

		ISSST Track 1: Products, Systems, and Services	ISSST Track 2: Tools and Methods	ISSST Track 3: Special Topics and Critical Perspectives	Special Sessions
Time		Sunday, May 17, 2009			
3:00pm-7:00pm		Registration			
Time		Monday, May 18, 2009			
Registration	7:00am-8:00am	Breakfast			
	8:00am-9:30am	Free ISSST Tutorial Session Life-Cycle Assessment, Policy, and Product Certification			
	9:30am-10:00am	Refreshment Break (Foyer)			
	10:00am - 11:30am	Free ISSST Tutorial Session Carbon Footprinting: Challenges and Opportunities			
	11:30am-1:00pm	Lunch on your own			
	1:00pm-2:00pm	Keynote Speaker - Michael Crow, President, Arizona State University			
	2:00pm-2:15pm	Refreshment Break (Foyer)			
		Energy Systems: Trends and Innovations	Applications of Life-Cycle Assessment	Nanotechnology	Joint ISSST/ISTAS Session on Emerging Technologies
	2:15pm-2:45pm	<i>Energy and Civilization: A history of energy production and consumption in a global cultural, technological and economic context</i> Carolyn Mattick, Eric Williams and Braden Allenby	<i>Manufacturing Energy Consumption for Solid State Lighting Systems</i> Paulina Jaramillo, Deanna Matthews, H. Scott Matthews and Christopher Weber	<i>A Life-Cycle Energy Analysis of Single Wall Carbon Nanotubes Produced Through Laser Vaporization</i> Matthew J. Ganter, Thomas P. Seager, Chris M. Schauerman, Ryne P. Raffaele and Brian J. Landi	Title TBD Mike Gorman
	2:45pm-3:15pm	<i>Research and Future Trend of Green Roofs: State of the art survey of Research in Green Roof and its Applications</i> Xiong Xiong, Jianzhi Li and John Lloyd	<i>Determining the environmental impact of an efficiency-improving product</i> Jeffrey Vickers and Carol Boyle	<i>Single Wall Carbon Nanotubes for Conductive Wiring</i> Christopher Schauerman, Matthew Ganter, Thomas Seager, Brian Landi and Ryne Raffaele	Title TBD Brad Allenby
	3:15pm-3:45pm	<i>Environmental Comparison of Energy Scavenging Technologies for Self-Sufficient Micro System Applications</i> Stephan Benecke, Nils Nissen and Herbert Reichl	<i>Life-Cycle Assessment of overhead versus underground power distribution in Southern California</i> Sarah Bumby, Ekaterina Druzhinina, Rebe Feraldi, Danae Werthmann, Jack Sahl and Roland Geyer	<i>Environmental Assessment of Manufacturing with Carbon Nanotubes</i> Lindsay Dahlben and Jacqueline Isaacs	Title TBD ISTAS Paper
3:45pm-4:15pm	<i>Making Power Adapters Smarter and Greener: There is no need for disposable, device-specific external power supplies.</i> Paul Panepinto	<i>Embedded Temporal Difference in Life Cycle Assessment: Case Study on VW Golf A4 Car</i> Chris Yuan, Rachel Simon, Natalie Mady and David Dornfeld	<i>Multi Criteria Risk Models for the Assessment of Environmental, Health, and Safety Trade-offs in Nanomanufacturing</i> Zeynep D. Ok, Jacqueline A. Isaacs and James C. Benneyan	Title TBD ISTAS Paper	
4:15pm-6:15pm	Poster Session and Reception				
Time		Tuesday May 19, 2009			
7:00am-8:00am	Breakfast				
	Materials and Sustainability	Risk and Uncertainty Assessment	Policy, Regulation, and Standards	ISSST Special Session on Thermodynamics and Sustainability	
8:00am-8:30am	<i>A Study of New Type Medium Density Fiberboard Based on Plant Fiber and Corn Viscose-ISEE2009-Xiujie_Jia</i> Jia Xiujie, Li Jianfeng and LI Fangyi	<i>Uncertainty and Variability in Accounting for Grid Electricity in Life Cycle Assessment: Attributional and Consequential Methods</i> Christopher Weber, Constantine Samaras and Paulina Jaramillo	<i>Power Management for Networked Computers: A Review of Incentive Programs</i> J. Michael Walker	<i>A Thermodynamic Interpretation of Sustainability</i> Timothy G. Gutowski, Bhavik R. Bakshi and Dusan P. Sekulic	
8:30am-9:00am	<i>Cobalt-Free Batteries, a New Frontier for Advanced Battery Recycling</i> Steve Sloop, Kyle Kotaich	<i>Modeling the Risks to Complex Industrial Networks Due to Loss of Natural Capital</i> Vikas Khanna and Bhavik Bakshi	<i>Ineffective Environmental Laws in Regulating Electronic Manufacturing Pollution: Examining Water Pollution Disputes in Taiwan</i> Wenling Tu	<i>Understanding the Implications of a Thermo-Economic Perspective on Sustainability</i> Thomas Seager	

Registration	9:00am-9:30am	<i>Excellent Product Stewardship and Sustainable Use of Plastics Additives in the Electronics Industry</i> Susan Landry, Steve Scherrer and Joel Tenney	<i>Strategies to Address Risks of Platinum Scarcity for Supply Chain Downstream Firms</i> Elisa Alonso, Frank Field, Rich Roth and Randolph Kirchain	<i>Methodology and utilization of simplified eco-assessments for policy making</i> Lutz Stobbe and Nils Nissen	<i>Thermodynamic constraints on Sustainability</i> Eric Williams
	9:30am-10:00am	<i>Sustainable Plastics from Recycled Electronics for New Products</i> Michael Biddle, Brian Riise and Chris Slijkhuis	<i>Methods for managing uncertainty in material selection decisions: robustness of early stage LCA</i> Anna Nicholson, Frank Field, Jeffrey Dahmus, Jeremy Gregory and Randolph Kirchain	<i>IT Products. Going Beyond Green-Can High Performance and Sustainability Co-Exist?</i> Clare Hobby and Wendy Williams	<i>Lifetime Exergy Consumption as a Sustainability Metric for Information Technologies</i> David Lettieri, Christopher R. Hannemann, Van P. Carey, and Amip Shah
	10:00am-10:30am	Refreshment Break			
		Green Design and Manufacturing	Sustainability Tools and Metrics I	Electronics Product Stewardship: International Perspectives	
	10:30am-11:00am	<i>Bringing Forth Sustainability Innovation in the Electronic Industry: The Case of Lead-Free Solders</i> Masaru Yarime	<i>A tool for quantifying the ecological goods and services consumption : Ecological Life Cycle Assessment (ECO-LCA) tool</i> Shweta Singh and Bhavik Bakshi	<i>Implementing IPR under the European WEEE directive - experiences in Germany</i> Susanne Rotter, Perrine Cancereel and Wolf-Peter Schill	
	11:00am-11:30am	<i>Elementary analysis of mobile phones for optimizing end-of-life scenarios</i> Kaue Takahashi, Masayuki Tsuda, Jiro Nakamura, Kazumi Otabe, Masaaki Tsuruoka, Yasunari Matsuno and Yoshihiro Adachi	<i>Is Economic Value an Effective Proxy for Embodied Energy and Environmental Impact in Material Systems?</i> Jeremy Gregory, Susan Fredholm and Randolph Kirchain	<i>Implementing Electronics Stewardship: A U.S. Federal Agency's Perspective</i> Mark Sajbel	
	11:30am-12:00pm	<i>Lead-free soldering of telecom network infrastructure products</i> Richard Trankell and Bo Eriksson	<i>Integration of Reliability and Environmental Aspects in Early Design Stages of Mechatronics</i> Andreas Middendorf, Sebastian Deyter, Jürgen Gausemeier, Nils Nissen and Herbert Reichl	<i>Developments and Evaluation of Existing Policies and Regulations for E-waste in India</i> Amit Jain	
	12:00pm-12:30pm	<i>Lifecycle Methodology Simplification in Assessing Eco-environmental Benefits of Product Refurbishment Operations</i> Thomas Okrasinski, Pierre-Louis Frouein, Renee Mummert and Ernst-Ulrich Kuester	<i>Schematic Characterization of the Human Health Impact of Toxic Chemicals for Sustainable Design and Manufacturing</i> Chris Yuan and David Dornfeld	<i>Case study of a Suzhou pilot project on the suitable treatment technology for scrap computers in China</i> Jinhui Li, Huabo Duan and Wenyi Yuan	
	12:30pm-2:00pm	Luncheon Speakers - Brad Allenby, Arizona State University, and Clint Andrews, Rutgers University (Lunch Provided)			
		Renewable Energy Systems	IT Systems and Sustainability	Transportation and Logistics	ISSST Special Session on Education
	2:15pm-2:45pm	<i>INCREASING THE PENETRATION OF WIND GENERATED ELECTRICITY USING DEMAND SIDE MANAGEMENT</i> Paddy Finn, Colin Fitzpatrick and Martin Leahy	<i>Automated Synthesis of Sustainable Data Centers</i> Tom Christian, Yuan Chen, Rocky Shih, Ratnesh Sharma, Christopher Hoover, Manish Marwah, Amip Shah and Daniel Gmach	<i>ASSESSING SUSTAINABILITY IMPACTS OF ROUTE GUIDANCE SYSTEMS UNDER COOPERATIVE VEHICLE INFRASTRUCTURE</i> Byungkyu (Brian) Park and Jyoung Lee	<i>Testing Experiential Teaching Strategies for Developing Ethical Reasoning Skills Relevant to Sustainability</i> Thomas P. Seager and Evan Selinger
	2:45pm-3:15pm	<i>Public Institution Fast Tracking Solar Panel Array Implementation</i> Cynthia Orndoff	<i>Developing an Overall CO2 Footprint for Semiconductor Products</i> Tim Higgs, Michael Cullen, Marissa Yao and Scott Stewart	<i>Life Cycle Assessment of Traditional Retail and E-commerce Logistics for Electronic Products</i> Amy Nagengast, Rachael Nealer, Chris Hendrickson, Paulina Jaramillo, Scott Matthews and Chris Weber	<i>Reverse Engineering as an Educational Tool for Sustainability</i> Luisa Dempere
	3:15pm-3:45pm	<i>Sustainability Modeling and Analysis of Emerging Technologies in the Bio-fuel Supply Chain(Case of Wood-based Biorefinery System in Maine)</i> Anthony Halog	<i>Development of a Green Scorecard to Identify Research Projects for Eco-Efficient Print Engines</i> Fritz Ebner, Shu Chang, John Knapp, Victoria DeYoung and Wendi Latko	<i>Exploring the Tradeoffs of Transportation Mode Choice</i> Christopher Harto	<i>Sustainable Engineering Vertically-Integrated Project Scheme in Undergraduate Engineering Education</i> Troy McBride, Jean Fullerton and Kurt DeGoede
	3:45pm-4:15pm	<i>Effect of agricultural practices on biofuel's environmental footprint</i> Xiaobo Xue, Deborah Steinberg and Amy Landis	<i>Social impact assessment of multipurpose ICT service by using GSF</i> Masayuki Tsuda, Kazue Takahashi, Masayuki Nakamura, Jiro Nakamura, Haruna Furuta and Norihiro Itsubo	<i>Selection of lightweighting strategies for use across an automakers vehicle fleet</i> Trisha Montalbo, Theresa Lee, Richard Roth and Randolph Kirchain	<i>Research and Education in Green Materials: A Multi-disciplinary Program to Bridge the Gaps</i> Julie Schoenung, Oladele Ogunseitan and David Eastmond

4:15pm-4:45pm	<i>Land Use and Geospatial Aspects of Renewable Energy</i> Thomas P. Seager and Shellee A. Miller	<i>Dell Survey of electronic recyclers to improve product Design for Reuse, Repair and Recycling</i> Puneet Shrivastava, Scott O'Connell and Mike Watson	<i>Emission Inventory Assessment for a Container Vessel</i> Fangfang(Emily) Wang and Han P. Bao	<i>Personalized Education</i> Brad Allenby
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Time Wednesday, May 20, 2009

Registration	7:00am-8:00am	Breakfast			
		Green IT	Sustainability Tools and Metrics II	Emerging Issues in Electronics Recycling	Joint ISSST/ISTAS Session on Ethics
	8:00am-8:30am	<i>Beyond Direct Emissions and Purchased Electricity Carbon Footprinting Upstream Supply Chain of Computer Manufacturing Industry</i> Y. Anny Huang, Christopher L. Weber and H. Scott Matthews	<i>Water Efficiency Management in Datacenters: Metrics and Methodology</i> Ratnesh Sharma, Amip Shah, Cullen Bash, Tom Christian and Chandrakant Patel	<i>End-of-Life Challenges of Printed Electronics</i> Marika Keskinen and Jani Valkama	<i>Title TBD</i> ISTAS Paper
	8:30am-9:00am	<i>Creating a Sustainable IT Ecosystem</i> Brian J. Watson, Manish Marwah, Amip J. Shah, Cullen E. Bash, Ratnesh Sharma, Christopher Hoover, Tom Christian and Chandrakant D. Patel	<i>End-of-Life Analysis of Analog CATV Converters</i> John Carrell, Hong-Chao Zhang, Hua Li and Chengcheng Fan	<i>Microbiological recovering of metals from printed circuit boards by Acidithiobacillus ferrooxidans</i> Jianfeng Bai, Jingwei Wang, Jinqiu Xu, Mingyuan Zhou, Jie Guan and Chenglong Zhang	<i>Title TBD</i> ISTAS Paper
	9:00am-9:30am	<i>Emerging Scenarios in Electronic Product Design for End-of-Life Management</i> Wayne Rifer, Andy Baynes	<i>Assessment of Supply Chain Carbon Mitigation Potentials</i> Eric Masanet, Klaas Jan Kramer, Greg Homan, Rich Brown, and Ernst Worrell	<i>Waste Printed Circuit Board recycling methods and their implications: review and prospects</i> Jinglei Yu, Eric Williams, Meiting Ju and Braden Allenby	<i>Barriers of Implementation of Sustainability in Engineering</i> Jennifer Languell
	9:30am-10:00am	<i>Reducing the Greenhouse Gas Emissions of Commercial Print with Digital Technologies</i> Royston Sellman, Chris Preist and Scott Canonico		<i>E-SCRAP RECYCLING: DESIGNING FOR THE ENVIRONMENT</i> Tomas Prieto	<i>The Ethics of Emerging Technologies: Real Time Macroethical Assessment</i> Brad Allenby
	10:00am-10:15am	Refreshment Break			
		Regional Aspects of Product Systems	End of Life Systems Analysis	Sustainability and the Built Environment	
	10:15am-10:45am	<i>Environmental life-cycle impacts and benefits of secondhand CRT TV exported from Japan to the Philippines</i> Aya Yoshida and Atsushi Terazono	<i>Modeling the Impact of Varying Product Portfolio on the Economic and Environmental Performance of Recycling Systems</i> Elsa Olivetti, Jeffrey Dahmus, Susan Fredholm, Jeremy Gregory and Randolph Kirchain	<i>Preliminary Life Cycle Assessment of Residential Homes: Focus on Insulating Concrete Forms with Traditional residential wall sections</i> Neethi Rajagopalan, Melissa Bilec and Amy Landis	
	10:45am-11:15am	<i>A study on remanufacturing businesses in Japan</i> Mitsutaka Matsumoto and Koh Naito	<i>Product End-of-Life Management Networks</i> Vered Doctori Blass and Roland Geyer	<i>Integration of Technological and Ecological Systems to Assess the Environmental Footprint of a Residential System</i> Robert Urban and Bhavik Bakshi	
	11:15am-11:45am	<i>Assessing the management of small waste electrical and electronic equipment through substance flow analysis The example of gold in</i> Perrine Chancerel, Barbara K. Reck, T.E. Graedel and Susanne Rotter	<i>Supply and Demand in the Material Recovery System for Cathode Ray Tube Glass</i> Jeremy Gregory, Marie-Claude Nadeau and Randolph Kirchain		
	11:45-12:15pm	<i>Environmental Overhead of Labor Embodied in China-U.S. Trade Using Adjusted Trade Data</i> Ming Xu, Eric Williams and Braden Allenby	<i>Using RFID Signalling to close the loop on second hand Computers</i> Eanna Cronin, Stewart Hickey and Colin Fitzpatrick		
	12:30pm-1:00pm	Closing Session			