		ISSST Track 1: Products, Systems, and Services Location: Joshua Tree	ISSST Track 2: Tools and Methods Location: Capistrano	ISSST Track 3: Special Topics and Critical Perspectives Location: Palm F	Special Sessions Location: Cavetto	ISTAS Location: Augustine
	Time	Monday, May 18, 2009				
Registration	7:00am-8:00am	Breakfast (Break stations in courtyard)				
	8:00am-9:30am	Free ISSST Tutorial Session Introduction to Life-Cycle Assessment				Special Open Meeting IEEE Society on Social Implications of Technology Board of Governors
	9:30am-10:00am	Refreshment Break (Break stations in courtyard)				
	10:00am - 11:30am	Free ISSST Tutorial Session Carbon Footprinting: Challenges and Opportunities				Special Open Meeting IEEE Society on Social Implications of Technology Board of Governors
	11:30am-1:00pm	Lunch on your own				
	1:00pm-2:00pm	Keynote Speaker - Michael Crow, President, Arizona State University: "The Engineering Challenge of Sustainability" (Location: Palm AD)				
	2:00pm-2:15pm	Refreshment Break (Break stations in courtyard)				
		Energy Systems: Trends and Innovations	Applications of Life-Cycle Assessment	Nanotechnology	Joint ISSST/ISTAS Session on Emerging Technologies	ISTAS Roles for Expert and Lay Knowledge in Sustainable Development
	2:15pm-2:45pm	*Energy and Civilization: A History of Energy Production and Consumption in a Global Cultural, Technological and Economic Context* Carolyn S. Mattick, Eric Williams, and Braden R. Allenby	*Energy Consumption in the Production of High-Brightness Light-Emitting Diodes* Deanna H. Matthews, H. Scott Matthews, Paulina Jaramillo, and Christopher L. Weber	*A Life-Cycle Energy Analysis of Single Wall Carbon Nanotubes Produced Through Laser Vaporization* Matthew J. Ganter, Thomas P. Seager, Christopher M. Schauerman, Brian J. Landi, and Ryne P. Raffaelle	*Serious games, sustainable civilizations, and trading zones* Mike Gorman	*Managing highly uncertain risks: Unused pharmaceuticals, climate change, and nuclear waste* David Hassenzahl, Robert Goble, Ilene Ruhoy
	2:45pm-3:15pm	*Environmental Comparison of Energy Scavenging Technologies for Self-Sufficient Micro System Applications* Stephan Benecke, Nils F. Nissen and Herbert Reichl	*Comparative Life Cycle Assessment (LCA) of overhead and underground medium voltage power distribution* Sarah Bumby, Ekaterina Druzhinina, Rebe Feraldi, Danae Werthmann, Roland Geyer, and Jack Sahl	*Single Wall Carbon Nanotubes for Conductive Wiring* Christopher M. Schauerman, Jack Alvarenga, Matthew J. Ganter, Thomas P. Seager, Brian J. Landi, and Ryne P. Raffaelle	*The Challenge of Emerging Technologies* Brad Allenby	*Technology discourses and sustainability: Fraught with Disconnects* Peter Wiesner, William Tonti
	3:15pm-3:45pm	*Making Power Adapters Smarter and Greener* Paul A. Panepinto	*Embedded Temporal Difference in Life Cycle Assessment: Case Study on VW Golf A4 Car* Chris Yuan, Rachel Simon, Natalie Mady, and David Dornfeld	*Environmental Assessment of Manufacturing with Carbon Nanotubes* Lindsay Dahlben and Jacqueline Isaacs	*Are smarter buildings better buildings?* Clinton Andrews	*Stakeholder assessment for the introduction of sustainable energy and environmental technologies in Japan* Mashiro Matsuura, Tatsujiro Suszuki, Hideaki Shiroyama
	3:45pm-4:15pm		*Carbon Footprinting Upstream Supply Chain for Electronics Manufacturing and Computer Services* Y. Anny Huang, Christopher L. Weber and H. Scott Matthews	*Nanotechnology Environmental, Health, and Safety Issues: Brief Literature Review Since 2000* Zeynep D. Ok, James C. Benneyan, and Jacqueline A. Isaacs		*Potential of the corporate web site to generate trust in environmentally risky firms* Nuria Hurtado-Torres, Maria Bermudez-Edo, Juan Alberto Aragon-Correa, Eulogio Cordon-Pozo
	4:15pm-6:15pm	Poster Session and Reception (Location: Palm ABDE)				

Registration

Time	Tuesday May 19, 2009				
6:30-7:45am	**Committee Meeting** IEEE President's Sustainability Initiative				
7:00am-8:00am	**Breakfast (Break stations in courtyard)**				
	Materials and Sustainability	**Risk and Uncertainty Assessment**	**Policy, Regulation, and Standards**	**ISSST Special Session on Thermodynamics and Sustainability**	**ISTAS ICT & Community**
8:00am-8:30am	*Comparative Life Cycle Assessment of Insulating Concrete Forms with Traditional Residential Wall Sections* Neethi Rajagopalan, Melissa Bilec, and Amy Landis	*Uncertainty and Variability in Accounting for Grid Electricity in Life Cycle Assessment* Christopher Weber, Constantine Samaras and Paulina Jaramillo	*Power Management for Networked Computers: A Review of Incentive Programs* J. Michael Walker	*Preliminary Thoughts on the Application of Thermodynamics to the Development of Sustainability Criteria* Timothy G. Gutowski, Dusan P. Sekulic, and Bhavik R. Bakshi	*Going green: Videoconferencing as part of everyday life* Susan O'Donnell
8:30am-9:00am	*Excellent Product Stewardship and Sustainable Use of Plastics Additives in the Electronics Industry* Susan Landry, Steve Scherrer and Joel Tenney	*Modeling the Risks to Complex Industrial Networks Due to Loss of Natural Capital* Vikas Khanna and Bhavik Bakshi	*Ineffective Environmental Laws in Regulating Electronic Manufacturing Pollution: Examining Water Pollution Disputes in Taiwan* Wenling Tu and Yujung Lee	*Understanding the Implications of a Thermo-Economic Perspective on Sustainability* Thomas Seager	*The growing role of e-learning on sustainable growth: Applications to management education* Owen Hall, Jr., Phil Brown
9:00am-9:30am	*Supply Chain to Supply Cycle: Mining Plastics from Electronics to Close the Loop* Michael Biddle, Brian Riise, and Chris Slijkhuis	*Strategies to Address Risks of Platinum Scarcity for Supply Chain Downstream Firms* Elisa Alonso, Frank Field, Rich Roth and Randolph Kirchain	*Methodology and Utilization of Simplified Eco-assessments for Policy Making* Lutz Stobbe, Nils F. Nissen, Karsten Schischke, and Herbert Reichl	*Framework for Thermodynamic Constraints on Sustainability* Eric Williams	*From "localized" to "networked:" A transformation in community structures* William Towne
9:30am-10:00am	*Californnia's Green Chemistry Initiative* Bob Boughton	*End-of-life LCA allocation methods: open loop recycling impacts on robustness of material selection decisions* Anna L. Nicholson, Elsa A. Olivetti, Jeremy R. Gregory, Frank R. Field, and Randolph E. Kirchain	*IT Products. Going Beyond Green-Can High Performance and Sustainability Co-Exist?* Clare Hobby, N. Rydell, Emma Sjogren, and Wendy Williams	*Lifetime Exergy Consumption as a Sustainability Metric for Information Technologies* David Lettieri, Christopher R. Hannemann, Van P. Carey, and Amip Shah	*Location and interactive services: Not only at your fingertips but under your skin* Rodney Ip, Katina Michael, MG Michael
10:00am-10:30am	**Refreshment Break (Break stations in courtyard)**				
	Green Design and Manufacturing	**Sustainability Tools and Metrics I**	**Electronics Product Stewardship: International Perspectives**	**ISTAS Technological Innovation and Sustainability**	**ISTAS Urban Issues in Sustainable Development Roundtable**
10:30am-11:00am	*Bringing Forth Sustainability Innovation in the Electronic Industry: The Case of Lead-Free Solders* Masaru Yarime	*Eco-LCA : A tool for quantifying the role of ecological resources in LCA* Shweta Singh and Bhavik Bakshi	*Implementing IPR under the European WEEE directive - experiences in Germany* Susanne Rotter, Perrine Cancerel and Wolf-Peter Schill	*Sustainable disasters: The impact of natural disaster on vulnerable populations, the role of technology and its implications for community sustainability* Charles Schartung	*Examining urban sustainability issues from the perspectives of urban design, planning process, and systems thinking* Clinton Andrews, Emily Talen, Ashwani Vasisth
11:00am-11:30am	*Elementary analysis of mobile phones for optimizing end-of-life scenarios* Kaue Takahashi, Masayuki Tsuda, Jiro Nakamura, Kazumi Otabe, Masaaki Tsuruoka, Yasunari Matsuno and Yoshihiro Adachi	*Is Economic Value an Effective Proxy for Embodied Energy and Environmental Impact in Material Systems?* Jeremy Gregory, Susan Fredholm and Randolph Kirchain	*Implementing Electronics Stewardship: A U.S. Federal Agency's Perspective* Mark Sajbel	*Contending sustainability agencements and the future world* Ken Zimmerman	
11:30am-12:00pm	*Lead-free soldering of telecommunication network infrastructure products* Bo Eriksson and Richard Trankell	*Integration of Reliability and Environmental Aspects in Early Design Stages of Mechatronics* Andreas Middendorf, Sebastian Deyter, Jürgen Gausemeier, Nils F. Nissen, Herbert Reichl	*Developments and Evaluation of Existing Policies and Regulations for E-waste in India* Amit Jain	*Pro-active contributions of technology to more sustainable developments in our global society: Recent issues, trends and opportunities* Maurizio Traversi	**ISTAS Global Public Policy and Sustainability Roundtable** *Implications of population growth and access to water, food, and energy for disease and conflict among nations* Luis Kun, Clinton Andrews, Robert Matthews, Rahul Tongia, Stephen Unger
12:00pm-12:30pm	*Schematic Characterization of Human Health Impact of Toxic Chemicals for Sustainable Design and Manufacturing* Chris Yuan and David Dornfeld	*Quantifying Mitigation Potential of Climate Action Plans for American Cities* Michael Blackhurst, H Scott Matthews and Chris T. Hendrickson	*Case study of a Suzhou pilot project on the suitable treatment technology for scrap computers in China* Jinhui Li, Huabo Duan, and Wenyi Yuan	*Community wireless networks: Emerging wireless for digital inclusion* Abdelnasser Abdelaal, Hesham Ali	
12:30pm-2:00pm	**Lunch (Provided) (Location: Palm AD)** **Speakers - Brad Allenby, Arizona State University, and Clint Andrews, Rutgers University: "Update on the IEEE President's Sustainability Initiative"** **Presentation of Awards**				

	Renewable Energy Systems	IT Systems and Sustainability	Transportation and Logistics	ISSST Special Session on Education	ISTAS Ethical Considerations in Technology Deployment
2:15pm-2:45pm	*Increased Penetration of Wind Generated Electricity using Real time Pricing & Demand Side Management* Paddy Finn, Colin Fitzpatrick and Martin Leahy	*Automated Synthesis of Sustainable Data Centers* Tom Christian, Yuan Chen, Rocky Shih, Ratnesh Sharma, Christopher Hoover, Manish Marwah, Amip Shah, and Daniel Gmach	*Assessing Sustainability Impacts of Route Guidance System under Cooperative Vehicle Infrastructure Environment* Byungkyu (Brian) Park and Joyoung Lee	*Experiential Teaching Strategies for Ethical Reasoning Skills Relevant to Sustainability* Thomas P. Seager and Evan Selinger	*Considering sustainability through ethical approaches and their practical application* Denise Oram
2:45pm-3:15pm	*Public Institution Fast Tracking Solar Panel Array Implementation* Cynthia Orndoff and Joe Shepard	*Developing an Overall CO2 Footprint for Semiconductor Products* Tim Higgs, Michael Cullen, Marissa Yao, and Scott Stewart	*Life Cycle Assessment of Traditional Retail and E-commerce Logistics for Electronic Products* Amy Nagengast, Rachael Nealer, Chris Hendrickson, Paulina Jaramillo, H. Scott Matthews, and Christopher Weber	*Reverse Engineering as an Educational Tool for Sustainability* Luisa Dempere	*Social implications of automobile collision avoidance systems* Scott Miller
3:15pm-3:45pm	*Effect of Agricultural Practices on Biofuels' Environmental Footprints* Xiaobo Xue and Amy E. Landis	*Development of a Green Scorecard to Identify Research Projects for Eco-Efficient Print Engines* Fritz Ebner, Shu Chang, John Knapp, Victoria Deyoung, and Wendi Latko	*Exploring the Tradeoffs of Daily Commute Choice* Christopher Harto	*Sustainable Engineering Vertically-Integrated Project Scheme in Undergraduate Engineering Education* Troy O. McBride, Kurt DeGoede, and Jean Fullerton	*Nuclear power and prima facie duties towards future people* Benham Taebi
3:45pm-4:15pm	*Land Use and Geospatial Aspects in Life Cycle Assessment of Renewable Energy* Thomas P. Seager, Shelie A. Miller and J. Kohn	*Social Impact Assessment of Multipurpose ICT Service by Using GSF* Masayuki Tsuda, Kazue Takahashi, Masayuki Nakamura, Jiro Nakamura, Haruna Furuta and Norihiro Itsubo	*Selection of Lightweighting Strategies for Use Across an Automaker's Vehicle Fleet* Trisha Montalbo, Theresa M. Lee, Richard Roth, and Randolph E. Kirchain	*Research and Education in Green Materials: A Multi-disciplinary Program to Bridge the Gaps* Julie M. Schoenung, Oladele A. Ogunseitan, and David A. Eastmond	*Privacy and ethical issues in location-based tracking systems* Jessa Wang Liying, Michael Loui
4:15pm-4:45pm		*Dell Survey of Electronic Recyclers – Results and Analysis* Puneet Shrivastava, Scott O'Connell, and Mike Watson	*Emission Inventory Assessment for a Container Vessel* Fangfang Wang, Han P. Bao, and Thomas Kiernan	*Personalized Education* Brad Allenby	*The legal ramifications of microchipping people in the United States of America: A state legislative comparison* Angelo Friggieri, Katina Michael, MG Michael

Registration

Time	Wednesday, May 20, 2009				
7:00am-8:00am	**Breakfast (Break stations in courtyard)**				
	Green IT	**Sustainability Tools and Metrics II**	**Emerging Issues in Electronics Recycling**	**Joint ISSST/ISTAS Session on Ethics**	**ISTAS Systems Thinking as an Approach to Sustainable Development**
8:00am-8:30am	*Creating a Sustainable IT Ecosystem: Enabling Next-Generation Urban Infrastructures* Brian Watson, Ratnesh Sharma, Susan Charles, Amip Shah, Chandrakant Patel, Manish Marwah, Christopher Hoover, Thomas	*Water Efficiency Management in Datacenters: Metrics and Methodology* Ratnesh Sharma, Amip Shah, Cullen Bash, Tom Christian and Chandrakant Patel	*End-of-Life Challenges of Printed Electronics* Marika Keskinen and Jani Valkama	*Macroethics in Engineering: The Case of Climate Change* Joseph R. Herkert	*Decision making for social sustainability: A life-cycle assessment approach* Margot Hutchins, John Gierke, John Sutherland
8:30am-9:00am	*A New Look at Design for EoL: Game Changing Outcomes of the Close the Loop Study* Wayne Rifer and P. Brody-Heine	*End-of-Life Analysis of Analog CATV Converters* John Carrell, Hong-Chao Zhang, Hua Li, and Chengcheng Fan	*Microbiological recovering of metals from printed circuit boards by Acidithiobacillus ferrooxidans* Bai Jianfeng,Wang Jingwei, Xu Jinqiu, Zhou Mingyuan, Guan Jie, and Zhang Chenglong	*Sustainability as preserving intergenerational equity: the acceptable course of action in nuclear power* Benham Taebi	*The 'systems approach' to human problems: How humanitarian engineering can help* Matthew Burnham
9:00am-9:30am	*Reducing the Greenhouse Gas Emissions of Commercial Print with Digital Technologies* Royston Sellman, Chris Preist and Scott Canonico	*Assessment of Supply Chain Carbon Mitigation Potentials* Eric Masanet, Greg Homan, Rich Brown, Klaas Jan Kramer, and Ernst Worrell	*Review and Prospects of Recycling Methods for Waste Printed Circuit Boards* Jinglei Yu, Eric Williams, and Meiting Ju	*Macroethical and Social Issues in Emerging Technologies and the Military* Carolyn Mattick	*On analytical tools to advance resolving ingenuity gaps for complex learning societies: A prerequisite for sustainable development?* Walter Zessner
9:30am-10:00am		*Technological-Ecological Networks for Sustainable Process Design* Robert Urban and Bhavik Bakshi	*E-Scrap Recycling Designing for the Environment* Tomas Prieto	*The Ethics of Emerging Technologies: Real Time Macroethical Assessment* Brad Allenby	*Seven barriers to a sustainable future* Jeff Robbins
10:00am-10:15am	**Refreshment Break (Break stations in courtyard)**				
	Regional Aspects of Product Systems	**End of Life Systems Analysis**		**ISTAS Autonomous Robots Panel**	
10:15am-10:45am	*Environmental life-cycle impacts and benefits of secondhand CRT TVs exported from Japan to the Philippines* Aya Yoshida, Tomohiro Tasaki, and Atsushi Terazono	*Modeling the Impact of Product Portfolio on the Economic and Environmental Performance of Recycling Systems* Jeffrey B. Dahmus, Elsa A. Olivetti, Susan A. Fredholm, Jeremy R. Gregory, and Randolph E. Kirchain		*How sustainable is a society that employs autonomous robots?* Keith Miller, Ronald Arkin, John Canning, Peter Asaro, Noel Sharkey, Rob Sparrow	
10:45am-11:15am	*A study on remanufacturing businesses in Japan* Mitsutaka Matsumoto and Koh Naito	*Supply and Demand in the Material Recovery System for Cathode Ray Tube Glass* Jeremy Gregory, Marie-Claude Nadeau and Randolph Kirchain			
11:15am-11:45am	*Assessing the management of small waste electrical and electronic equipment through substance flow analysis The example of gold in Germany and the USA* Perrine Chancerel, Barbara K. Reck, T.E. Graedel and Susanne Rotter	*Using RFID signalling to close the loop on second hand Computers* Eanna Cronin, Pat Sweeney, Stewart Hickey, and Colin Fitzpatrick			
11:45-12:15pm	*Environmental Overhead of Labor (EOL) Embodied in Trade: The Case of 2002 China-U.S. Trade* Ming Xu, Eric Williams and Braden Allenby				
12:30pm-1:00pm	**Closing Session (Palm AD)**				
1:00pm-3:00pm	**Committee Meeting (Location: Sand Lotus)** ECE TIG Roadmap Meeting				