofer Veronika**)

10:30 – 10:45

Isolation and characterization of cellulolytic key organisms in biogas plants (**Rettenmaier Regina**)

10:45 – 11:00

Metagenomic investigation of twelve centralized biogas plants operated in Denmark revealed important functional roles for microbial species belonging to underexplored taxa (**Campanaro Stefano**)



LCA Thematic area 5

Room: Lisbona

Chair: tba

Social, economic and environmental positive impacts of northern Italy biogas supply chain (**Chiabrando Andrea**)

Energy based economic and environmental analysis for the thermodynamic improvement potential of biogas production from organic wastes and surplus biomass (**Weichgrebe Dirk**)

Life cycle assessment of an algal oil extraction with a subsequent anaerobic digestion of the residues (**Spielmann Eugen**)

Bioenergy Farm II project: Economics of biogas production in micro-installations in selected EU countries (**Sopegno Alessandro**)




11:00 – 11:30 Coffee break and poster session

Tuesday 18th September, 2018

11:30 – 12:45 Company session (plenary – Londra hall)

12:45 – 13:45 Lunch break and poster session



13:45 – 15:15 Parallel sessions

	 MICROBIOLOGY Thematic area 4 <i>Room: Lisbona</i> <i>Chair: tba</i>	 PROCESS TECHNOLOGY Thematic area 3 <i>Room: Londra</i> <i>Chair: tba</i>	 DIGESTATE POST TREATMENT Thematic area 6 <i>Room: Madrid</i> <i>Chair: tba</i>
13:45 – 14:00	Impact of changing nutrient availability on the microbial community and its stress tolerance potential against enriched process inhibiting substances (Klang Johanna)	Estimating biogas potential and degradation kinetics in anaerobic digestion - Critical evaluation of different experimental setups and model structures (Weinrich Sören)	Processing digestate to recover nitrogen by using a simplified stripping technology (Provolò Giorgio)
14:00 – 14:15	Analysis of metatranscriptome data during a partial shutdown and start-up (LÖSER Lucy)	Next Generation Advancements in Anaerobic Sequencing Batch Reactors (Hamilton Douglas W.)	Combination of biomethanization and smoldering techniques for closed-loop management of agricultural waste (Ezieke Arinze)
14:15 – 14:30	Microbial community analysis in thermophilic trickle bed reactors efficient for biological methanation of H ₂ and CO ₂ (MÖBNANG Bettina)	Novel substrates and process management approaches for efficient biogas production (Kovács Kornél)	New digestate treatment concept SEQUESTA - sequencing sludge to ammonia (Stopp Paul)
14:30 – 14:45	Analyzing fhs genes and transcripts to assess the activity of intermediate metabolizers in agricultural biogas plants (Munk Bernhard)	Use of a Near Infrared Portable Instrument in monitoring anaerobic digestion process parameters and nutrients in digestates (Benozzo Francesco)	Anaerobic digestion of macroalgae with trace element supplementation: Batch and continuous studies (Membere Edward)
14:45 – 15:00	Microbiological surveillance of biogas plants (Singh Abhijeet)	Improving methane production of cow manure by steam explosion. (Elisabeth A. Cazier)	Digestates from cover crop, straw and cattle slurry mixtures as nutrient source in an organic cropping system (Fontaine Doline)
15:00 – 15:15	Causes, mechanisms and effects of process disturbances on biogas microbiomes (Theuerl Susanne)	Converting food waste into energy by coupling hydrothermal liquefaction and anaerobic digestion (Cabrera Daniela)	Microfiltered digestate in fertigation through drip lines (Mantovi Paolo)

15:15 – 15:45 Coffee break and poster session

Tuesday 18th September, 2018

15:45 - 16:45 Parallel sessions

	 PROCESS TECHNOLOGY Thematic area 3	 MICROBIOLOGY Thematic area 4
	<p><i>Room: Londra</i> <i>Chair: tba</i></p>	<p><i>Room: Madrid</i> <i>Chair: tba</i></p>
15:45 – 16:00	High-solids Anaerobic Digestion of the Organic Fraction of Municipal Solid Waste: Batch Experiments and Model Development for Assessing the Main Biodegradability Indicators (Pastor-Poquet Vicente)	Increased biogas production and acetate production from food waste and sewage sludge (Moestedt Jan)
16:00 – 16:15	The rational method of biogas plant management (Rosato Mario)	Metaproteomics highlights the impact of competition and host-phage interactions for the understanding of the biogas process (Robert Heyer)
16:15 – 16:30	Improvement of biomethane production through global value chain (Valentin Solene)	Molecular Analyses of Microbial Communities in Large-Scale Anaerobic Digesters Revealed the Optimization of the Biogas Process Based on Controlled Calcium Nitrate Dosage (Stoeck Thorsten)
16:30 – 16:45	Application of a mathematical model for optimization of methane production and minimization of greenhouse gas emissions in agricultural biogas plants (Herrmann Christiane)	Bacterial & archaeal metagenomic characterization during hydrogen production by dark fermentation of buffalo waste and rumen as inoculum (Chiariotti Antonella)

17:00 – 17:30 Awards and closing ceremony (Chairmen: tba)

- Keynote sentence summary
 - Thematic Areas 1 ÷ 6
- Best poster award
- Closing

Wednesday 19th September, 2018

8:00 – 18:30 **Technical visits** (A detailed programme will be available soon)

Dairy cattle farm with two 1MWel. biogas plants (Cooperativa Speranza – Candiolo)

Municipal bio-waste treatment facility and anaerobic digestion plant with biogas upgrading (Consorzio ACEA, Pinerolo)

Digestate post treatment facility (Fratelli Bonetto farm, Racconigi) - to be confirmed