16TH IWA World Conference on Anaerobic Digestion

Accelerating natural cycles with anaerobic digestion

Preliminary program

Sunday 23-06-2019

16.00	Opening
16.20	AD in a social context: Kala Vairavamoorty (IWA executive director)
17.00	AD in an economic context: Platinum sponsors
17.40	ANAEROBIC DIGESTION- BEYOND THE PARIS AGREEMENTS / LINKING UP WITH THE COMING HYDROGEN ECONOMY Willy Verstraete (University of Ghent)
18.20	Welcome cocktail

Monday 24-06-2019

Time	Session 1	Session 2	Session 3
8.45-9.10	Opening Session		
9.10-9.40	Plenary 3: Alfred Spormann, Stanford University		
9.40-10.10	Plenary 4: Lutgarde Raskin, University of Michigan		
10.10-10.40	Coffee break + posters		
	Microbiology of anaerobic digestion / (meta) genomic research	***Sulfur cycle technology***	***Post treatment (+ agricultural use)***
10.40-11.00	**Anna Schnürer** **Swedish University of Agricultural Sciences** **Sweden** *Title to be confirmed*	**Erik van Zessen** **Paques B.V.** **The Netherlands** *Title to be confirmed*	**Appropriateness of empirical models predicting the performance of rock-bed trickling filters following UASB reactors** C.A.L. Chernicharo, . T. Bressani-Ribeiro, E.I.P. Volcke, Brazil
11.00-11.15	**Global reference database of microbes in anaerobic digesters** V. Rudkjøbing, M. Dueholm, S. Knutson, M. Nierychlo, J. Kristensen, F. Petriglieri, G. Dottorini, E. Yashiro, S. Karst, M. Albertsen, P. H. Nielsen, Denmark	**Ni Stress to Sulphate Reducing Bacteria Enhances Ni Complexation: Opportunity for Ni-Co Separation from wastewater** Y. Liu, A. Serrano, V. Wyman, G. Southam, J. Vaughan, D. Villa-Gomez, Australia	**A. practical solution for sludge stabilization from aerobic post treatment in the anaerobic pre treatment unit** A. van Haandel, Brazil

11.15-11.30	**Genomic insights into the syntrophic metabolism of propionate oxidation** D.Z. Sousa, M.K. Nobu, C.A.P. Hidalgo, T. Narihiro, H. Tamaki, W.-T. Liu, N.Q. Wofford, M.J. McInerney, Y. Kamagata, A.J.M. Stams, H. Imachi, The Netherlands	**Developing a new thiosulfate-driven sulfur-cycle anammox process** D.Wu, Hong Kong	**Post-treatments and recirculation of agricultural solid digestates: impact on full-scale methane yield** U. Brémond, A. Bertrandias, J.P. Steyer, H. Carrere, France
11.30-11.45	**Aerobic and facultative bacteria: working horses at the service of Anaerobic Digestion** M. Alves, S.Duarte, J. Vitor Oliveira, C. Pereira Magalhães, A. Salvador, A.R. Castro, A.J.M. Stams, A.J. Cavaleiro, M. Alcina Pereira, Portugal	**Autotrophic denitrification via nitrite associated with microaeration for sulfide removal** P.I.M. Firmino, G.Neto, R.H.Lima, D.C. Hortêncio, M.E. Rodrigues da Silva, A.B.dos Santos, Brazil	**Removal of dissolved methane and nitrogen from anaerobically treated sewage using the SIAM process** J. M. Garrido, J. Domínguez, L. Rodríguez, A. Silva-Teira, T. Serna, E. Sánchez, P. Simón, N. Moya, A. Arias, J. M. Lema, Spain
11.45-12.00	**Microbial diversity, and biofilm growth, in size-resolved anaerobic granules** A. Trego, C. Morabito, S. Mills, S. Connelly, I. Bourven, G. Guibaud, C. Quince, U. Zeeshan Ijaz, G. Collins, Ireland	**Potential of sulfide-based denitrification for municipal wastewater treatment** A. Van den Hove, J.E. Baeten, S.O. Decru, E.I.P. Volcke, Belgium	**Hydrothermal carbonisation post-treatment of digestate from a municipal digester targeting solid reduction and increased methane yield** J. Frigon, Canada

12.00-12.15	**Meta-analysis of amplicon sequencing datasets to understand the ecology of Chloroflexi in methanogenic full scale reactors** P. Bovio, A. Cabezas, C. Etchebehere, Uruguay	**Electron Donor Influence in Metal Sulfide Removal and Recovery from Acid Mine Drainage** R.Costa, D. Bevilaqua, Brazil	**Partial nitritation/anammox process using intermittent aeration as post-treatment of food waste effluent** B. G. P. Carvalho, F. A. C. Warrener, H. M. C. Castro, A. Pereira, C. Chernicharo, J. C. Araújo, Brazil
12.15-12.35	**4 poster pitches**	**4 poster pitches**	**4 poster pitches**
	Thermal hydrolysis affects the microbiome structure and composition in sewage sludge anaerobic reactors G.H.R.. Braz, A. Taboada-Santos, N. Fernandez-González, M. Carballa and J. M. Lema, Spain	**Performance and bacterial diversity of a bioreactor for oxidation of sulfide from UASB reactor treating sewage** L. S. Azevedo, J. C. Araújo, C. A. L. Chernicharo, Brazil	**Filtration of municipal UASB effluent using a dynamic membrane immersed in anaerobic granular sludge** A. Rodríguez-Medina, A. Noyola, Mexico
	End-of-life of biodegradable plastics supports through anaerobic digestion: performance and microbial study C. Guillaume, F. Monlau, R. Guyoneaud, C. Vasmara, C. Gassie, R. Marchetti, France	**Use of magnetite for in-situ removal of hydrogen sulfide during anaerobic digestion** H. Jung, J. Kim, C.Lee, Republic of Korea	**Water treatment sludge as a filtration medium for post-treatment of UASB reactor effluent** M. Ahammed, India

	Impact of operational parameters on reactor performance and microbial community development during pilot-scale low temperature anaerobic digestion wastewater treatment L.M. Paulo, J. Castilla-Archilla, J. Ramiro-Garcia, J.A. Picón, D. Hughes, T. Mahony M. Murray, P. Wilmes, V. O'Flaherty, Ireland	**Simultaneous biological treatment and REY (rare earth elements and yttrium) removal from an acid mine drainage** E.W. Nogueira, L.A.G. Godoi, G. Brucha, M.H.R.Z. Damianovic, Brazil	**AlgaeBioGas: Algal-bacterial treatment of biogas digestate with biomass production and energy recovery** A.Cerar, R.Reinhardt, M. B. Zrimec, B.Lazar, M. Slapnik, Slovenia
	How reproducible is the anaerobic digestion microbiome? M. Peces, S. Astals, Denmark	**A passive treatment system for bioremediation of sulfate rich mine affected waters** S.Rossouw, C. Sheridan, South Africa *To be confirmed*	**Impact of microaeration on dissolved sulfide and methane removals from anaerobic effluent** C.S. Cabral, C.A.L. Chernicharo, J.C. Araújo, Brazil
12.35-14.00	Lunch + posters		
	Microbiology of anaerobic digestion / (meta) genomic research	***Nutrient removal/recovery linked to AD (anammox, struvite, N/P general)***	***Anaerobic high-rate/granular sludge***
14.00-14.20	**Application of synthetic microbial co-cultures for the conversion of syngas to bio-based chemicals** M. Diender, I. Parera-Olm, J.Koehorst, P. Schaap, A. J.M. Stams, D. Z. Sousa, The Netherlands	**Ilje Pikaar** **Wageningen University and Research** **The Netherlands** *Title to be confirmed*	**Ana Soares** **Cranfield University** **United Kingdom** *Title to be confirmed*

14.20-14.35	**Identifying metabolic flexibility in syntrophic populations within anaerobic digesters using stable-isotope informed metagenomics** R. Ziels, D.Z. Sousa, Canada	**A new UASB-gas-lift reactor design for the simultaneous production and recovery of calcium phosphate granules and methane from vacuum collected black water** J.R. Cunha, R.D. van der Weijden, L. Hernández Leal, G. Zeeman, C. Buisman, The Netherlands	**Anaerobic Granular Sludge Technology at High Salinity – Why Protein May be Crucial** D. Sudmalis, M.C.Gagliano, H.H.M.C. Rijnaarts, G. Zeeman, H. Temmink, The Netherlands
14.35-14.50	**Shaping robust methanogenic communities for the treatment of domestic wastewater at 15oC** E. Petropoulos, Y. Yu, A. Yakubu, T.P. Curtis, J. Dolfing, United Kingdom	**The potential for polyphosphate cycling in Archaea and extensive anaerobic polyphosphate formation in Methanosarcina mazei** J.C. Connolly, F. Paula, J. Chin, A. Schnurer, B. Muller, P. Manesiotis, N. Waters, K. Macintosh, F. Abram, J. McGrath, V. O'Flaherty, Ireland	**Development of dynamic membrane bioreactor based on rumen physiology for efficient hydrolysis of lignocellulosic biomass** X. Fonoll Almansa, T. Meuwissen, L. Aley, S. Shrestha, L. Raskin, United States
14.50-15.05	**Revealing the causal relationship between the anaerobic microbiome and co-digester performance using a common garden approach** L.Wang, J. J. Ducoste, F. L. de los Reyes III, United States	**Treatment of thermal hydrolysis process pre-treated mesophilic digestion dewatering liquors via two different deammonification reactors** P.O. Ochs, B. Martin, E. Germain-Crips, T. Stephenson, M.C.M. van Loosdrecht, A. Soares, United Kingdom	**High Rate Biomethanation Delivered by a Novel Plug Flow Biofilm Reactor** S.Savvas, J. Donnelly, T. Petterson, Z. Chong, S.Esteves, United Kingdom

15.05-15.20	**Transcriptome analysis of high ammonia biogas reactors** O.Karlsson-Lindsjö, B. Müller, F. Leung, A. Schnürer, Sweden	**Balancing physics, chemistry and microbiology in intensified biosolids and nutrient treatment systems** H. De Clippeleir, Q. Zhang, B. Wett, S. Martinelli, M. Miranda, C. Cusic, S.M. Kharkar, R. Suzuki, N. Passarelli, A. Al-Omari and C. deBarbadillo, United States	**Enhanced biogas production and in situ ammonia recovery using a novel gas-membrane absorption anaerobic reactor** X. Shi, J. Zuo, Y. Wang, M. Zhang, China
15.20-15.35	**Anaerobic Propionate Degradation: From Metagenomes to Kinetics** D. Popp, D. Becker, T. Malycheva, F. Bonk, S. Kleinsteuber, H. Sträuber, F. Centler, Germany	**Effect of N-NO2-/N-NH4+ ratio and organic carbon concentrations on N2O production in biological batch reactors containing anammox-granular sludge** T.D.S. Pereira, R.H. Spindola, E.C. Pires, M.H.R.Z. Damianovic, Brazil	**Low-ambient temperature high-rate anaerobic wastewater treatment at full-scale: two case studies** L.M. Paulo, J. Ramiro-Garcia, D. Hughes, T. Mahony, M. Murray, P. Wilmes, V. O'Flaherty, Ireland
15.35-16.00	Coffee break + posters		
16.00-16.15	**Marker microbiomes and key taxa combinations are determined by operational parameters in anaerobic digestion** S. Theuerl, J. Klang, M. Heiermann, J. De Vrieze, Germany	**Effect of thermal hydrolysis pre-treatment of waste activated sludge on fate and solubilisation of nutrients, melanoidins formation and effects on anaerobic digestion** J.A. Pavez, M.K de Kreuk, J.B van Lier, The Netherlands	**VFA production using anaerobic granular sludge: product yield maximization by SRT control** M. Mulders, R. Kleerebezem, M. Pronk, J. Tamis, G. Stouten, A.E. Alonso, The Netherlands

16.15-16.30	**Fungal pretreatment vs. Fungal bioaugmentation in lignocellulose-based anaerobic digesters: a metagenomic approach** Ç. Akyol, O. Ince, M. Bozan, E. Gozde Ozbayram, B. Ince, Turkey	**N2O gas emissions estimated by water dissolved measurements: Robustness and financial opportunity in different configurations** A. Fenu, B. Saerens, K. De Gussem, T. Wambecq, M. Weemaes, Belgium	**Biopaq®ICX: The next generation high rate anaerobic reactor proves itself at full scale** T.L.G. Hendrickx, B. Pessotto, R. Prins, L. Habets, J. Vogelaar, The Netherlands
16.30-16.45	**Response of anaerobic methanogenic biomass to immobilized C-nanotubes exposure** B. Fernández, J. Ruiz-Sánchez F. Prenafeta-Boldú, M. Guivernau, Spain	**Enhanced nitrogen removal from low COD/N tropical wastewater: low-dissolved-oxygen nitrification and slowly-biodegradable COD for denitrification** A.S.M. Chua, S.W.How, G.C. Ngoh, T.P. Curtis Malaysia	**Evaluation of microbial properties of the granular sludge developed in the psychrophilic UASB reactor fed with an electronics industry wastewater** K. Syutsubo, T. Danshita, H. Sumino, A. Iguchi, Y. Takemura, H. Sonaka, T. Yamaguchi
16.45-17.00	**Comprehensive ecosystem specific 16S rRNA database illuminates the microbial dark matter in anaerobic digesters** M.S Dueholm, S. Knutson, V. Rudkjøbing, M. Nierychlo, J. Kristensen, F. Petriglieri, E. Yashiro, S.M. Karst, M. Albertsen, P.H. Nielsen, Denmark	**Partial nitritation of anaerobically pre-treated sewage: pilot-scale experiences** V. Kouba, H.N.C. Thanh, B. Plutova, A. Paulu, B. Satkova, D. Vejmelkova, P. Dolejs, J. Hejnic, P. Jenicek, J. Bartacek, Czech Republic	**Enhancing biogas recovery from municipal sewage using granular activated carbon amended UASB digestion** Y. Zhang, L. Zhang, B. Guo, M.Gao, Y. Liu, Canada

17.00-17.15	**Reduced lag time and archaeal community shift after bioaugmenting anaerobic co-digesters fed poly-hydroxybutyrate bioplastic** N.Benn, K. Venkiteshwaran, D. Zitomer, United States	**Presentation by Dr. Bruce Logan** *Title to be confirmed*	**Phase separation hinders the bioenergy recovery from sugarcane vinasse anaerobic digestion: Contradicting the literature** L.T. Fuess, M. Zaiat, C. Augusto Oller do Nascimento, Brazil
17.15-17.35	**4 poster pitches**	**4 poster pitches**	**4 poster pitches**
	Lactic acid bacteria as key players in acidogenic fermentation as unveiled by flow cytometry and amplicon sequencing H. Sträuber, J. Lambrecht, S. Kleinsteuber, S. Müller, Germany	**Treatment of sidestream dewatering liquors from thermally hydrolized and anaerobically digested biosolids** W.J.B.M. Driessen, J.T.A. van Veldhoven, M. Janssen, M.C.M. van Loosdrecht, The Netherlands	**AnSBBR Applied to Methane Production by Thermophilic Anaerobic Co-Digestion of Cheese Whey and Glycerin** J.N. de Albuquerque, A.P. Paulinetti, E. Kurita, J. Ventura, M.C. Hallak, S.M. Ratusznei, J.A.D. Rodrigues, Brazil
	Enhanced resolution of ecological keystone populations in full-scale AD systems N. de Jonge, T Sørensen, AC Pedersen, A Schnürer, JL Nielsen, Denmark	**Enhanced anaerobic digestion for energy autonomy necessitates mainstream anammox technology** S.E. Vlaeminck, M. Van Tendeloo, D. Seuntjens, B. Bundervoet, A. Haan, I. Dekker, R. Jordaens, H. Mollen, E. Wypkema, J. Colsen, Belgium	--- **Long-term performance of an ECSB reactor treating cheese industry wastewater** V. Diamantis, A. Aivasidis, Greece

	To be confirmed --- **Identification of novel foam-forming microbes in full-scale mesophilic digester at a wastewater treatment plant** C. Jiang, E. Yashiro, A.K. Corfitz Petersen, P. Halkjær Nielsen, Denmark	**Towards enhanced nutrient recovery, biogas production and upgrading through AD and BES integration** V. Koskue, P. Ledezma, S. Freguia, M. Kokko, Finland --- **Operational strategies for a membrane biofilm reactor coupling DAMO and Anammox treating municipal landfill leachate to achieve a high rate nitrogen removal** G.J.. Xie China	**Hydrogen fermentation treatment of organic wastewater with high ammonia nitrogen concentration via electrodialysis bioreactor** A. Xia, P. Wei, C. Sun, Y. Huang, Q. Fu, China --- **Comparison of UASB and AnSCMR efficiency for the treatment of suspended solid (SS) rich starch wastewaters** B. Jiang, J. Wu, H. Chen, Y. Li, Japan
17.35-19.30	Poster session I + drinks + fingerfood		

Tuesday 25-06-2019

Time	Session 1	Session 2	Session 3
9.00-9.30	Plenary 5: Kara Nelson, University of California		
9.30-10.00	Plenary 6: Raul Muñoz, University of Vallalodid		
10.00-10.30	Coffee break + posters (CHANGE OVER)		
	Low-tech solutions for developing countries/ Environmental Management	***Biogas upgrading and management***	***Anaerobic biotransformations***
10.30-10.50	**S. Mutnuri** **Bits Pilani K K Birla Goa Campus** **India** *Title to be confirmed*	**E. McAdam** **Cranfield University** **United Kingdom** *Title to be confirmed*	**Biotransformation of organic micropollutants under anaerobic conditions: what do we know and what do we need to know** M. Carballa, Lorena Gonzalez-Gil, J.M. Lema, Spain
10.50-11.05	**Quantifying methane emissions from anaerobic digesters** J. Tauber, V. Parravicini, K. Svardal, J. Krampe, Austria	***To be confirmed***	**A wide perspective of carbon materials as catalysts for bioremediation of emerging pollutants and methanogenesis** L. Pereira, A. Salvador, G. Martins, A.R. Silva, A.J. Cavaleiro, M.A. Pereira, A. Stams, M.F. Pereira, M. Alves, Portugal

11.05-11.20	**Simultaneous stabilization, methanation, and hygienization of faecal matter from poor urban settlements applying co-digestion in plug-flow digester systems.** J.N. Riungu, M. Ronteltap, J.B. van Lier, The Netherlands	**Anaerobic thermophilic trickle bed reactor as a promising technology for flexible H2/CO2 biomethanation** K. Koch, D. Strübing, A.B. Moeller, B. Mößnang, M. Lebuhn, J.E. Drewes, Germany	**Potential for biodegradation of microplastics in thermophilic anaerobic digesters** J.L. Nielsen, N.K. Pedersen, A. Peydaei, E. Baudu, W.E.Y. Fernando, L. Gurevich, P. Fojan, R. Wimmer, N. de Jonge, Denmark
11.20-11.35	**Constraints, performance and perspectives of anaerobic sewage treatment: lessons from full-scale STPs in Brazil** C.A.L Chernicharo, L.A. Chamhum-Silva, T. Bressani-Ribeiro, Brazil	**Biological removal of siloxanes from biogas for biomethane injection in natural gas grid** C.Pascual, E. Arnaiz, R. Muñoz, R. Lebrero, Spain	**Combining Thermophilic Aerobic Reactor (TAR) with Mesophilic Anaerobic digestion (MAD) improves the degradation of pharmaceutical compounds** Y. Bessiere, I. Gonzalez-Salgado, L. Cavaillé, S. Dubos, E. Mengelle, C. Khim, E. Paul, S. Pommier, France
11.35-11.50	**Closing cycle in food waste treatment: by-products and energy recovery in a pilot-scale integrated system** F. Passos, A. Torres, T. Ferreira, C. Souza, C. Mota, C.A.L. Chernicharo, Brazil	**Ex-situ Biogas upgrading via hydrogenotrophic methanogenesis in anaerobic rotating reactor under extreme-thermophilic condition** W. Zhu, N. Dong, Y. Zhou, L. Xie, China	**The fate of micro-pollutants in an anaerobic-aerobic based system treating domestic sewage** L. Vasalle de Castro, L.S. Azevedo, S.F. Aquino, C. Moreira, M.P. de Freitas, A.F.T. Franco, F. Passos and C.R. Mota, Brazil

11.50-12.05	**Anaerobic-based biorefinery — A Techno-Economic Analysis** J.E. Schmidt, J.R. Bastidas-Oyanedel, Denmark	**In-situ biomethanation: Effect of hydrogen on acetate production and consumption rates.** N. dos Reis Vechi, L.M. Agneessens, L. Ditlev M. Ottosen, A. Feilberg, M. Vedel Wegener Kofoed, Denmark	**Hydrolysis or acidogenesis? Who plays a major role on the biotransformation of organic micropollutants?** R. Carneiro, L. Gonzalez-Gil, M. Zaiat, M. Carballa, J. M. Lema, Spain
12.05-12.25	**4 poster pitches**	**4 poster pitches**	**4 poster pitches**
	Influence of the scale factor on environmental and economic indicators of anaerobic digestion A. Arias, G. Feijoo, M.T. Moreira, Spain	**Pilot-scale demonstration of a biomembrane for biogas desulfurization** L. Pokorna-Krayzelova, J. Bartacek, S. Nyawira Theuri, C.A.S.Gonzalez, J.Prochazka, E.I.P. Volcke, P. Jenicek, Czech Republic	**Anaerobic treatment of hexachlorocyclohexane contaminated biomass in continuous stirred tank reactor** M. Nikolausz, I. Nijenhuis, U. N. da Rocha, B. Liu, F. B. Corrêa, H. H. Richnow, Germany
	Model-based analysis of greenhouse gas emission reduction potential through farm-scale digestion T. Vergote, W. Vanrolleghem, C. Van der Heyden, A. De Dobbelaere, J. Buysse, E. Meers, E.I.P. Volcke, Belgium	**Biogas upgrading using algal-bacterial processes in wastewater treatment plants** M. Rodero Raya, Spain *To be confirmed*	**Comparative fate of antibiotic resistant *E. coli* and antibiotic resistance genes in anaerobically digested sludge from wastewater treatment plants** S.C. Redhead, J. Nieuwland, E. Hayhurst, United Kingdom

	Influence of aqueous phase supplementation on biofiltration of diffuse methane emissions E.M.F. Brandt, J.C. Araújo, C.A.L. Chernicharo, Brazil	**Ex-situ biogas upgrading in thermophilic reactors using membranes as gas diffusion device** M. Peprah, P. Kougias, P. Tsapekos, L. Treu, S. Campanaro, I. Angelidaki, Denmark	**Azo dyes structure influencing it's own degradation: kinetics and redox conditions** R. Brito, S.Gavazza, J.R.Carvalho, M. Paraiso, M. Kato, L. Florencio, Brazil
	Anaerobic codigestion of sludge and manure in low cost vertical digesters for developing countries context R. Valencia Vázquez, L.J. Velázquez-Chávez, C.U. Moreno-Medina, R. Lucho-Chigo, M.D.J. Rodríguez-Rosales, Mexico *To be confirmed*	**Innovative in-situ biological biogas upgrading using high rate up flow anaerobic polyfoam bioreactor (UAPB)** K.B. Karkaby, K. Yanuka-Golub, S. Muhsein, M. Hassanen, N. Massalha, I. Sabbah, Israel	**Biodegradability and Toxicity of Ubiquitous Azoles to Anaerobic and Post-Treatment Processes** R. Sierra-Alvarez, K. Jog, C.H. Nguyen, E. Vanover, G. Li, J.A. Field, United States
12.25-14.00	Lunch + posters		
	Anaerobic MBR, research & application	***MFC / Bio-electrochemical systems***	***Pre-treatment***
14.00-14.20	**J. Kim** **INHA University** **Republic of Korea** *Title to be confirmed*	**A. Ter Heijne** **Wageningen University and Research** **The Netherlands** *Title to be confirmed*	**Assessing the effect of enzyme application in anaerobic digestion: experiences from the DEMETER project** L. de Beer, F. Velghe, J. Liebetrau, L. Müller, Belgium

14.20-14.35	**Challenging high salinity chemical wastewater treatment by applying anaerobic membrane bioreactors** J.D. Muñoz Sierra, H. Spanjers, J.B. van Lier, The Netherlands	**Impact of applied voltage on methane production and microbial activity in anaerobic digesters in the presence of granular activated carbon (GAC)** M. Harb, N. Ermer †, A.L. Smith, United States	**An innovative pre-treatment of poultry manure via Poul-AR technology enabling high yield thermophilic mono-digestion** N. Carlier, A. Kulagowska, R. Jordaens, J. Colsen, JW. Bijnagte, W. Fuchs, The Netherlands
14.35-14.50	**Two-phase improves energy recovery from food waste at high organic loading rate in anaerobic membrane bioreactors** Y.M. Amha, W. Zhao, M. Corbett, A.L. Smith, Unites States	**Microbial photoelectrochemical reactors for high rate wastewater treatment and energy recovery** J.Ren, Y Jiang, L Lu, X Chen, United States	**Pushing organic loading rate in a full scale anaerobic digester with thermal hydrolysis pre-treatment** Y. Bajon Fernandez, A. Aimale-Troy, R. Villa, C. Carliell-Marquet, B. Digby, D. Polag, Y. Bajon Fernandez, United Kingdom
14.50-15.05	**The first two years of operation of a semi-industrial AnMBR plant for urban wastewater treatment** A. Robles, F. García-Bellón, A. Jiménez, F. Durán, J. Vazquez-Padín, J. Serralta, J. Ribes, J. Ferrer, F. Rogalla, A. Seco, Spain	**Operation of a scaled-up BES prototype for electromethanogenesis** D. Molognoni, A. Ceballos-Escalera, P. Bosch-Jimenez, R. Rodriguez, E. Licon, D. Gali, C. Corbella, M. Aliaguilla, M.P. Bernicola, M. Della Pirriera, E. Borràs, Spain	**Influence of individual phenols and furans released during thermal pre-treatment on anaerobic digestion** A. Carvajal, E. Caroca, A. Serrano, R. Borja, A. Jiménez, A.F.M. Braga, G. Rodriguez-Gutierrez, F. G. Fermoso, Chile

15.05-15.20	**Treatment of Domestic Wastewater with Recirculating Anaerobic Dynamic Membrane Bioreactor** T. Fairley, L. Raskin, S. Skerlos, United States	**Long-term performance of TN removal and power generation in a single chamber MFC using a separator with pre-enriched nitrifying biofilm** T. Watanabe, A. Kawata, S. Tanno, S. Xue, K. Kubota, Japan	**Potentials and challenges by implementing fine mesh sieving for primary treatment of wastewater** L. Karstenskov Hughes, L. Bailon, M. Lykkegaard, C.Jes la Cour Jansen
15.20-15.35	**Anaerobic membrane bioreactor for direct COD capture and biogas production in mainstream wastewater treatment** C. Park, S. Kim, M. Cha, Republic of Korea *To be confirmed*	**Modeling an environmental biorefinery scenario with anaerobic digestion coupled to bioelectrosynthesis: analyzing the requirements for profitability** R. Moscoviz, A. Huyard, E. Desmond-Le Quéméner, J.H. Tian, T. Bouchez, M. Crest, France	**Exploring the complex role of pre-treatments in anaerobic digestion: from batch to continuous mode** C.M. Braguglia, A. Gallipoli, A. Gianico, D. Montecchio, P. Pagliaccia, Italy
15.35-16.00	Coffee break + posters		
16.00-16.15	**AnMBR: Evaluation of three membranes and three substrates** J.R.Vazquez-Padin, Spain	**Critical factors affecting biocathode development and bio-production from CO2 reduction in Microbial electrosynthesis (MES)** P. Izadi, United Kingdom	**Energetic and economic assessment of sludge thermal hydrolysis in novel configurations of wastewater treatment plants** A. Taboada-Santos, M. Carballa, J.M. Lema, Spain

16.15-16.30	**Evaluating Antibiotic Resistance Proliferation in Anaerobic Membrane Bioreactors Under Different Antibiotic Exposure Conditions** A.L. Smith, P. Wang, M. Harb, L. Stadler, United States	**Dreams are (only?) my reality - state of the art of microbial electrochemical sensors for AD process control** J. Kretzschmar, F. Harnisch, Germany	**Steam explosion: A method for enhancing biogas production from lignocellulosic biomass on a semi-continuous system** F. Kaldis, D. Cysneiros, A. Chatzifragkou, A. Karatzas, United Kingdom
16.30-16.45	**Fouling control by flocculant addition based on online measurement of sludge filterability in a pilot AnMBR** M. Odriozola, M. Lousada-Ferreira, N. Morales, H. Spanjers, J.B. van Lier, The Netherlands	**On-line monitoring of biohythane fermentation system based on microbial electrochemical technology** S. Huang, S. Mengmeng, L. Zhidan, China	**Electrochemical pretreatment for H2S control of CEPT sludge** Q Zeng, FX Zan, TW Hao, GH Chen, X. Weiqi, Hong Kong
16.45-17.00	**Antibiotic Resistance Gene Fate during Co-digestion of Livestock Manure and Domestic Wastewater in an Anaerobic Membrane Bioreactor** E. Lou, L. Baker, A. Smith , L.Stadler, United States	**Dynamic simulation of bioelectrical and electrical processes in microbial fuel cells operating with municipal wastewater** T. Littfinski, H. Hiegemann, M. Lübken, T. Gehring, K.-G. Schmelz, D. Pant, M. Wichern, Germany	**Optimization of methane production from cattle manure using steam explosion pre-treatment** M. Studer, S. Brethauer, E. Cazier, Switzerland

17.00-17.20	**4 poster pitches**	**4 poster pitches**	**4 poster pitches**
	Development of Electrospun Nanofiber Membranes for Anaerobic Membrane Bioreactors S.Gee, A. Smith, United States	**Bioelectrochemical Anaerobic Sewage Treatment (BEAST): From Laboratory Tests to Full Scale Implementation** B.Tartakovsky, Y. Kleiner, Canada *To be confirmed*	**Biorefinery approach for lignocellulosic biomass valorisation: combination of pretreatment with chemical recycling, phenols extraction and anaerobic digestion** G. Cazaudehore, C. Peyrelasse, M. Marques, B. Schraauwers, F. Monlau, France
	Protocol to Evaluate and Correlate Membrane Performance and Mixed-liquor Characteristics of Full-scale and Pilot-Scale AnMBRs M.M.J. Baudry, T. Zhou, P. Van Gaelen, I. Smets, S. Pacheco-Ruiz, The Netherlands	**High carbon conversion rate to carboxylic acids through a bio-electrofermentation – ion substitution electrodialysis integrated system** B. Yan, M. Zhou, W. Zhao, Y. Zhang, China *To be confirmed*	**Electrokinetic disintegration for an improvement in sludge digestion yield** S. Houtmeyers, R. Dewil, L. Appels, Belgium
	Heavy metals effects and denitrifying process in an Anaerobic Swirling Fluidized Bed Membrane Bioreactor (ASFMBR) J.E. Ramírez, S. Esquivel, G. Buitrón, F.J. Cervantes, Mexico	**Economic Evaluation Of Commercial Applications For Electrogenic Bioreactors Based On Experimental Results** A. Szczupak, R. Shechter, Israel *To be confirmed*	**Exogenous ligninases improve methane yields during anaerobic digestion of lignocellulosics: The case of corn stover** J. E. Mendez-Hernández, O. Loera, E. M. Méndez-Hernández, U. Duran, N. O. Soto-Cruz, Mexico

	Fouling behavior comparison of three membrane modules in anaerobic membrane bioreactor Z. Liu, X. Huang, China	**Magnetic fields enhance power generation and shape exoelectrogenic microbiome in bioelectrochemical systems** H. Zhou, D. Xing, China	**The science of enzyme dosing in anaerobic digestion.** J. Jantova-Patel, Y. Bajón Fernández, F. Ishaq, C. Marquet, R. Villa, United Kingdom
17.20-18.30	Posters with drinks and finger food		
18.30-19.30	Arts and Science		

Wednesday 26-06-2019

Time	**Session 1**	**Session 2**	**Session 3**
9.00-9.30	Plenary 7: Mark van Loosdrecht, Technical University of Delft		
9.30-10.00	Plenary 8: Elizabeth Edwards, University of Toronto		
10.00-10.30	Coffee break + posters		
	Modelling and Control	***Resource Recovery /Bio-polymer production using anaerobic systems***	***Sludge and slurry digestion***

10.30-10.50	**A revision of microbial growth yields in anaerobic digestion** J. Rodríguez, M. Paton, United Arab Emirates	**A. Rotaru** **University of Southern Denmark** **Denmark** *Title to be confirmed*	**Co-digestion and pretreatment improve microalgae anaerobic digestion** I. Ferrer, M. Solé-Bundó, M. Garfí, Spain
10.50-11.05	**Demand-driven biogas production by substrate management – Investigations in process stability at different scales** E. Mauky, S. Weinrich, H.J. Naegele, H.F. Jacobi, J. Liebetrau, M. Nelles, Germany	**Integrating recovery of nutrients and energy: An economic assessment of fifteen scenarios for pig manure treatment** J. de Vrieze, G. Colica, C. Pintucci, C. Pedizzi, M. Spiller, M. Carballa, S.E. Vlaeminck, Belgium	**High solids anaerobic digestion of lignocellulosic biomass via oxidation-reduction potential-based micro-aeration** S. Khanal, D. Nguyen, Z. Wu, S. Shrestha, P.H. Lee, L. Raskin, United States
11.05-11.20	**Predictive models of AD inhibition can be built by integrating independent studies** O. Chapleur, S. Poirier, S. Déjean, K. Lê Cao, France	**Chain oddity: understanding odd-chain elongation and why it behaves in an odd way** R. Ganigué, P. Candry, C. Petrognani, B. Ulčar, K. Rabaey, Belgium	**Continuous stirred tank reactors in series: an approach to enhance the enzymatic hydrolysis and sludge reduction in anaerobic waste activated sludge digestion?** H. Guo, R. Nair, F. Tonin, A. Hendriks, J.B. van Lier, M. de Kreuk, The Netherlands
11.20-11.35	**Moving window PCA based on NIRS spectra for anaerobic digestion (AD) process monitoring** L. Awhangbo, F. Béline, J. Roger, A. Gobrecht, R. Bendoula, France	**Improvement of caproate synthesis from lactate through inoculum preparation and butyric acid supplementation** C. Nzeteu, Ireland	**Surprising requirements for anaerobic hydrolysis and acidification of proteins** T.H. Duong, M. van Eekert, K. Grolle, N.T.T. Viet, H. Temmink, G. Zeeman, The Netherlands

11.35-11.50	**In-depth bioenergetic evaluation of propionate oxidation pathways** M. Patón, H.H, Hernandez, J. Rodríguez, United Arab Emirates	**Effects of elevated pCO2 in mixed culture fermentation** P.S. Ceron Chafla, R.E.F Lindeboom, R. Kleerebezem, K. Rabaey, J.B van Lier, The Netherlands	**Linking microbial population dynamics in landfill bioreactors to food waste type and decomposition stage** F.L. de los Reyes III, L. Wang, E. Lee, M.A. Barlaz, United States
11.50-12.05	**Long-term operation of a feedback control strategy for biohydrogen production from organic solid waste in a sequencing batch reactor** I. Moreno-Andrade, A. Vargas, S. Santiago, Mexico	**Revamping the partition-release-recovery concept by thermal hydrolysis and internal carbon recycle: closing the carbon cycle** D. Puyol, I, Rodriguez, J.D. Marín-Batista, V. Monsalvo, T. Hülsen, D. Batstone, F. Martinez, J.A. Melero, A.F. Mohedano, Spain	**Feasibility of biomethane production by supplying H2 into a pressurized digester of sewage sludge** I. Diaz, F. Fdz-Polanco, M. Fdz-Polanco, Spain
12.05-12.25	**4 poster pitches**	**4 poster pitches**	**4 poster pitches**
	Open-loop model-based optimisation method for start-up of anaerobic co-digestion processes S. García-Gen, Chile	**From laboratory to continuous pilot scale VFA production: the challenge of up-scaling and process engineering** J. Garcia-Aguirre, M. Esteban-Gutiérrez, J. González Martínez de Goñi, I. Irizar, E. Aymerich, Spain	**Influence of sorghum's structural composition for biomethane production using sequential cropping system** M. Garuti, P. Mantovi, M. Soldano, A. Immovilli, F. Ruozzi, F. G. Fermoso, A. J. Rodriguez, C. Fabbri, Italy

	Mixing characterisation in gas-mixed anaerobic digesters: scaled-down evaluation and scaled-up implication P.Wei, R. F. Mudde, W.S.J. Uijttewaal, H. Spanjers, J. B. van Lier and M. de Kreuk, The Netherlands	**Continuous Production and Separation of Organic Acids from Biomass via Anaerobic Digestion, Filtration and Electrodialysis** J. Massanet-Nicolau, R.J. Jones, R. Fernandez-Feito, A. Guwy, R. Dinsdale, United Kingdom	**Contribution of acetogenesis to anaerobic digestion of sewage sludge** B. Fu, R. Conrad, X. Jin, H. Liu, China
	Effects of carbon redirection on anaerobic digester performance of water resource recovery facilities K. Solon, M. Jia, E.I.P. Volcke, Belgium biogas --- **Stratification in anaerobic granules: A health measurement of the anaerobic digestion process** R. Gonzalez-Cabaleiro, S. Connolly, United Kingdom	**Enhancing biogas production and recovering volatile fatty acids with magnetic molecularly imprinted polymers** M. Tonnuci, O. Adarme, B. Baeta, C. Tarley, S. de Aquino --- **Steering microbiomes towards new biochemical production: iso-caproate** K. de Leeuw, D. Strik, C. Buisman, The Netherlands	**Anaerobic digestion in the kraft pulp and paper industry – benefits and strategies for implementation** E. Ekstrand, A. Björn, A. Karlsson, B. Magnusson, M. Gustavsson, M. Larsson, X.B. Truong, B.H. Svensson, J. Ejlertsson, Sweden --- **Semi-continuous anaerobic co-digestion of flotation sludge and sweet potato: Nutrients and energy recovery** Sarolli S. de M. Costa
12.25-14.00	Lunch + posters		

14.00-14.15	**Anaerobic sequential batch reactors for high-efficiency treatment of slow degradable industrial wastewater** S.P.R. Pacheco-Ruiz, A.M. Ferreira, The Netherlands	**Nitrogen recovery from anaerobically digested blackwaters using Bioelectrochemical systems** E. Borràs, D. Molognoni, M. Aliaguilla, P. Bosch-Jimenez, M. P. Bernicola, J. García-Montaño, S. Sanchis, Spain	**Dry anaerobic digestion of sewage sludge in small and medium WWTP** J. Garcia-Aguirre, E. Aymerich, M. Esteban-Gutierrez, L. Pastor, J.E. Sánchez-Ramírez, S. Doñate, R. Romaguera, C. Lardin, E. Mino, Spain
14.15-14.30	**Insights into the synergistic effects of the anaerobic co-digestion of sludge and food waste through the modelization of semi-continuous experimental tests** D. Montecchio, P. Pagliaccia, V. Di Castro, A. Gallipoli, A. Gianico, S. Rossetti, B. Tonanzi, C. Braguglia, Italy	**Evaluation of protein composition influence on yields and selectivity of volatile fatty acids production** R. Bevilacqua, A. Regueira, M. Mauricio, J.M. Lema, M. Carballa, Spain	**BioH2 and bioCH4 recovery by recirculated temperature-phased anaerobic co-digestion of food waste and paper waste** Y. Qin, L. Li, J. Wu, B. Xiao, T. Hojo, K. Kubota, Y. Li, Japan
14.30-14.45	**Using kinetic isotope effect to evaluate the significance of the sequential and parallel steps: formation of microbial consortium during reversible anaerobic methane oxidation coupled with sulfate reduction** V.A. Vavilin, L.Y. Lokshina, S.V. Rytov, Russian Federation	**Caproic acid production: process development, product recovery, microbiome characterization and techno-economic analysis** P. Oleskowicz-Popiel, M. Lezyk, A. Duber, F. Brodowski, E. Jankowska, F. Walkiewicz, N. Gutowska, R. Zagrodnik, Poland	**Enhanced anaerobic digestion of waste activated sludge using sludge incineration bottom ash** Y. Shen, C. Yin, N. Zhu, China

14.45-15.00	**Optimization of the agitation process in a full-scale anaerobic digester using computational fluid dynamics (CFD) and tracer experiment** J. Claros, J.E.Sánchez-Ramírez, A.M. Maciá, C. Lardín, L. Pastor, Spain	**Enrichment and characterisation of chain elongating communities** P. Candry, J. Carvajal-Arroyo, S. Huang, K. Rabaey, R. Ganigue, Belgium	**Seasonal Variation of the Digester Temperature: Using the Digester as Heat Storage** B. Steiniger, C. Hubert C. Schaum, M. Michel, M. Spalleck, Germany
15.00-15.15	**Modelling VFA production kinetics from protein-rich industrial wastes** A. Regueira, R. Bevilacqua, J. M. Lema, M. Carballa, M. Mauricio-Iglesias, Spain	**Chain elongation with lactate for producing medium-chain carboxylates: challenging the robustness of the reactor microbiome by introducing a temperature perturbation** B. Liu, Germany	**Effect of zeolite addition on the biogas production from chicken manure leachate** A. Spyridonidis , I.A. Vasiliadou , K. Athanasiou, , K. Stamatelatou, Greece
15.15-15.30	**Meta-analysis of dark fermentation in continuous stirred-tank reactors** E. Razo-Flores, Mexico	**High-rate production of caproic acid in a chain elongating granular reactor** J.M Carvajal Arroyo, P. Candry, S.J. Andersen, R. Props, T. Seviour, R. Ganigué, K. Rabaey, Belgium	**Methane recovery from ammonia-inhibited thermophilic reactors using bioaugmentation** H. Tian, M. Yan, I. Angelidaki, I. A. Fotidis, Denmark
15.30-16.00	Coffee break + posters		
16.00-17.30	Closing session: Paper award / Poster award Lettinga Award		

	Farewell address
17.30-19.00	Bus transport to Scheveningen
	Conference dinner at the beach!

Thursday 27 June: Excursions