

3rd Summer School
Biological Treatment of Solid Waste
Final Program

Day 1-Monday 26 June		
9.00 - 9.10	Openining and Welcome	Prof. Giovanni Esposito
Session 1. Waste Treatment (chairman Dr. Stefano Papirio)		
9.10 - 9.35	A study of organic matter and trace elements bio-accessibility in substrate and digestate from an anaerobic digestion plant	A. Laera
9.35 - 10.00	Bioelectricity production and role of the active microbial community in mesophilic and thermophilic microbial fuel cells	P. Dessi
10.00 - 10.25	Chemical treatments prior to the anaerobic digestion for the organic solid waste biorefinery	A. Conte
10.25 - 10.50	Process optimization of Thermotoga neapolitana Hydrogen production	G. Dreschke
10.50 - 11.20	Coffee Break	
11.20 - 11.45	Different approaches to enhance biogas production from anaerobic digestion of lignocellulosic materials	G. Mancini
11.45 - 12.10	Hydrogen production by synthetic co-culture and pure cultures of Thermotoga neapolitana and Caldicellulosiruptor saccharolyticus	O. Okonkwo
12.10 - 12.35	High-solids Anaerobic Digestion of Solid Waste in Batch and Semi-Continuous Mode	V. Pastor-Poquet
12.35 - 13.00	Methane production from LCFA-containing dairy wastewater at low temperature with granular sludge	S. Singh
13.00 - 14.30	Lunch break	
14.30 - 14.55	ADM1 based mathematical model of trace element precipitation/redissolution in anaerobic digestion processes.	B.C. Maharaj
14.55 - 15.20	High biomass yield of Scenedesmus acuminatus cultivated in liquid digestates from pulp and paper industry biosludge	R. Tao
15.20 - 15.45	Parametric Effects on Fermentative H ₂ Production of Agroindustrial Residues	M. Akhlaghi
Session 2. Biogas Treatment (chairman Dr. Eldon Ray)		
15.45 - 16.10	Biosequestration of CO ₂ in algal photo-bioreactors	N. R. Badgular
16.10 - 16.35	Simultaneous biodegradation of gas phase methanol and volatile fatty acid production using thiosulphate as the electron acceptor in a biotrickling filter	T. Eregowda
16.35 - 16.50	Coffee Break	
16.50 - 18.00	Management assembly ETECOS ³	
Day 2- Tuesday 27 June		
Session 3. Wastewater Treatment (chairlady Dr. Marika Kokko)		
9.00 - 9.25	Performance evaluation of sulfide-oxidizing bioreactors under autotrophic denitrification conditions	R. Khanongnuch
9.25 - 9.50	Ferrous iron mediated autotrophic denitrification: A new bioprocess for bioprecipitation/biorecovery of iron and treatment of nitrate-containing wastewaters	K. Kiskira
9.50 - 10.15	Denitrification coupled to sulfur solubilization: kinetics and mathematical modeling	A. Kostrytsia
10.15 - 10.40	Study of algal biofilm structure by using advanced microscopy techniques	J. H. Moreno
10.40 - 11.10	Coffee break	
11.10 - 11.35	Comparison of UASB and BTF bioreactor for the removal of selenate with sulfate and heavy metals (Ni and Cd)	L. C. Tan
11.35 - 12.00	Selenite reduction using fungal-bacterial co-culture of Phanerochaete chrysosporium and Delftia lacustris in the presence of phenol	S. Chakraborty
Session 4. Soil Bioremediation (chairman Dr. Antonio Panico)		
12.00 - 12.25	Chromium mobility in ultramafic areas: A isotopic study	V. Bolaños
12.25 - 12.50	Mass transfer mechanisms in a soil slurry bioreactor	D.O. Pino-Herrera
12.50 - 14.30	Lunch break	
14.30 - 14.55	Toxicity assessment of a TPH Contaminated Weathered Clay Soil and a Sandy Soil after Bioremediation by Adding Solid Digestate Amendment	A. Gielnik
14.55 - 15.20	Biochar production from two different digestates as sorbing material for lead removal from aqueous solutions	S. Wongrod
15.20 - 15.45	Optimisation of soil washing for seleniferous soil from North-west India and biological treatment of soil leachate	S. L. Wadgaonkar
15.45 - 16.30	Coffee break	
16.30 - 18.00	Management assembly ABWET	
Day 3-Wednesday 28 June		
9.00 - 13.00	Technical Visit of a Solid Waste Treatment Plant	
13.00 - 14.00	Lunch Break	
14.00 - 16.00	PhD Defense of Ms. Chiara Cassarini	
16.00 - 16.15	Coffee break	
16.15 - 18.15	PhD Defense of Ms. Feishu Cao	

Day 4-Thursday 29 June

General Introduction (chairman Prof. Giovanni Esposito)		
8.30 - 9.00	Registration	
9.00 - 9.20	Opening session and welcome	
9.20 - 10.00	Biogas and biomethane in Italy and Europe	Dr. Lorenzo Maggioni
Anaerobic Digestion (chairman Prof. Jukka Rintala)		
10.00 - 10.40	Physiological and metabolic aspects of biofilms in engineered systems	Dr. Federica Villa
10.40 - 11.00	Coffee Break	
11.00 - 11.40	Mathematical modelling of anaerobic digestion	Dr. Luigi Frunzo
11.40 - 12.20	ADM1 as a tool to study system dynamics, parameter sensitivity and identification of anaerobic digestion processes	Dr. Artin Hatzikioseyan
12.20 - 13.00	Anaerobic digestion pre-treatments	Prof. Vincenzo Belgiorno/Dr. Alessandra Cesaro
13.00 - 14.00	Lunch Break	
Anaerobic Digestion (chairman Prof. Jukka Rintala)		
14.00 - 14.40	High-solids anaerobic digestion	Dr. Renaud Escudie
14.40 - 15.20	Biogas production from chicken manure: lab and full-scale experiences	Prof. Erkan Sahinkaya
Biohydrogen/Bioenergy/Biorefinery (chairman Prof. Eric van Hullebusch)		
15.20 - 16.00	Biorefinery: Concepts, Current Status, and Development Trends	Prof. Jukka Rintala
16.00 - 16.15	Coffee Break	
16.15 - 18.15	PhD Defense of Mr. Silvio Riggio	
19.00 - 23.00	Tour of Sperlonga and Social Dinner	

Day 5-Friday 30 June

Biohydrogen/Bioenergy/Biorefinery (chairman Prof. Eric van Hullebusch)		
9.00 - 9.40	BioHydrogen production in anaerobic digestion processes : innovations and challenges	Dr. Eric Trably
9.40 - 10.20	Photobioreactor design and illumination systems for H ₂ production with anoxygenic photosynthetic bacteria	Prof. Roberto De Philippis
10.20 - 11.00	Hydrogen synthesis by Thermatoga Neapolitana: an unexpected deviation from the Dark Fermentation Model	Dr. Angelo Fontana
11.00 - 11.40	Coffee Break	
11.40 - 12.20	Fuel cells in the waste-to-energy chain	Dr. Viviana Cigolotti
12.20 - 13.00	Metabolic aspects of microalgae in biorefinery applications: the case of Cyanidiophyceae, polyextremophilic red algae	Dr. Claudia Ciniglia
13.00 - 14.00	Lunch Break	
Digestate and Gas Treatment and Valorization (chairman Prof. Piet Lens)		
14.00 - 14.40	Biogas desulfurization	Prof. Piet Lens
14.40 - 15.20	Novel bioreactor configurations for waste gas treatment and resource recovery	Dr. Eldon Ray
15.20 - 16.00	Coffee Break	
16.00 - 16.40	Fate of trace metals in digestate and environment	Prof. Eric van Hullebusch
16.40 - 17.20	Using microalgae to remove nutrients from digestates while producing valuable products	Prof. Elena Ficara
17.20 - 17.40	Closing Session	