

BBEST 2014 CONFERENCE PROGRAM

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The Conference Program will be structured in plenary, special, parallel sessions, and panel exhibits on the following topics:

- Biomass
- Biofuel Technologies
- Alcohol Chemistry and Biorefinery
- Engines and other Conversion Devices
- Process Integration and Sustainability

The program is subject to change without further notice.

Campos do Jordão - Brazil, 20-24 October, 2014	
Monday	Oct 20th, 2014 - POLICY DAY Room Aspen + Vail
9:00 - 9:15	BBEST OPENING CEREMONY Chair: Hernan Chaimovich (Universidade de São Paulo and Fundação de Amparo à Pesquisa do Estado de São Paulo), Brazil
9:15 - 9:30	SCOPE Bioenergy and Sustainability opening Chairs: Glaucia M. Souza (Universidade de São Paulo), Brazil; Reynaldo L. Victoria (Universidade de São Paulo), Brazil; Carlos A. Joly (Universidade Estadual de Campinas), Brazil; Luciano M. V. Paulo), Brazil; Jon Samseth (Scientific Committee on Problems of the Environment), France SCOPE/FAPESP Bioenergy & Sustainability: a global assessment of land use, technologies and impacts for the sustainable expansion of Bioenergy in the world Chair: Hernan Chaimovich (Universidade de São Paulo and Fundação de Amparo à Pesquisa do Estado de São Paulo), Brazil
9:30 - 9:45	Achim Steiner (United Nations Environment Programme), Kenya
9:45 - 10:00	Carlos Henrique de Brito Cruz (Fundação de Amparo à Pesquisa do Estado de São Paulo), Brazil Round Table 1: Energy Security - SCOPE Bioenergy & Sustainability Recommendations
10:00 - 10:10	Chair: Glaucia M. Souza (Universidade de São Paulo), Brazil
10:10 - 10:40	Isaias de Carvalho Macedo (Universidade Estadual de Campinas), Brazil
10:40 - 10:55	Chris Somerville (University of California, Berkeley), USA
10:55 - 11:10	Jack Saddler (University of British Columbia), Canada

11:10 - 11:30	Debate: audience
11:30	Lunch
	Round Table 2: Environmental & Climate Security - SCOPE Bioenergy & Sustainability Recommendations
13:00 - 13:10	Chair: Reynaldo L. Victoria (Universidade de São Paulo), Brazil
13:10 - 13:40	Paulo Eduardo Artaxo Netto (Universidade de São Paulo), Brazil
13:40 - 13:55	Luciano M. Verdade (Universidade de São Paulo), Brazil
13:55 - 14:10	Heather Youngs (University of California, Berkeley)
14:10 - 14:30	Debate: audience
14:30	Coffee break
	Round Table 3: Food Security - SCOPE Bioenergy & Sustainability Recommendations
15:00 - 15:10	Chair: Carlos A. Joly (Universidade Estadual de Campinas), Brazil
15:10 - 15:40	Francis X. Johnson (Stockholm Environment Institute), Sweden
15:40 - 15:55	Helen Watson (Kwazulu-Natal University), South Africa
15:55 - 16:10	Patricia Osseweijer (Delft University of Technology), The Netherlands
16:10 - 16:30	Debate: audience
	Round Table 4: Sustainability & Innovation - SCOPE Bioenergy & Sustainability Recommendations
16:30 - 16:40	Chair: Manoel Regis L. V. Leal (Lab. Nacional de Ciência e Tecnologia do Bioetanol), Brazil
16:40 - 17:10	Erick Fernandes (World Bank), USA

17:10 - 17:25	Luiz Augusto Horta Nogueira (Universidade Federal de Itajubá), Brazil
17:25 - 17:40	Rocio Diaz-Chavez (Imperial College London), UK
17:40 - 18:00	Debate: audience
18:00 - 19:30	POSTER SESSION
20:00	Speakers Dinner

Tuesday	Oct 21st, 2014

Room Aspen	Room Vail	Room Bariloche	Room Chilan	
PS 1 - 2nd Generation Biofuel Technologies, Pilot Plants and Case Studies	PS 2 - Feedstock Production - Crops and Wood plants	PS 3 - Bioenergy Competing and Complementing Technologies (oil, gas, wind, solar)	PS 4 - Challenges for Increasing Yield: Systems and Synthetic Biology	PS 5 - Policy and Socio-Economic Issues
chair: Artur Yabe Milanez (Banco Nacional de Desenvolvimento Econômico e Social), Brazil	chair: Heitor Cantarella (Instituto Agronômico de Campinas), Brazil	chair: Helena Chum (National Renewable Energy Laboratory), USA	chair: Marie-Anne van Sluys (Universidade de São Paulo), Brazil	chair: Leticia Lima (Universidade Federal do Rio de Janeiro), Brazil

9:00 - 9:20	<i>A hybrid strategy for production of diesel and jet fuels from sugar</i> Chris Somerville (University of California, Berkeley), USA	<i>Analyzing future productivity of sugarcane in Brazil under different climate and land use change scenarios</i> Stephen Long (University of Illinois at Urbana-Champaign), USA		<i>Improving photosynthetic efficiency and biomass yield in plants and algae</i> Richard Sayre (New Mexico Consortium), USA	<i>Adapting crops to different climates and soils</i> Luiz Augusto de Faria (Federal University of Lavras), Brazil
9:20 - 9:40	<i>Cellulosic ethanol: a step change in productivity</i> Robson Cintra de Freitas (Centro de Tecnologia Canavieira), Brazil	<i>Options for increasing biomass production for bioenergy: the case of sugarcane and other selected high yield energy crops</i> Vikram Seebaluck (University of Mauritius), Mauritius	<i>Photovoltaic: challenges and opportunities for Brazil</i> Danny Krautz (Berlin Partner for Business and Technology), Germany	<i>Developing CBP processes for lignocellulose conversion</i> Emile van Zyl (Stellenbosch University), South Africa	<i>Using Genomics to improve crop productivity</i> Rubens A. de Lencastre (University of Coimbra), Portugal
9:40 - 10:00	<i>Second generation: a reality</i> Gonalo A. G. Pereira (Granbio), Brazil	<i>The potential use of forest biomass in Brazil for the production of biofuels and biochemicals</i> Juliano Bragatto (VTT), Brazil	<i>Alternative and complementary energy sources to bioenergy – methane, wind, hydro and nuclear</i> Jon Samseth (Oslo and Akershus University College of Applied Sciences), Norway	<i>Polygenic analysis of complex traits for development of superior industrial yeast strains for first- and second-generation bioethanol production</i> Johan Thevelein (VIB Department of Molecular Microbiology), Belgium	<i>The socio-economic impact of bioenergy</i> Jeremy V. Wilson (University of Oxford), UK

10:00 - 10:20	<i>Pilot plants: CTBE case study</i>	<i>Concentrated vinasse from sugarcane: leaching ion and changes in soil properties</i>	<i>Ethanol for hydrogen production: energy and economic aspects for transport sector</i>	<i>The production of propionic acid through sugar fermentation: an industrial perspective on the progress, technical challenges and future outlook</i>	<i>Global L...</i>
	Jonas Nolasco Junior (Lab. Nacional de Ciência e Tecnologia do Bioetanol), Brazil	Raffaella Rossetto (Agência Paulista de Tecnologia do Agronegócio), Brazil	Carla Kazue Nakao Cavaliero (Universidade Estadual de Campinas), Brazil	Chris Stowers (Dow AgroSciences), USA	Lee Lynd
10:30	Coffee break				
11:00 - 11:20	Room Aspen	Room Vail	Room Bariloche	Room Chilan	
	PS 6 - Sustainability: Economic & Policy Issues	PS 7 - Strategies for Marginal Land Occupation/Perennial Wood	PS 8 - Designing Bioenergy Systems	PS 9 - Innovation and Technology Transfer	PS 10 - Aspects
	chair: Reynaldo L. Victoria (Universidade de São Paulo), Brazil	chair: Rubens Maciel Filho (Universidade Estadual de Campinas), Brazil	chair: Luuk van der Wielen (Delft University of Technology), The Netherlands	chair: Patricia Tedeschi (Fundação de Amparo à Pesquisa do Estado de São Paulo), Brazil	chair: G (Univers
	<i>Can biofuel policies be changed in times of food price crisis to reduce impacts on the poor?</i>	<i>Ecosystem services from cellulosic biofuels grown on marginal lands in the U.S. midwest</i>	<i>Food and sustainable biofuels: thinking clearly about the issues</i>	<i>Innovation and technology transfer – the case of UFSCar</i>	<i>BIOEN & integrat greenho bio-bas</i>
	Manoel Regis L. V. Leal (Lab. Nacional de Ciência e Tecnologia do Bioetanol), Brazil	G. Philip Robertson (Great Lakes Bioenergy Research Center), USA	Bruce Dale (Michigan State University), USA	Ana Lúcia Vitale Torkomian (Universidade Federal de São Carlos), Brazil	Eiko Kur Ecology)

11:20 - 11:40	<i>Brazil's strategic role in the future of biofuels: a joint assessment</i> Maggie Davis (Oak Ridge National Laboratory), USA	<i>Transgenic eucalyptus and the applications in bioenergy sector</i> Esteban Roberto González (FuturaGene), Brazil	<i>Evaluation of technological routes for renewable jet fuel using the Virtual Sugarcane Biorefinery</i> Antonio M. F. L. J. Bonomi (Lab. Nacional de Ciência e Tecnologia do Bioetanol), Brazil	<i>How to celebrate a collaborative research and development project with an industrial partner? What USP has done to simplify this process</i> Eduardo Vieira de Brito (Universidade de São Paulo), Brazil	<i>Mitigation of greenhouse gas emissions from bioenergy systems</i> Jeanette Centre),
11:40 - 12:00	<i>Sustainability and certification</i> Arnaldo Cesar da Silva Walter (Universidade Estadual de Campinas), Brazil	<i>Integrating multifunctional landscape design into agro-energy policy</i> Rayane Oliveira de Aguiar (University of Illinois), USA	<i>Challenges and opportunities in the microbial production of diesel and jetfuel replacements</i> Luuk van der Wielen (Delft University of Technology), The Netherlands	<i>UNICAMP's portfolio in the bioenergy sector</i> Milton Mori (Universidade Estadual de Campinas), Brazil	<i>Using a systems approach to assess the environmental fluxes from bioenergy plantations</i> Niall Mc Centre),
12:00 - 12:20	<i>Economic sustainability of ethanol: policies and politics</i> Márcia Azanha Ferraz Dias de Moraes (Universidade de São Paulo), Brazil	<i>Incorporating bioenergy into sustainable landscape designs</i> Keith L. Kline (Oak Ridge National Laboratory), USA	<i>Innovative chemicals from fermented carbohydrate</i> Juscinei Santos (Corbion), Brazil	<i>University's role in innovation process</i> Fabíola M. Spiandorello (Universidade Estadual Paulista), Brazil	<i>Integrating bioenergy into the ethanol value chain</i> Floor van Utrecht
12:30	Lunch				
	Special Session: Aviation Biofuels				

	Chair: Luis Augusto B. Cortez (UNICAMP), Brazil
14:00 - 14:30	Francisco E. B. Nigro (Universidade de São Paulo), Brazil
14:30 - 15:00	Barbara Bramble (Roundtable on Sustainable Biomaterials), Switzerland
15:00 - 15:30	Telma T. Franco (Universidade Estadual de Campinas), Brazil
15:30	Coffee break
16:00 - 17:30	Plenary 2: CEO Panel: Science – a bridge to technology and Opportunity Creation Chair: Luuk van der Wielen (President BE-Basic), The Netherlands Speakers: Speakers: Paulo Kakinoff (CEO GOL), Brazil; Paulo Thomazoni (Managing Director Corbion), Brazil; Dirk Kronemeijer (CEO SkyNRG), The Netherlands; William Burnquist (Vice Director of Biomass Conversion, Braskem) (tbc)
17:30 - 18:00	BE-Basic Design Competition Award Ceremony
18:00 - 19:00	Meet the CEO at Holland Pavilion <i>Social interaction with CEOs</i>
19:00 - 20:30	POSTER SESSION
Wednesday	Oct 22nd, 2014
Room Aspen + Vail	
9:00 - 10:00	Plenary 3: <i>Integrated biomass conversion systems</i>

	Helena Chum (National Renewable Energy Laboratory), USA			
10:00	Coffee break			
10:30 - 11:30	Plenary 4: <i>The biomass digestibility challenge</i>			
	Simon J. McQueen-Mason (University of York), UK			
11:30 - 12:30	Plenary 5: <i>Bioenergy research; opportunities for collaboration between UK and Brazilian researchers</i>			
	Duncan Eggar (Biotechnology and Biological Sciences Research Council - BBSRC), UK			
12:30	Lunch			
	Room Aspen	Room Vail	Room Bariloche	Room Chilan
	PS 11 - Bioen Highlights I: Biomass Division	PS 12 - Bioen Highlights II: Biofuel Technologies Division	PS 13 - Bioen Highlights III: Biorefineries & Engines Divisions	PS 14 - Bioen Highlights IV: Sustainability Division
	chair: Paul H. Moore (Centro de Tecnologia Canavieira), Brazil	chair: Igor Polikarpov (Universidade de São Paulo), Brazil	chair: Hernan Chaimovich (Universidade de São Paulo and Fundação de Amparo à Pesquisa do Estado de São Paulo), Brazil	chair: Patricia Osseweijer (Delft University of Technology), The Netherlands

14:00 - 14:30	Modeling sugar cane potential yield through climate parameters	Influence of the acid treatment step applied during fuel ethanol production in Brazil on the physiology of different <i>Saccharomyces cerevisiae</i> strains: has this been a key selective pressure for the current phenotype of industrial strains?	Technological options for biofuel engines: regulated emissions, GHG emissions and vehicle efficiency	Life cycle assessment of integrated and stand alone second generation ethanol production from sugarcane bagasse and straw
	Edgar Gomes F. Beauclair (Universidade de São Paulo), Brazil	Andreas K. Gombert (Universidade Estadual de Campinas), Brazil	Waldyr Luiz Ribeiro Gallo (Universidade Estadual de Campinas), Brazil	Otavio Cavalett (Lab. Nacional de Ciência e Tecnologia do Bioetanol), Brazil
14:30 - 15:00	Sugarcane genomics to improve energy crops traits	Engineering of a xylose transporter allows <i>Saccharomyces cerevisiae</i> to grow on xylose as a single carbon source	Energy conversion of ethanol in fuel cells: direct and indirect oxidations on high and low temperature systems	Reconciling the agroindustrial production of biofuel crops and biodiversity conservation
	Glaucia M. Souza (Universidade de São Paulo), Brazil	Gustavo H. Goldman (Universidade de São Paulo), Brazil	Edson Antonio Ticianelli (Universidade de São Paulo), Brazil	Luis Cesar Schiesari (Universidade de São Paulo), Brazil

15:00 - 15:30	<i>Structural biology toward rational agrochemical design: applications in sugarcane leaf scald disease</i> Rafael Victorio Carvalho Guido (Universidade de São Paulo), Brazil	<i>Current approaches concerning the biotechnological process of producing fuel ethanol</i> Cecilia Laluce (Universidade Estadual Paulista), Brazil	<i>Improving the use of xylose by Burkholderia sacchari to produce biodegradable polymers</i> Luiziana Ferreira da Silva (Universidade de São Paulo), Brazil	<i>Greenhouse gas emissions from direct land use change in sugarcane expansion in São Paulo state, Brazil</i> Marcelo Valadares Galdos (Lab. Nacional de Ciência e Tecnologia do Bioetanol), Brazil
15:30 - 16:00	<i>Identification and selection of genitors with high efficiency in the production of sugarcane families with high agroenergetic potential</i> Silvana A. Creste Dias de Souza (Instituto Agronômico de Campinas), Brazil	<i>Omics-based approaches for biocatalyst discovery in lignocellulose-to-bioprocess applications</i> Fabio Squina (Lab. Nacional de Ciência e Tecnologia do Bioetanol), Brazil	<i>An integrated process for bioethanol production and zero CO2 emission - a proposal integrating platforms for biofuels and bio-based chemicals</i> Rubens Maciel Filho (Universidade Estadual de Campinas), Brazil	<i>Greenhouse gases emissions during sugarcane plantation in São Paulo state: lessons learned during field conditions</i> Janaina Braga do Carmo (Universidade Federal de São Carlos), Brazil
16:00 - 17:00	Closing Session & BBEST Awards			
17:00	BIOEN Wine & Cheese			
Thursday	Oct 23rd, 2014			
7:30	Visits to Laboratories & Industries outside Campos do Jordão			

9:30 - 12:30	Tutorials part I			
	Room Aspen	Room Vail	Room Bariloche	Room Chilan
	T1 - Sugarcane Breeding	T3 - Advanced Biofuels - Ethanol Production in Brazil	T5 - Biochemical Routes for Cellulosic Ethanol	T7 - Biofuel Sustainability
	Paul H. Moore (Centro de Tecnologia Canavieira), Brazil and Silvana A. Creste Dias de Souza (Instituto Agronômico de Campinas), Brazil	Jaime Finguerut (Centro de Tecnologia Canavieira), Brazil and Henrique Amorim (FERMENTEC), Brazil	Emile van Zyl (University of Stellenbosch), South Africa and Luiz Pereira Ramos (Universidade Federal do Paraná), Brazil	Frank Rosillo-Calle (Imperial College), UK and Cássia Ugaya (Universidade Tecnológica Federal do Paraná), Brazil
12:30	Lunch			
14:00 - 17:00	Tutorials part II			
	Room Aspen	Room Vail	Room Bariloche	Room Chilan
	T2 - Sugarcane Agricultural Practices	T4 - Thermochemical Routes for Biofuels	T6 - Biorefineries beyond ethanol	T8 - Biofuel Engines
	Vikram Seebaluck (University of Mauritius), Mauritius and Oscar Braunbeck (Lab. Nacional de Ciência e Tecnologia do Bioetanol), Brazil	Helena Chum (National Renewable Energy Laboratory), USA and Carlos Alberto Gurgel Veras (Universidade de Brasília), Brazil	Luuk van der Wielen (Delft University of Technology), The Netherlands; Solange Mussatto (Delft University of Technology), The Netherlands; and Valdeir Arantes (University of British Columbia), Canada	Franck Turkovics (PSA Peugeot Citroën), Brazil and Henry Joseph Jr. (Volkswagen do Brasil), Brazil

Friday

Oct 24th, 2014

7:30

Visits to Laboratories & Industries outside Campos do Jordão