

WEDNESDAY	08:30	<b>1CO.1</b> T1.4	<b>4CO.2</b> T4.3	<b>3CO.3</b> T3.7	<b>5CO.4</b> T5.2	<b>3CV.1</b> T3.3/3.4/ 3.5	EXHIBITION
	10:30	Break					
	10:45	<b>Plenary Session 4CP.1</b>					
		<b>Plenary Session 5CP.2</b>					
		<b>Plenary Session ICP.3</b>					
	12:30	Lunch Break					
	13:30	<b>1CO.5</b> T1.3	<b>4CO.6</b> T4.5	<b>3CO.7</b> T3.7	<b>1CO.8</b> I6.2	<b>3CV.2</b> T3.1	
	15:00	Break					
	15:15	<b>1CO.9</b> T1.3	<b>4CO.10</b> T4.5	<b>3CO.11</b> T3.7	<b>1CO.12</b> I6.3	<b>2CV.3</b> T2.4/2.5	
	16:45	Break					
17:00	<b>2CO.13</b> T2.1	<b>4CO.14</b> T4.3	<b>3CO.15</b> T3.5	<b>1CO.16</b> I6.1	<b>2CV.4</b> T2.6		
18:30	<b>EUBCE Dinner</b>						

<b>1 Biomass Resources</b> T1.3 Biomass crops and energy grasses T1.4 Algae production systems
<b>2 Biomass Conversion Technologies for Heating, Cooling and Electricity</b> T2.1 Production and supply of solid biofuels T2.4 Gasification for power, CHP and polygeneration T2.5 Gasification for synthesis gas production T2.6 Anaerobic digestion for biogas production
<b>3 Biomass Conversion Technologies for fuels, chemicals and materials</b> T3.1 Production of thermally treated solid biofuels T3.3 Oil-based biofuels T3.4 Biomethane T3.5 Bioethanol and sugars from lignocellulosic biomass T3.7 Production and application of biobased chemicals
<b>4 Biomass Policies, Markets and Sustainability</b> T4.3 Environmental impacts of bioenergy T4.5 Biomass strategies and policies
<b>5 Bioenergy in integrated energy systems</b> T5.2 Bioenergy and grid balancing
<b>1 Industry Sessions</b> 6.1 Biomass Resources (Crops, SRF, Algae and Organic Waste) 6.2 Thermochemical conversion processes 6.3 Power & Heat processes and systems

08:30 - 10:00

ORAL SESSION 1CO.1

Microalgae Processing, Process Parameters and Harvesting

ROOM: K21

**CHAIRPERSONS:**

**Frédéric VOGEL**, PSI - Paul Scherrer Institut, SWITZERLAND

**Scott TURN**, University of Hawaii, USA

**1CO.1.1**

**DUNALIELLA TERTIOLECTA MICROALGAE HARVESTING USING ABS MEMBRANES IN VIBRATORY FILTRATION**

Monika HAPONSKA, Catalonia Institute for Energy Research / Universitat Rovira i

Virgili, Bioenergy and Biofuels Dpt., SPAIN

Co-authors: E. Clavero, C. Torras, Catalonia Institute for Energy Research, Tarragona, Spain; J. Salvadó, Universitat Rovira i Virgili, Tarragona, Spain

**1CO.1.2**

**MICRO-ALGAE CULTIVATION BY ENRICHED CO<sub>2</sub> FROM DIESEL TRI-GENERATION SYSTEM WITH SELECTIVE CCS AND DIRECT BIOFUEL CONVERSION FROM WET MICRO-ALGAE BY SUPER-HEATED METHANOL VAPER METHOD**

Koji YAMANE, University of Shiga Prefecture, Mechanical Systems Engineering Dpt., JAPAN

Co-authors: K. Kawasaki, S. Iwai, University of Shiga Prefecture, Hikone, Japan

**1CO.1.3**

*Invited*

**1CO.1.4**

**MICROALGAE FRACTIONATION INTO BIOPRODUCTS BY STEAM EXPLOSION AND MEMBRANE FILTRATION**

Joan SALVADÓ, Universitat Rovira i Virgili, Chemical Engineering Dpt., SPAIN

Co-authors: E. Lorente, C. Torras, E. Clavero, N. Descarrega, Catalonia Institute for Energy Research, Tarragona, Spain; M. Haponska, Universitat Rovira i Virgili, Tarragona, Spain

**1CO.1.5**

**NUTRIENT USAGE IN MICROALGAL BIOTECHNOLOGY: UPDATES ON A GROWING PROBLEM AND STRATEGIES FOR EFFECTIVE USAGE**

Joshua MAYERS, Chalmers University of Technology, Biology and Biological Engineering Dpt., SWEDEN

Co-authors: E. Albers, Chalmers University of Technology, Goteborg, Sweden; K.J. Flynn, Swansea University, United Kingdom

08:30 - 10:00

ORAL SESSION 4CO.2

Land Use Change and Deforestation

ROOM: K2

**CHAIRPERSONS:**

**Gustaf EGNELL**, Swedish University of Agricultural Sciences, SWEDEN

**Ruben GUISSON**, VITO - Flemish Institute Technological Research, BELGIUM

**4CO.2.1**

**A HISTORICAL PERSPECTIVE ON BIOENERGY ENVIRONMENTAL SUSTAINABILITY IN EU POLICIES**

Luisa MARELLI, European Commission, JRC, ITALY

Co-authors: J. Giuntoli, European Commission, JRC, Petten, The Netherlands; R. Edwards, European Commission, JRC, Ispra, Italy

**4CO.2.2**

**BIOMASS, LAND-USE CHANGES AND ENVIRONMENTAL IMPACTS: A QUALITATIVE AND QUANTITATIVE REVIEW OF SCIENTIFIC LITERATURE**

Benoit GABRIELLE, AgroParisTech - INRA, Functional Ecology of Agro-Ecosystems Dpt., FRANCE

Co-authors: A. Bispo, ADEME, Angers, France; M. El Akkari, O. Réchauchère, INRA, Paris, France; D. Makowski, L. Bamière, A. Barbottin, INRA, Thiverval-Grignon, France; V. Bellassen, S. Gaba, INRA, Dijon, France; C. Bessou, P. Dumas, CIRAD, Montpellier, France; J. Wohlfahrt, INRA, Mirecourt, France

**4CO.2.3**

**BENEFITS OF A CAUSAL ANALYSIS FRAMEWORK TO INFORM LAND-USE CHANGE MODELING IN THE CONTEXT OF BIOENERGY**

Hans LANGEVELD, Biomass Research, THE NETHERLANDS

Co-authors: R.A. Efroymson, K.L. Kline, V.H. Dale, N. Singh, Oak Ridge National Laboratory, Oak Ridge, Usa; A. Angelsen, Norwegian University of Life Sciences, As, Norway; P.H. Verburg, VU University Amsterdam, Amsterdam, The Netherlands; J.W.A. Langeveld, Biomass Research, Wageningen, The Netherlands

**4CO.2.4**

**BRAZILIAN SUGARCANE EXPANSION AND DEFORESTATION**

Manoel Regis LEAL, CTBE - Brazilian Bioethanol Science and Technology Laboratory, Industry Division, BRAZIL

Co-authors: D.G. Duft, T.A.D. Hernandez, CTBE, Campinas, Brazil

**4CO.2.5**

**ASPECTS OF THE FOREST-WOOD SECTOR AND BIOENERGY PRODUCTION**

Birger KERCKOW, FNR - Agency for Renewable Resources, European and International Cooperation, GERMANY

08:30 - 10:00

ORAL SESSION 3CO.3

Biomass to Energy and other Valuable Components

ROOM: K1

**CHAIRPERSONS:**

**Xiaoling MIAO**, Shanghai Jiao Tong University, P.R. CHINA

**Arturo SANCHEZ**, Centro de Investigacion y de Estudios Avanzados del IPN, Bioenergy Futures Laboratory, MEXICO

**3CO.3.1**

**HYDROGEN PRODUCTION FROM BIOMASS VIA GASIFICATION PROCESS: THE RESULTS OF THE EU UNIFHY PROJECT**

Pier Ugo FOSCOLO, University of L'Aquila, Industrial Engineering Dpt., ITALY  
Co-authors: D. Barisano, G. Braccio, ENEA, Rotondella, Italy; E. Bocci, Guglielmo Marconi University, Rome, Italy; S. Heidenreich, Filtersystems GmbH Werk Schumacher, Crailsheim, Germany; M. Rep, HYGEAR, Arnhem, The Netherlands; C. Courson, University of Strasbourg, France; J. Cornish, EPC, Herten, Germany

**3CO.3.2**

**CO HYDROGENATION TO ALCOHOLS OVER SBA-15 SUPPORTED FE, CO, AND CU: BINARY VS TERNARY CATALYSTS**

Jordi PLANA-PALLEJÀ, Universitat Rovira i Virgili, Chemical Engineering Dpt., SPAIN  
Co-authors: D. Montané, Universitat Rovira i Virgili, Tarragona, Spain; C. Berruero, S. Abelló, Catalonia Institute of Energy Research (IREC), Tarragona, Spain;

**3CO.3.3**

**CHARS FROM THERMO-CHEMICAL CONVERSION TECHNOLOGIES: PHYSICAL AND CHEMICAL CHARACTERISTICS AND THEIR BEHAVIOR IN SOILS**

Daniele BASSO, HBI, ITALY  
Co-authors: D. Wuest, A. Kruse, University of Hohenheim, Stuttgart, Germany

**3CO.3.4**

**IMPROVEMENT OF THE AGRONOMIC PROPERTIES OF POOR SOILS AFTER AMENDMENT OF BIOCHAR PRODUCED BY THE PYROLYSIS OF THICK FRACTION PIG MANURE**

Jens MAGGEN, Hasselt University, Applied and Analytical Chemistry Dpt., BELGIUM  
Co-authors: R. Carleer, J. Yperman, S. Schreurs, Hasselt University, Diepenbeek, Belgium

**3CO.3.5**

**SUSTAINABLE REDESIGN OF BPA-BASED POLYMERS VIA STRATEGIC ASSEMBLIES OF WOOD-DERIVED BUILDING BLOCKS**

Joseph STANZIONE, Rowan University, Chemical Engineering Dpt., USA  
Co-authors: G. Palmese, Drexel University, Philadelphia, USA; J. Sadler, J. La Scala, Army Research Laboratory, Aberdeen Proving Ground, USA

## ORAL PRESENTATIONS

### WEDNESDAY, 14 JUNE 2017

08:30 - 10:00

#### ORAL SESSION 5CO.4

#### Bioenergy and Grid Balancing

ROOM: K23+K24

#### CHAIRPERSONS:

**Daniela THRÄN**, DBFZ-German Biomass Research Centre, GERMANY

**Antti ARASTO**, VTT Technical Research Centre of Finland, FINLAND

#### 5CO.4.1

#### DEMAND-DRIVEN BIOGAS PRODUCTION IN FULL-SCALE BY MODEL PREDICTIVE FEED CONTROL

Eric MAUKY, DBFZ-German Biomass Research Centre, Biochemical Conversion Dpt., GERMANY

Co-authors: S. Weinrich, J. Liebetrau, M. Nelles, DBFZ-German Biomass Research Centre, Leipzig, Germany; H.F. Jacobi, Hessian State Laboratory, Gießen, Germany

#### 5CO.4.2

#### GIS-BASED OPTIMIZATION MODEL FOR THE SMART DESIGN OF A NATIONWIDE BIO-SNG PRODUCTION SYSTEM FOR IRELAND

Alessandro SINGLITICO, National University of Ireland, College of Engineering and Informatics, IRELAND

Co-authors: I. Kilgallon, Gas Networks Ireland, Cork, Ireland; J. Goggins, R.F.D. Monaghan, National University of Ireland, Galway, Ireland

#### 5CO.4.3

#### CONCEPT AND PRACTICAL IMPLEMENTATION OF INTEGRATED FLEXIBLE BIOGAS-INTERMITTENT RE-BATTERY STORAGE FOR RELIABLE AND SECURE POWER SUPPLY TO MEET ACTUAL LOAD DEMAND AT OPTIMAL COSTS

Dodiek Ika CANDRA, Hochschule Aschaffenburg, Engineering Science Dpt., GERMANY

Co-authors: K. Hartmann, M. Nelles, University of Applied Sciences Aschaffenburg, Germany

#### 5CO.4.4

#### SHOWCASE BIOCAT: BALANCING THE ELECTRICITY GRID WITH THE GAS GRID VIA BIOLOGICAL METHANATION

Doris HAFENBRADL, Electrochaea, GERMANY

#### 5CO.4.5

#### THE POTENTIAL ROLE OF WASTE BIOMASS IN THE FUTURE URBAN ELECTRICITY SYSTEM

Yu JIANG, Wageningen University, Biobased Chemistry and Technology Dpt., THE NETHERLANDS

Co-authors: E van der Werf, E.C van Ierland, K.J Keesman, Wageningen University & Research, Wageningen, The Netherlands

**08:30 - 10:00**

**VISUAL PRESENTATIONS 3CV.1**

**Oil-based Biofuels. Biogas Upgrading Systems. Feedstock and Processes for Bioalcohol Production**

ROOM: Poster Area

*See page 116*

**08:30 - 15:00**

**PARALLEL EVENT**

**BIOENERGY - FROM RESEARCH TO MARKET DEPLOYMENT IN A EUROPEAN CONTEXT**

*See page 146*

**10:00 - 10:15**

**BREAK**

**10:15 - 11:00**

**PLENARY SESSION 4CP.1**

**Biomass Strategies and Policies. Mobilization and Environmental Impact**

ROOM: K1

**CHAIRPERSON:**

**Tomas LUNDMARK**, Swedish University of Agricultural Sciences, SWEDEN

**4CP.1.1**

Keynote presentation

**MAPPING INDIRECT LAND USE CHANGE AND THE EFFECT OF ILUC MITIGATION MEASURES**

Floor VAN DER HILST, Utrecht University, Energy & Resources, Copernicus Institute, THE NETHERLANDS

Co-authors: J.A. Versteegen, University of Münster, Münster, Germany; G. Woltjer, E.M.W. Smeets, Wageningen Economic Research, The Netherlands; A.P.C. Faaij, University of Groningen, The Netherlands

**4CP.1.2**

**POLICY LESSONS TO MOBILIZE SUSTAINABLE BIOMASS RESOURCES FOR THE BIOBASED ECONOMY: CONCLUSIONS FROM THE PROJECTS BIOMASS POLICIES, S2BIOM AND BIOTRADE2020+**

Luc PELKMANS, VITO - Flemish Institute Technological Research, Separation & Conversion Processes Dpt., BELGIUM

Co-authors: C. Panoutsou, Imperial College, United Kingdom; A. Uslu, ECN, Amsterdam, The Netherlands; E. Alakangas, VTT, Jyväskylä, Finland; L. Wenzelides, FNR, Gölzow, Germany; D. Sanchez Gonzales, CENER, Sarriguren, Spain; R. Guissson, VITO NV, Mol, Belgium

## ORAL PRESENTATIONS

### WEDNESDAY, 14 JUNE 2017

11:00 - 11:45

#### PLENARY SESSION 5CP.2

##### Integrated Bioenergy Projects

ROOM: K1

#### CHAIRPERSON:

**Jeffrey SKEER**, IRENA-International Renewable Energy Agency, GERMANY

#### 5CP.2.1

##### INTEGRATED BIOENERGY HYBRIDS - FLEXIBILITY FOR A LOW-EMISSION ENERGY SYSTEM

Elina HAKKARAINEN, VTT Technical Research Centre of Finland, Renewable Energy Processes Dpt., FINLAND

Co-author: I. Hannula, VTT Technical Research Centre of Finland Ltd, Espoo, Finland

#### 5CP.2.2

##### INTEGRATING POWER -TO -GAS INTO SUGARCANE ETHANOL INDUSTRY. A MOBILITY ORIENTED OPTIMIZATION

Alexandre DE BARROS GALLO, University of São Paulo, Institute of Energy and Environment, BRAZIL

Co-authors: A.B. Gallo, M.M. Santos, H.K.M. Costa, E. Moutinho dos Santos, M.T.W. Fagá, USP - Institute of Energy and Environment, São Paulo, Brazil

11:45 - 12:30

#### PLENARY SESSION ICP.3

##### Industrial Deployment of New Biomass Conversion Technology

ROOM: K1

#### CHAIRPERSON:

**Michael PERSSON**, Head of Secretariat of the Danish Bioenergy Association, DENMARK

#### ICP.3.1

##### GOBIGAS - FIRST FULL-SCALE DEMONSTRATION OF BIOMETHANE FROM FOREST RESIDUES

Martin SEEMANN, Chalmers University of Technology, Energy Technology Dpt., SWEDEN

Co-authors: E. Zinn, I. Gunnarsson, Göteborg Energi, Göteborg, Sweden

#### ICP.3.2

##### NEW INDUSTRIAL DEVELOPMENT IN FLUIDISED BED COMBUSTION OF WASTE AND BIOMASS

Lars BIERLEIN, E.ON, SWEDEN

Co-author: B. Fredriksson Moeller, E.ON Gasification Development, Malmö, Sweden

12:30 - 13:30

LUNCH

13:30 - 15:00

**ORAL SESSION 1CO.5**

**Biomass Crops for Marginal Land**

ROOM: K21

**CHAIRPERSONS:**

**Ana Luisa FERNANDO**, Universidade Nova de Lisboa, PORTUGAL

**Vance OWENS**, South Dakota State University, USA

**1CO.5.1**

**INFLUENCE OF ENDOPHYTIC ROOT BACTERIA ON THE GROWTH, CADMIUM TOLERANCE**

Qingsheng CAI, Nanjing Agricultural University, College of Life Sciences, P.R. CHINA

Co-authors: S. Afzal, N. Begum, H. Zhao, Z. Fang, L. Lou, Nanjing Agricultural University, P.R. China

**1CO.5.2**

**FROM IRRIGATED TO RAINFED AGRICULTURE IN A MEDITERRANEAN ENVIRONMENT: THE SHIFT IN BIOMASS YIELD OF THE ARUNDO ENERGY CROP OVER THE SEASONS**

Maria Dolores CURT, Universidad Politecnica de Madrid, Agricultural Production Dpt., SPAIN

Co-authors: M. Sanz, J. Sanchez, P.L. Aguado, J. Fernandez, Universidad Politecnica de Madrid, Madrid, Spain; P.V. Mauri, IMIDRA, Madrid, Spain; A. Plaza, J. Cano-Ruiz, IMIDRA, Alcala de Henares, Spain

**1CO.5.3**

**PURE AND MIXED PERENNIAL BIOMASS CROPS FOR A CONSTRAINT MARGINAL LAND IN NORTH-CENTRAL SPAIN (A 6-YEAR STUDY)**

Carlos Sixto CIRIA RAMOS, CIEMAT, Biomasa Dpt., SPAIN

Co-authors: J.E. Carrasco, J. Perez, E. Maletta, R. Barro, P. Ciria, CEDER-CIEMAT, LUBIA-SORIA, Spain

**1CO.5.4**

**LONG-TERM YIELDS OF PERENNIAL GRASSES IN MEDITERRANEAN REGION**

Efthymia ALEXOPOULOU, Center for Renewable Energy Sources, Biomass Dpt., GREECE

Co-authors: M. Christou, I. Papamichael, K. Tsiotas, CRES, Athens, Greece

**1CO.5.5**

**FOSTERING SUSTAINABLE FEEDSTOCK PRODUCTION FOR ADVANCED BIOFUELS ON UNDERUTILISED LAND IN EUROPE**

Rita MERGNER, WIP, GERMANY

Co-authors: R. Janssen, D. Rutz, WIP, Munich, Germany



13:30 - 15:00

**ORAL SESSION 4CO.6**

**Strategies and Policies for Biomass Supply and Demand in Europe**

ROOM: K2

**CHAIRPERSONS:**

**Luc PELKMANS**, VITO - Flemish Institute Technological Research, BELGIUM

**Mirjam ROEDER**, University of Manchester, UNITED KINGDOM

**4CO.6.1**

**BIOMASS CONSUMPTION SCENARIOS FOR ENERGY AND CHEMICALS IN THE EU AND NEIGHBOURING COUNTRIES UNTIL 2030**

Marc LONDO, Energy Research Centre of the Netherlands, Policy Studies Dpt., THE NETHERLANDS

Co-authors: C.M. Kraan, J. van Stralen, A. Uslu, Energy Research Centre of the Netherlands, Amsterdam, The Netherlands

**4CO.6.2**

**COMPARISON OF EFFECTIVENESS OF SUPPORT POLICIES FOR SUSTAINABLE DEVELOPMENT OF THE BIOENERGY SECTOR: BIOENERGY DEVELOPMENT IN THE UK & NORDIC COUNTRIES**

Patricia THORNLEY, SUPERGEN Bioenergy Hub, UNITED KINGDOM

Co-authors: A. Welfle, University of Manchester, United Kingdom; S. Cross, S. Syri, Aalto University, Espoo, Finland; M. Mikaelsson, UK Foreign & Commonwealth Office, Stockholm, Sweden

**4CO.6.3**

**MAPPING OF THE DANISH BIOENERGY CLUSTER AND ITS IMPACT ON JOBS AND EXPORTS**

Michael PERSSON, Head of Secretariat of the Danish Bioenergy Association, DENMARK

**4CO.6.4**

**EVALUATION OF GOVERNMENTAL POLICIES TO STIMULATE BIOFUELS USE IN AVIATION**

Anouk VAN GRINSVEN, CE Delft Consultancy, Fuels and Cities Dpt., THE NETHERLANDS

Co-authors: E. Smeets, H. Bartelings, Wageningen Economic Research, The Hague, The Netherlands; A. Van Velzen, TAKS, Utrecht, The Netherlands; J. Faber, CE Delft, The Netherlands

**4CO.6.5**

**CAN LIGNOCELLULOSIC BIOMASS RECONCILE AGRICULTURAL PRODUCTIVITY, THE BIOECONOMY AND CLIMATE CHANGE MITIGATION IN THE EU?**

Hyung Sik CHOI, University of Hohenheim, Agricultural and Food Policy Group, GERMANY

Co-authors: H. Grethe, S. Entenmann, Humboldt-University of Berlin, Berlin, Germany

13:30 - 15:00

ORAL SESSION 3CO.7

Chemicals and Materials from Biomass

ROOM: K1

**CHAIRPERSONS:**

**Solange MUSSATTO**, Technical University of Denmark, DENMARK

**Tanja BARTH**, University of Bergen, NORWAY

**3CO.7.1**

**CHEMICALS FROM BIOMASS: CHEMISTRY, SYNTHESIS, ENGINEERING AND SUSTAINABILITY ANALYSES**

Mobolaji SHEMAFE, University of Surrey, Centre for Environment and Sustainability, UNITED KINGDOM

Co-author: J. Sadhukhan, University of Surrey, Guildford, United Kingdom

**3CO.7.2**

**RECYCLABLE GREEN PROCESS FOR BIO-ADIPIC ACID**

Young Gyu KIM, Seoul National University, School of Chemical and Biological Engineering, KOREA

Co-authors: N. Shin, S. Kwon, Y. Lee, N. Kim, H.M. Yang, Seoul National University, Korea; C.H. Hong, Seoul National University, Gyeonggi-do, Korea

**3CO.7.3**

**POLYURETHANE FOAMS PRODUCED FROM PYROLYSIS OIL: PRODUCTION AND POSSIBLE APPLICATION**

Tim SCHULZKE, Fraunhofer-Institut UMSICHT, Biorefinery and Biofuels Dpt., GERMANY

Co-authors: A. Lakovleva, S. Zabelkin, A. Grachev, Kazan National Research Technological University, Kazan, Russian Federation; Q. Cao, Ruhr-University, Bochum, Germany; S. Conrad, Fraunhofer Institute for Environmental, Safety and Energy Technology UMSICHT, Oberhausen, Germany

**3CO.7.4**

**POLYMER NANOCOMPOSITES BASED ON LIGNIN NANOPARTICLES: DEVELOPMENT, CHARACTERIZATION AND POTENTIAL APPLICATIONS**

Maria Nelly GARCIA GONZALEZ, Polytechnic of Milan, Chemistry, Materials and Chemical Engineering Dpt., ITALY

Co-authors: G. Griffini, S. Turri, M. Levi, Polytechnic of Milan, Italy

**3CO.7.5**

**THE SYNTHESIS OF BIO-SOURCED EPOXY RESINS USING DEPOLYMERISED LIGNIN STREAMS**

Elias FEGHALI, SCION/VITO, NEW ZEALAND

Co-authors: D. van de Pas, K. Torr, Scion, Rotorua, New Zealand; K. Servaes, Vito, Mol, Belgium

## ORAL PRESENTATIONS

### WEDNESDAY, 14 JUNE 2017

13:30 - 15:00

#### ORAL SESSION ICO.8

##### Thermochemical Biomass Conversion Processes

ROOM: K23+K24

#### CHAIRPERSONS:

**Björn FREDRIKSSON MÖLLER**, E.ON Gasification Development, SWEDEN

**Bert VAN DE BELD**, BTG Biomass Technology Group, THE NETHERLANDS

#### ICO.8.1

##### HIGH QUALITY FUEL BY STEAM EXPLOSION

Tero JORONEN, Valmet, Bioenergy R&D Dpt., FINLAND

Co-authors: P. Björklung, Valmet, Sundvall, Sweden; M. Bolhär-Nordenkampf, Valmet, Vienna, Austria

#### ICO.8.2

##### CONCEPT FOR UTILIZATION OF WASTE FUELS IN A SMALL SCALE UPDRAFT GASIFIER SYSTEM

Moritz HUSMANN, Highterm Research, AUSTRIA

Co-authors: C. Zuber, H. Brugger, G. Binder, Highterm Research, Graz, Austria; S. Siddiqui, Entrade Energiesysteme, Düsseldorf, Germany

#### ICO.8.3

##### BIOMASS CHP SYSTEMS IN COMMERCIAL AGRICULTURAL PROCESSING

Matthew SUMMERS, West Biofuels, USA

Co-authors: C. Liao, B. Bruning, M. Hart, West Biofuels, Woodland, CA, USA; G. Faussone, INSER, Torino, Italy

#### ICO.8.4

##### EXPERIENCES WITH WOODROLL - VERSATILE GREEN ENERGY GAS PRODUCTION

Rolf LJUNGGREN, Cleantech Inn, Gasification Dpt., SWEDEN

#### ICO.8.5

##### COMMERCIAL GASIFICATION OF WASTE PAPER RESIDUES - FEEDBACK ON THE COMMISSIONING OF A 12MW PLANT

Timothée NOCQUET, Leroux & Lotz Technologies, FRANCE

Co-authors: B. Cluet, C. Marty, M. Al Haddad, Leroux & Lotz Technologies, Grenoble, France

13:30 - 15:00

#### VISUAL PRESENTATIONS 3CV.2

##### Thermally Treated Solid Biofuels

ROOM: Poster Area

*See page 119*

15:00 - 15:15

**BREAK**

15:15 - 16:45

**ORAL SESSION 1CO.9**

**Advances in Cropping Systems for Sustainable Biomass Production**

ROOM: K21

**CHAIRPERSONS:**

**Marisol BERTI**, North Dakota State University, USA

**Stefano AMADUCCI**, Università Cattolica del Sacro Cuore, ITALY

**1CO.9.1**

**COMPARING YIELD AND ENVIRONMENTAL EFFECTS OF POPLAR AND WILLOW PLANTATIONS ON AGRICULTURAL LAND IN SWEDEN**

Blas MOLA, University of Eastern Finland, FINLAND

Co-authors: I. Dimitriou, Swedish University of Agricultural Sciences, Uppsala, Sweden; B. Mola-Yudego, UEF/SLU, Joensuu, Finland

**1CO.9.2**

**BIOETHANOL YIELD AND QUALITY COMPONENTS IN CELLULOSIC BIOMASS CROPS GROWN IN THE NORTH CENTRAL USA**

Kurt THELEN, Michigan State University, Plant, Soil & Microbial Sciences Dpt., USA

Co-authors: G. Sanford, R. Jackson, University of Wisconsin, Madison, Usa; P. Robertson, Michigan State University, East Lansing, Usa

**1CO.9.3**

**EVALUATING TROPICAL FORAGES GRASSES AS BIOMASS SOURCES TO ENERGY PRODUCTION**

Marcelo AYRES CARVALHO, Embrapa - Brazilian Agriculture Research Corporation, Cerrados Research Center, BRAZIL

Co-authors: F. Duarte Fernandes, A. Kardec Braga Ramos, G. Jose Braga, Embrapa, Brasilia, Brazil

**1CO.9.4**

**EVALUATION OF A SUGAR CORN TO BIOENERGY AND BIOPRODUCTS VALUE CHAIN**

Tiffany HINBEST, University of Guelph Ridgetown Campus, CANADA

Co-authors: R. Nicol, D. Young, D. Hooker, L. McNea, B.H. Gilroyed, University of Guelph Ridgetown Campus, Ridgetown, Canada; M. Morrisson, L. Reid, Agriculture and Agri-Food Canada, Ottawa, Canada; A. Margaritis, University of Western Ontario, London, Canada

**1CO.9.5**

**CAMELINA & CRAMBE: TWO NON-FOOD OIL CROPS WITH NEW PERSPECTIVES FOR EUROPE**

Ioannis ELEFTHERIADIS, Centre for Renewable Energy Sources and Saving, GREECE

Co-authors: E. Alexopoulou, CRES, Pikermi, Greece; F. Zanetti, A. Monti, D. Righini, University of Bologna, Italy; M. Stolarski, M. Krzyzaniak, UWM, Olsztyn, Poland; E.N. Van Loo, WUR, Wageningen, The Netherlands; C. Eynck, J. Grushcow, Linnaeus, Saskatoon, Canada

15:15 - 16:45

**ORAL SESSION 4CO.10**

**Biomass Strategies and Policies - The International Perspective**

ROOM: K2

**CHAIRPERSONS:**

**Birger KERCKOW**, FNR - Agency for Renewable Resources, GERMANY

**Ali SAYIGH**, WREC, UNITED KINGDOM

**4CO.10.1**

**INTEGRATIVE APPROACHES FOR BIOENERGY AND THE BIO-ECONOMY: A COMPARATIVE ASSESSMENT IN KENYA, THAILAND AND SWEDEN**

Francis X. JOHNSON, Stockholm Environment Institute, KENYA

Co-authors: O. Olsson, I. Virgin, Y. Ran, Stockholm Environment Institute, Stockholm, Sweden;

A. Nyambane, P. Osano, Stockholm Environment Institute, Nairobi, Kenya; M. Fielding, M. Aung, Stockholm Environment Institute, Bangkok, Thailand

**4CO.10.2**

**BIOMASS LANDSCAPE IN MALAYSIA / ASIA**

Kester CHIN, MBIC, Biotechnology, MALAYSIA

**4CO.10.3**

**EXPLORING THE RICE STRAW BIOENERGY LANDSCAPE: FARMER PERSPECTIVES FROM INDIA AND THE PHILIPPINES**

Angela Mae MINAS, University of Manchester, Tyndall Centre for Climate Change Research, UNITED KINGDOM

Co-authors: M. Röder, P. Thornley, University of Manchester, United Kingdom; A. Samaddar, J. Luis, E. Cabrera, C. Jamieson, International Rice Research Institute, Manila, Philippines

**4CO.10.4**

**PERSPECTIVE FOR THE USE OF BIOMASS IN THE IRON AND STEEL INDUSTRY**

Hana MANDOVA, University of Leeds, School of Chemical and Process Engineering, UNITED KINGDOM

Co-authors: W. F. Gale, A. Williams, University of Leeds, United Kingdom; A.L. Heyes, University of Strathclyde, Glasgow, United Kingdom

**4CO.10.5**

**HOUSEHOLD LEVEL FOOD SECURITY IMPACTS OF A 20% BIOFUEL MANDATE IN GHANA**

Marnix BRINKMAN, Utrecht University, Copernicus Institute of Sustainable Development, THE NETHERLANDS

Co-authors: J. Levin-Koopman, E. Smeets, Wageningen Economic Research, The Netherlands; I. Maltsoglou, FAO, Rome, Italy; L. Rincon, FAO, Italy; B. Wicke, F. van der Hilst, Utrecht University, The Netherlands; A.P.C. Faaij, University of Groningen, The Netherlands

15:15 - 16:45

ORAL SESSION 3CO.11

**Biomass Products from Food Processing**

ROOM: K1

**CHAIRPERSONS:**

**Tim SCHULZKE**, Fraunhofer-Institut UMSICHT, GERMANY

**Tomazs CALIKOWSKI**, European Commission, BELGIUM

**3CO.11.1**

**EXPLOITATION OF INULIN-TYPE FRUCTANS (ITF) FROM CHICORY ROOTS FOR THE PRODUCTION OF PLATFORM CHEMICALS**

Dominik WUEST, University of Trento, Civil, Environmental and Mechanical Engineering Dpt., GERMANY

Co-authors: D. Wüst, M. Götz, J. Pfenning, A. Kruse, University of Hohenheim, Stuttgart, Germany; L. Fiori, University of Trento, Trento, Italy

**3CO.11.2**

**DEPOLYMERIZATION OF LIGNIN: PRODUCT CHARACTERIZATION AND EVALUATION OF ITS ANTIOXIDANT POTENTIAL**

Alberto GONZALO CALLEJO, Universidad de Zaragoza, Instituto de Investigación en Ingeniería de Aragón, SPAIN

Co-authors: J.L. Sánchez, J. Salafranca, N. Gil-Lalaguna, C. Dueso, A. Gonzalo, Universidad de Zaragoza / Aragón Institute for Engineering Research (I3A), Zaragoza, Spain; S. Moles, J.F. Palomo, C. Martínez, Universidad de Zaragoza, Zaragoza, Spain

**3CO.11.3**

**PHYSICAL AND STRUCTURAL PROPERTIES OF XYLAN-BASED BIODEGRADABLE FILMS FROM SORGHUM BY-PRODUCTS**

Prima LUNA, University of Reading, Food and Nutritional Sciences Dpt., UNITED KINGDOM

Co-authors: A Chatzifragkou, D Charalampopoulos, University of Reading, United Kingdom

**3CO.11.4**

**CONSORTIA BASED PRODUCTION OF BIOCHEMICALS**

Sheila Ingemann JENSEN, Technical University of Denmark, Novo Nordisk Foundation, Center for Biosustainability, DENMARK

Co-authors: S. Sukumara, E. Özdemir, K. Schneider, P. Calero, S. Li, C. Ronda, A.T. Nielsen, Novo Nordisk Foundation, Center for Biosustainability, Technical University of Denmark, Lyngby, Denmark

**3CO.11.5**

**PRODUCTION OF ANTIOXIDANT ADDITIVES FOR BIODIESEL USING RESIDUES FROM WINE INDUSTRY**

Jose Luis SANCHEZ CEBRIÁN, Universidad de Zaragoza, Chemical & Environmental Engineering Dpt., SPAIN

Co-authors: L. Botella, N. Gil-Lalaguna, A. Gonzalo, J.L. Sánchez, J. Arauzo, Universidad de Zaragoza / Aragón Institute for Engineering Research (I3A), Zaragoza, Spain; M. Ramos, Universidad de Zaragoza, Zaragoza, Spain

15:15 - 16:45

**ORAL SESSION ICO.12**

**Small Scale Industrial Application for Heat and Power**

ROOM: K23+K24

**CHAIRPERSONS:**

**Liang WANG**, SINTEF Energy Research, NORWAY

**Andrea Maria RIZZO**, University of Florence, Industrial Engineering Dpt. ITALY

**ICO.12.1**

**THE USE OF FAST PYROLYSIS OIL IN DIESEL ENGINES FOR CHP APPLICATIONS**

Bert VAN DE BELD, BTG Biomass Technology Group, THE NETHERLANDS

Co-authors: L. van de Beld, E. Holle, J. Florijn, BTG Biomass technology Group BV, Enschede, The Netherlands

**ICO.12.2**

**ENABLING SOLID BIOMASS FIRED SMALL SCALE COGENERATION SYSTEMS WITH THE TWIN SCREW WET STEAM EXPANDER TECHNOLOGY**

Marco IEZZI, Heliex Power, Thermodynamics and Product Planning Dpt., UNITED KINGDOM

Co-author: M.G. Read, City, University of London, London, United Kingdom

**ICO.12.3**

**POTENTIAL OF A MACHINE VISION-BASED COMBUSTION MONITORING SYSTEM IN OPTIMIZING STEP-GRATE BIOMASS COMBUSTION**

Attila GARAMI, University of Miskolc, Combustion Technology and Thermal Energy Dpt., HUNGARY

Co-authors: P. Tóth, University of Miskolc, Hungary; P. Kókai, MIHO Ltd., Miskolc, Hungary

**ICO.12.4**

**AFFORDABLE AND CLEAN ENERGY: ADDRESSING PROJECT DEVELOPMENT CHALLENGES FOR THE PRODUCTION OF SOLID BIOFUELS FROM WOODY BIOMASS FOR HEAT & POWER**

Simon BENMARRAZE, IRENA, GERMANY

Co-authors: C. Ruiz, R. Roesch, International Renewable Energy Agency (IRENA), Bonn, Germany

**ICO.12.5**

**EVALUATION OF THE COMBUSTION BEHAVIOUR OF STRAW, POPLAR AND MAIZE IN A SMALL-SCALE BIOMASS BOILER**

Joachim KELZ, Bioenergy 2020+, AUSTRIA

Co-authors: O. Krenn, C. Zemann, D. Muschick, M. Gölles, St. Retschitzegger, A. Weissinger, C. Schmidl, W. Haslinger, Bioenergy 2020, Graz, Austria; G. Hofmeister, KWB, St. Margarethen/Raab, Austria; C. Hochenauer, Institute of Thermal Engineering, Graz University of Technology, Graz, Austria

15:15 - 16:45

**VISUAL PRESENTATIONS 2CV.3**

**Gasification Research through Modeling and Pilot Installation Studies and Advances in Gasification and Gas Cleaning of Synthesis Gas Production**

ROOM: Poster Area

*See page 121*

16:45 - 17:00

**BREAK**

17:00 - 18:30

**ORAL SESSION 2CO.13**

**Production, Characterisation and Supply of Solid Biofuels**

ROOM: K21

**CHAIRPERSONS:**

**Volker LENZ**, DBFZ-German Biomass Research Centre, GERMANY

**York NEUBAUER**, TU Berlin, GERMANY

**2CO.13.1**

**PRE-PROCESSING OF BIOMASS BY ROLLING - A COMBINED EXPERIMENTAL AND NUMERICAL ANALYSIS**

Klaus Schütt HANSEN, IPU, DENMARK

Co-authors: P. Christiansen, Dept. of Mech. Eng., Technical University of Denmark IPU, Kgs. Lyngby, Denmark; T. Koch, C. Porte, TK Energy, Koege, Denmark; A.A. Rasmussen, IPU, Kgs. Lyngby, Denmark; N. Bay, Dept. of Mech. Eng., Technical University of Denmark, Kgs. Lyngby, Denmark

**2CO.13.2**

**STUDY OF THE PRODUCTION OF PELLETIZED BIOFUELS FROM MEDITERRANEAN SCRUB BIOMASS**

Raquel BADOS SEVILLANO, CIEMAT-CEDER, Energía Dpt., SPAIN

Co-authors: R. Bados, L.S. Esteban, P. Perez, I. Mediavilla, M.J. Fernandez, R. Barro, R. Corredor, J.E. Carrasco, CEDER-CIEMAT, Soria, Spain; L. Maqueda, CEDER-CIEMAT, Soria, Spain

**2CO.13.3**

**WARREN-SPRING BASED MODEL FOR THE SHEAR YIELD LOCUS OF BIOMASS POWDERS**

Clement VANNESTE-IBARCQ, CEA-Liten, Laboratoire de Préparation des Bioressources, FRANCE

Co-authors: T. Melkior, CEA-Liten, Laboratoire de Préparation des Bioressource, Grenoble, France; A. de Ryck, Centre RAPSODEE, UMR CNRS 2392, Ecole des Mines d'Albi, Albi, France

**2CO.13.4**

**POSSIBILITIES TO REDUCE BIOMASS SUPPLY COSTS THROUGH A TERMINAL**

Matti VIRKKUNEN, VTT Technical Research Centre of Finland, Biofuels and

Bioenergy Dpt., FINLAND

Co-author: J. Raitila, VTT, Jyväskylä, Finland

**2CO.13.5**

**EUBCE STUDENT AWARDEE PRESENTATION**

**DEVELOPMENT OF A MODEL TO PREDICT THE GRATE BURNING PROFILE OF BIOMASS DERIVED CHAR**

Scott RUSSELL, University of Nottingham, Centre for Doctoral Training in Efficient Fossil Energy Technologies, UNITED KINGDOM

Co-authors: J.L. Turrion, CPL Industries Ltd., Immingham, United Kingdom; P. Langston, C.E. Snape, University of Nottingham, United Kingdom



17:00 - 18:30

ORAL SESSION 4CO.14

Climate Impacts of Bioenergy Systems

ROOM: K2

**CHAIRPERSONS:**

**Patricia THORNLEY**, SUPERGEN Bioenergy Hub, UNITED KINGDOM

**Jacopo GIUNTOLI**, European Commission, JRC, THE NETHERLANDS

**4CO.14.1**

**LIFE CYCLE ASSESSMENT OF CLIMATE IMPACT OF BIOENERGY FROM A LANDSCAPE**

Torun HAMMAR, Swedish University of Agricultural Sciences, Energy and Technology Dpt., SWEDEN

Co-authors: C. Sundberg, Swedish University of Agricultural Sciences, KTH Royal Institute of Technology, Uppsala, Sweden; J. Stendahl, A. Larsolle, P-A. Hansson, Swedish University of Agricultural Sciences, Uppsala, Sweden

**4CO.14.2**

**ASSESSING ENERGY CROP ILUC POTENTIAL ON A REGIONAL SCALE**

Kristine BITNERE, International Council on Clean Transportation, Fuels Researcher Dpt., GERMANY

Co-authors: C.V. Petrenko, Independent consultant, San Francisco, Usa; S.Y. Searle, International Council on Clean Transportation, Washington, Usa

**4CO.14.3**

**IMPLICATIONS OF DIRECT LAND USE-CHANGE ON THE GREENHOUSE GAS BALANCE OF BIOENERGY CROPS**

Jeanette WHITAKER, Centre for Ecology and Hydrology, Plant-Soil Interactions Dpt., UNITED KINGDOM

Co-authors: N.P. McNamara, R.L. Rowe, Centre for Ecology & Hydrology, Lancaster, United Kingdom; R. Ceulemans, University of Antwerp, Belgium; C.E.P. Cerri, University of Sao Paulo, Brazil; C.J. Bernacchi, University of Illinois, Illinois, Usa

**4CO.14.4**

**CLIMATE CHANGE IMPACTS AND RELATED EMISSION UNCERTAINTIES FROM WASTE WOOD BASED ENERGY SYSTEMS IN THE UK**

Mirjam ROEDER, University of Manchester, UNITED KINGDOM

Co-author: P. Thornley, University of Manchester, Manchester, United Kingdom

**4CO.14.5**

**COMPARATIVE LIFE CYCLE ASSESSMENT OF BIOMASS UTILIZATION FOR ELECTRICITY GENERATION IN THE EUROPEAN UNION AND THE UNITED STATES**

Emily BEAGLE, University of Wyoming, Mechanical Engineering Dpt., USA

Co-author: E. Belmont, University of Wyoming, Laramie, Usa

17:00 - 18:30

ORAL SESSION 3CO.15

New Scientific Findings for Bio-alcohol Production

ROOM: K1

**CHAIRPERSONS:**

**Jan LINDSTEDT**, Lindab Sweden, SWEDEN

**Dina BACOVSKY**, Bioenergy 2020+, AUSTRIA

**3CO.15.1**

**TECHNO-ECONOMIC AND ENVIRONMENTAL ANALYSIS OF GLOBAL BIOMASS SUPPLY CHAINS FOR GERMANY - EXEMPLIFIED BY A CASE STUDY FOR ETHANOL AND PYROLYSIS SLURRY FROM BRAZIL**

Tobias DOMNIK, Karlsruhe Institute of Technology, Institute for Technology Assessment and System Analysis, GERMANY

Co-authors: E. Wendeborg, D. Poncette, S. Kälber, L. Leible, Karlsruhe Institute of Technology, Germany; C. Aipperspach, C. Jahn, L. Kretschmann, Hamburg University of Technology, Germany

**3CO.15.2**

**IMPROVING SUSTAINABILITY OF MAIZE TO ETHANOL PROCESSING BY PLANT BREEDING AND PROCESS OPTIMIZATION**

Petronella Margaretha SLEGGERS, Wageningen University, Biobased Chemistry and Technology Dpt., THE NETHERLANDS

Co-authors: A.F. Torres, A.J.B. van boxtel, L.M. Trindade, Wageningen University and Research, The Netherlands

**3CO.15.3**

**RECOVERY OF BUTANOL FROM ABE FERMENTATION BROTH BY GAS STRIPPING: PROCESS SIMULATION AND TECHNO-ECONOMIC EVALUATION**

Gabriele LODI, Polytechnic of Milan, Chemistry, Materials and Chemical Engineering Dpt. G. Natta, ITALY

Co-authors: G. De Guido, L. A. Pellegrini, Polytechnic of Milan, Italy

**3CO.15.4**

**FUNGI AS BIOMASS PRETREATMENT AGENTS FOR BIOFUEL APPLICATIONS**

Hector FLORES, Universidad Nacional de Agricultura, Natural Resources and Environment Management Dpt., HONDURAS

**3CO.15.5**

**UNDERSTANDING EFFECT OF SUGAR COMPOSITION ON CELL GROWTH: FERMENTATION OF GLUCOSE AND XYLOSE BY CLOSTRIDIUM ACETOBUTYLICUM ATCC 824**

Cansu BIRGEN, Norwegian University of Science and Technology, Chemical Engineering Dpt., NORWAY

Co-authors: H. A. Preisig, Norwegian University of Science and Technology, Trondheim, Norway; A. Wentzel, S. Markussen, B. Wittgens, SINTEF Materials and Chemistry, Trondheim, Norway; U. Sarkar, S. Saha, S. Baksi, Jadavpur University, Kolkata, India

## ORAL PRESENTATIONS

### WEDNESDAY, 14 JUNE 2017

17:00 - 18:30

#### ORAL SESSION ICO.16

#### Optimisation of Systems and Methods for Improvements in Feedstock Production and Supply

ROOM: K23+K24

#### CHAIRPERSONS:

**Eija ALAKANGAS**, VTT Technical Research Centre of Finland, FINLAND

**Ines DEL CAMPO**, CENER, SPAIN

#### ICO.16.1

#### CHANCES AND CHALLENGES OF BIOMASS FROM LANDSCAPE CONSERVATION AND MAINTENANCE WORK IN CONVERSION ROUTES ON DIFFERENT SCALE

Mini BAJAJ, SYNCOM Forschungs- und Entwicklungsberatung, GERMANY

Co-authors: K. Lenz, S. Kuehner, K. Ludewig, SYNCOM, Ganderkesee, Germany; W. Baumgarten, FNR, Gölzow, Germany; M. Gomez, D. Garcia, CIRCE, Zaragoza, Spain; A. Claluena, LWK Niedersachsen, Hannover, Germany; F. de Filippi, Sogesca, Rubano, Italy; J. Dolezal, CZBiom, Praha, Czech Republic; J. Lorenzo, Local action group Bajo Aragon-Matarrana, GanderkeseeTorrevelilla Teruel, Spain; L. Montagnoli, Comunità Montana Associazione dei Comuni, Magione, Italy

#### ICO.16.2

#### PRELIMINARY EVALUATION OF THE PERFORMANCES OF A PURPOSE DESIGNED MACHINE FOR GRASS HARVESTING AND PRE-PROCESSING IN ORCHARDS, VINEYARDS AND UNCULTIVATED AREAS.

Massimo BRAMBILLA, Consiglio per la Ricerca in Agricoltura e l'analisi dell'economia Agraria, Unità di Ricerca per l'Ingegneria Agraria, ITALY

Co-authors: D. Boscaro, A. Pezzuolo, L. Sartori, Università degli Studi di Padova, Dipartimento Territorio e Sistemi Agro-Forestali (TESAF), Padova, Italy; C. Bisaglia, Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria, Unità di ricerca per, Treviglio, Italy; F. Trabacchin, F. Berti, BERTI Macchine Agricole S.p.A., Caldiero, Italy

#### ICO.16.3

#### NEW OPPORTUNITIES FOR OPTIMIZED INFEEED OF STRAW FOR COMBUSTION AND BIOETHANOL PRODUCTION

Bodil Engberg PALLESEN, Danish Technological Institute, AgroTech Dpt., DENMARK

#### ICO.16.4

#### HAS LIGNIN'S TIME FINALLY COME? OPENING UP NEW BIO-BASED APPLICATION OPPORTUNITIES

Zoe VOLIOTI, Sustainability Consult, BELGIUM

Co-authors: K. Seppalainen, Stora Enso Biomaterials, Helsinki, FINLAND

#### ICO.16.5

#### ILUC IS ABOUT BIOMASS DISPLACEMENT - WHERE THERE IS NO DISPLACEMENT THERE IS NO ILUC

James COGAN, Industry & Policy Analyst, IRELAND

17:00 - 18:30

#### VISUAL PRESENTATIONS 2CV.4

#### Optimising Biogas Processes by Feedstocks, Technologies and Gas Utilisation

ROOM: Poster Area

See page 127

20:00

EUBCE Dinner