



Biogas & Anaerobic Digestion Training Course

September 2nd, 5th and 6th – 2016

Location:

Interdisciplinary Center of Energy Planning - NIPE/Unicamp
Videoconference Room - Ground Floor

Lecturers:

Bruna de Souza Moraes (BSM)

Researcher in Bioenergy

Interdisciplinary Center of Energy Planning - NIPE/Unicamp

Jin Mi Triolo (JMT)

Assistant Professor

Dep. of Chemical Eng., Biotechnology and Environmental Tech.

University of Southern Denmark

Information & Registration

Guilherme Brandini - NIPEevents

brandini@nipe.unicamp.br

Phone: +55 19 35211718



*****This course will be presented in english*****

*****Registration is required*****

Núcleo Interdisciplinar de Planejamento Energético - NIPE

Rua Cora Coralina, 330 - Caixa Postal 6166 - CEP: 13083-896 - Campus Unicamp - Campinas/SP

Fone: (19) 3521-1720 - (19) 3521-1718 | E-mail: nipe@nipe.unicamp.br

Course Information

Denmark is the first country that has explored the co-digestion technology during the early 80's, and has been a leading country in advanced biogas technologies in both the industrial and research sectors for past several decades. The successful stories of co-digestion have proven that it is a key technology for commercialization of the biogas sector by improving biogas competitiveness. This course will firstly provide comprehensive concepts and understanding of biogas technologies and AD process controls. Afterwards we focus on commercial operation, taking an extensive look into co-digestion of municipal waste, and challenges on integration of underutilized local biomass in Brazilian biogas plants. Simple biogas calculations on the technical operation of biogas digesters and on its biogas yields from diverse interesting waste biomass will be trained and discussed.

Time Schedule

Day I (September 2nd - NIPE)

Time	Issue	Responsible
09:00 - 12:00	Welcome and presentation of course Biogas in Brazil (Background)	BSM
12:00 - 13:15	Lunch	
13:15 - 15:00	Introduction to biogas production technology Introduction to case work (Designing a biogas reactor)	JMT
15:00 - 15:15	Break	
15:15 - 17:30	Methane potential for biogas production (Determination and calculation)	JMT

Day II (September 5th - NIPE)

Time	Issue	Responsible
09:00 - 11:00	AD technical and process optimisation	JMT
11:00 - 11:15	Break	
11:15 - 13:00	Commercial operation of co-digestion I	JMT
13:00 - 14:15	Lunch	
14:15 - 15:00	Commercial operation of co-digestion II	JMT
15:00 - 17:30	Working on case work	JMT & BSM

Day III (September 6th - Economy Institute of UNICAMP)

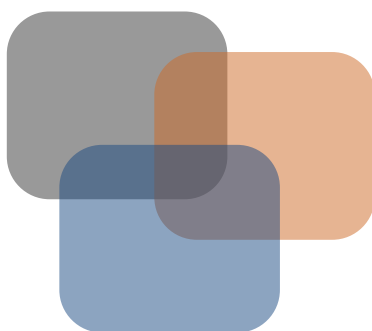
Time	Issue	Responsible
09:00 - 10:45	Biogas production in bioethanol biorefinery chain	BSM
10:45 - 11:00	Break	
11:00 - 13:00	Inhibition, Biogas microbiology, AD process optimisation	JMT
13:00 - 14:15	Lunch	
14:15 - 16:30	Working on case work	JMT & BSM
16:30 - 17:30	Presentation of case work (10 minutes each group)	JMT & BSM



Biography:

Prof. Dr. Jin Mi Triolo (JMP) is a specialist in state-of-the-art biogas production technology and AD operations. In close collaboration with commercial biogas plants, JMP has made researches and teaching with a strong focus on developing technology from non-food based sustainable bioresources, integration of underutilized biomass for biogas production, effects of refractory carbon on bioconversion of lignocellulosic residual biomass and sequential biorefinery process technology. She has an overall track record of over 55 scientific publications and has been a project manager for 2 international projects within the biogas production area.

Dr. Bruna de Souza Moraes is researcher in bioenergy field with focus on biogas production and utilization aiming environmental and economic sustainability. BSM started research on wastewater treatment in bench-scale exploring fundamentals and operational aspects of biological processes, including AD. In 2012, BSM focused your research on AD process within the context of sugarcane biorefineries, working with technical, economic and environmental assessment of different scenarios of biogas production and utilization, aiming to contribute for the application of AD technology in the sector. This work enabled an approach to the business and governmental sectors, apart from the academy. Currently she is also performing AD research on municipal solid waste and livestock residues.



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Organização:

nipe

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Apoio:

ie Instituto de
economia