

ISIE Fall 2013 New sletter

ISIE News

Volume 13, Issue 3
International Society for Industrial Ecology



Dear ISIE Members,

Here at the ISIE office, fall has swept away the leaves and we are preparing for chilling temperatures. With the fall, we are given a chance to reflect on the past year. With a successful conference in South Korea now behind us, we are looking forward to welcoming new members to our Council and Nominating committees in the new year. We are also excited to welcome Makarand Dehejia as our new ISIE Executive Director. Roland Clift has been a truly incredible leader for the Society and will continue to be so with his leadership role in the upcoming ISIE conference in Surrey UK in 2015. Before the conference in Surrey, we are excited to announce three ISIE related conferences being jointly organized in Melbourne Australia in November 2014. Read more below and we hope to see many of you there.

Enjoy reading about industrial ecology happenings around the world in this season's newsletter and we look forward to your news contributions in the future.

Best wishes,

Melanie Quigley
Program Coordinator, ISIE



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He was later made a member of IFC's Management Group and Promoted to Vice President, Engineering & Technical Assistance. When he retired from IFC in December 1994, he was Vice President in



From ISIE President Marian Chertow

Dear ISIE Members-

We are delighted to announce that Mr. Makarand Dehejia has been appointed to be the next Executive Director of ISIE. As one of the original members of the Society, Mak enters into this role with a unique perspective that will prove instrumental in the Society's future. A longtime member, Mak served as the first elected ISIE Treasurer during which time he established the basis for the way the administration organizes and reports its finances. He also currently serves as an Associate Editor of the *Journal of Industrial Ecology*.

He is dedicated to the missions and goals of the Society and we are pleased to welcome him to the leadership. His term as Executive Director will officially begin January 1, 2014 at which time our great colleagues Prof. Roland Clift will step down and continue to focus his efforts on organizing the ISIE biennial conference in Surrey UK in 2015.

Mak comes to us as the former Vice President of the World Bank Group in Washington D.C. and has for the past 50 years worked extensively in the area of global business and international trade in a wide variety of industrial sectors in more than 45 countries.

charge of Corporate Business Development.

During his tenure at IFC, Mak Dehejia was directly involved in the search, evaluation and selection of technologies for projects in developing countries and how to do business in emerging economies. His long experience makes him an ideal interpreter of technology and technological issues in global finance and trade matters including his work in developing countries. Mak is currently President and CEO of the Alliance for Sustainable Industry & Energy, LLC. He continues to advise investors seeking to promote business in emerging markets. His expertise is also sought by multinational corporations and governmental institutions to develop industrial investment strategies.

Procedurally, the selection committee was the current president (Marian Chertow), the Immediate Past President (Greg Keoleian) and the President-elect (Chris Kennedy). We were assisted in our efforts by Executive Director Roland Clift, Program Coordinator Melanie Quigley and by a productive brainstorming session in Ulsan among current and recent ISIE Council members.

Our recommendation for Mak was then proposed to and supported by the ISIE Council. We had all agreed that we would not restrict our search to professors, but at this stage in our development, it would also be helpful to consider other sorts of senior managers from business or other organizations. Mak not only brings long experience, but also an agenda that includes broadening and expanding the membership base and increasing our fundraising outreach in a more systematic way, two important issues that matched our recently approved strategic plan.

Please help us in welcoming Mak!

Best wishes,

As a student in India, Mak won a prestigious TATA Scholarship to pursue engineering studies at Cambridge University, UK. After graduating from Cambridge, Mak worked for private sector industrial groups in the U.K. and France, and with TATA in India. He joined the International Finance Corporation (IFC), the private sector affiliate of the World Bank, as a Project Engineer and quickly rose through the ranks to become the head of the Engineering Department.

Marian Chertow, Chris Kennedy, Greg Keoleian

ISIE Sections Update

IE / ISIE Promotional Booklet

The ISIE is currently working on a promotional booklet summarizing achievements of IE, and related teaching and research activities. As well as being somewhat of a celebration of the first 10 to 15 years of our Society, the booklet will serve as a resource for faculty looking to grow programs in IE. We'd be thrilled to get your help on some of the content!

Through the hard work of Melanie and others at the Yale main office we already have a substantial amount text and data for the booklet. Content under development includes: introduction to IE; description of the ISIE sections; lists of winners of ISIE prizes; lists of schools with courses in IE; descriptions of programs or certificates in IE; lists of 10-year members of ISIE; and more...

There are three items for which we need your help:

1. What have been the greatest impacts or achievements of IE? These might be practical applications, a body of research work, or policies or procedures developed by members of the IE community. Give us your top 5 list if you wish, and feel free to include your own work, if for example you've published in Nature, contributed to an IPCC chapter, formed a company practicing IE, etc.
2. Please tell us about any large grants you have received as an industrial ecologist (e.g., over \$1 million, or similar adjusting for country context). Give details such as PI, collaborators, grant title, amount, funder, year and industrial partners, as applicable. Hopefully this is just a quick cut and paste from your CV.
3. We are keen to feature career paths and statements of exceptional students who have received training in IE. If you have any suggestions for former students that we might feature, please provide name, contact e-mail and a couple of sentences about his or her achievements.

Please send input on the three items above by email to Melanie (melanie.quigley@yale.edu) by

December 31.

Note that we may not be able to use all the material received; but the richer the contributions from the membership, the better we can promote the ISIE.

Chris Kennedy, Julia Steinberger, Anthony Chiu

Student Chapter Update, by Graham Aid and Xiao Li

So far 2013 has been a big year for Industrial Ecology students. With the great biennial conference in Ulsan, South Korea, 156 students across the world met each other. On June 29, the student chapter board organized the 3rd Symposium on Industrial Ecology for Young Professionals (SIEYP) with the theme “Applying IE research toward transitions”. The chapter successfully got funding from the US National Science Foundation, which provided travel aid for 25 students and covered activity expenses.

50 students participated in the symposium. Prof. Heinz Schandl delivered the keynote speech, and five student presenters were selected from the submitted abstracts by SIEYP technical committee to give 15-minute oral presentations. An SIEYP poster session and competition were held, two sessions were arranged with 13 workshops covering various topics, and the first SIEYP Green Ad-hoc-a-thon was launched. In addition to the academic feast, the board held an ISIE Student Chapter business lunch where students contributed and discussed their ideas for the chapter work. A student social evening was organized. Students had dinner and fun out in the country’s industrial powerhouse with a rich flavor of life.

Recently, the student chapter leadership baton has been passed to a newly formed board. We would like to express our big thanks to the retired board members, Graham Aid, Simone Pereira de Souza, Prakhar Goel and Emma Keller, for their great contribution and teamwork spirit. Four new board members were elected out of 14 candidates. Congratulations to Carolin Bellstedt (Master student, Leiden University and TU Delft), Tomer Fishman (PhD student, Nagoya University), Burak Şen (Master student, EU Erasmus Mundus Industrial Ecology Master Program) and Lin Shi (Master student, Yale University)!

They joined with the two remaining senior board members, Claire Antaya (PhD student, Arizona State University) and Xiao Li (PhD student, Tsinghua University) to form the new board. We also would like to thank all the nominees for showing great motivation and vision for the future of the chapter, and we hope all nominees and members may find their active role in the chapter. Tracking the ideas discussed at the student meeting in Ulsan, many plans are now under development, including attracting more students to the chapter from worldwide IE-related programs and courses and starting a new tradition of student webinars. We look forward to arranging student activities during the Gordon Research Conference next June. A new issue of the student newsletter will also be released soon.

As always, please keep us updated with potential funding information, student news, student research opportunities, and other announcements to the student chapter at

Journal of Industrial Ecology **News**

Best Paper Prize

The *JIE* is pleased to announce the establishment of two annual prizes—for the best papers published by a junior and a senior author. The prizes will be a check for US\$250 and a free one-year membership in the ISIE. Papers will be nominated by members of the *JIE*'s editorial board and a Best Paper Prize committee chaired by Helge Brattebø of NTNU, which will also choose the prize-winning papers. Winners will be announced in the *JIE* and at the ISIE conference. For more information, see http://jie.yale.edu/best_paper_prizes.

Changes in Editorial Procedures

The *JIE* is in the process of making major changes in its editorial process. As the founding journal in the field, the *JIE* has sought to establish high standards for scholarship. It has additionally sought to engage readers from outside the academic world in order to disseminate industrial ecology research and insights to the “real world.” The *JIE* has also worked hard to help junior authors and those for whom English is not their native language. The industrial ecology community and the world of journal publishing have evolved since the *JIE* was established. The field has matured, becoming both more sophisticated and more deeply connected to mainstream academic institutions and imperatives—especially the imperative to publish frequently and quickly.

In the past, the *JIE*'s emphasis on quality and readability made it slower than some competing journals. The emphasis will now change. Authors will be expected to assume much greater responsibility for bringing their manuscripts to publishable quality including ensuring readability and addressing details of formatting and style. In addition, compliance with formatting and style guidelines will be required at the point at which revised manuscripts are submitted to the *JIE* after a decision of accept-pending-revision. This will allow the journal to move manuscripts, once they have received final acceptance, quickly through the publication process. More detail on these new procedures will be sent to the membership in the coming month.

New (Ancillary) Website

Check out the new *JIE* website at <http://jie.yale.edu>. This site is meant to complement the main website (www.wileyonlinelibrary.com/journal/jie) and to replace a very old ancillary website that had been used primarily for posting calls for papers. The new site contains:

Calls for papers

- List of special issues and features published
- Books received from publishers including those reviewed in the *JIE*
- Style/template files for EndNote, RefWorks, and Zotero for use in creating reference lists for *JIE* articles
- Complete bibliography of all papers published in the *JIE* recorded in EndNote, RefWorks and Zotero files
- Chinese translations of the abstracts of all articles published in the *JIE*
- Gallery of all the covers of the *JIE*

The website is a work in progress, so feedback and corrections are welcome!

Acknowledgement of Associate Editors

The *JIE* has begun recognizing the associate editor responsible for managing the review of a submission by displaying the editor's name in the lower right corner of the opening page of the published article. This acknowledges the time commitment and the important role that associate editors play in the *JIE*'s editorial process.

Calls for Papers for Special Issues

Frontiers in Socio-economic Metabolism – Deadline 1 April 2014

Research in and understanding of socio-economic metabolism (SEM) has grown rapidly in the last 2 decades. This special issue will explore the discourse between industrial ecology, environmental science and engineering, political and social ecology, human geography, ecological economics, and urban ecology and will examine SEM as a guiding analytical framework for analyzing global environmental change and globalization. Heinz Schandl (CSIRO), Daniel Müller (NTNU) and Yuichi Moriguchi (Tokyo University) are serving as editors. The full call for papers can be found at http://jie.yale.edu/JIE_cfp_SEM

Advances in Complex Adaptive Systems and Industrial Ecology – Deadline 15 January 2014

Research on complexity and its applications in IE have been increasing over the years, especially since the publication of the *JIE* special issue on "[Complexity and Industrial Ecology](#)" in 2009. This special issue seeks to capture the recent development and state-of-the-art in this field building in part on papers presented at the 2013 ISIE Conference in Ulsan. Gerard Dijkema of Delft University of Technology, Ming Xu of the University of Michigan, and Sybil Derrile of the University of Illinois at Chicago will serve as co-editors. The call for papers can be found at http://jie.yale.edu/JIE_cfp_complexity.

New Editors

The *JIE* is pleased to announce that Frank Boons of Erasmus University in Rotterdam, Netherlands, has agreed to serve as an associate editor for the *JIE*. He will handle case studies, business-environment papers, and papers related to organizing sustainable production and consumption. Sabrina Spatari of Drexel University in Philadelphia, Pennsylvania, USA has agreed to serve as book review editor. Mak Dehejia has stepped down from that role now that he is becoming executive director of the ISIE. Arnold Tukker has also stepped down from his role as book review editor in light of his new responsibilities at the Institute of Environmental Science at Leiden University. Daniel Guide has concluded his role as associate editor for supply chain management because of editorial responsibilities at other journals. We thank Mak, Arnold and Dan for their service!

Do you receive the JIE table of contents alerts? If not, be sure to sign up to receive these emails or RSS feeds so that you always have the latest in industrial ecology research.

IE News from around the world

Efficient Utilization of Renewable Resources

The “*International* Conference on Resource Efficiency in Interorganizational Networks” took place between the 13-14 of November 2013 in Göttingen (Germany) and is organized by the Research Training Group 1703 “Resource Efficiency in Interorganizational Networks - Planning Methods to Utilize Renewable Resources” of the University of Göttingen (www.ressourceneffizienz.uni-goettingen.de), funded by the German Research Foundation (Deutsche Forschungsgemeinschaft - DFG).

The conference brought together interdisciplinary researchers developing strategies and solution concepts for efficient resource utilization and offers a forum for scientific exchange between experts and interdisciplinary groups. During the conference, 42 contributions in the fields of agricultural and forestry science, mathematical optimization, operations research, marketing, production and logistics, and business informatics were presented in parallel sessions.

The three main tracks were “Materials and Technologies”, “Planning of Production and Value-Added Networks for Renewable Resources” and “Governance, Coordination, and Sales”. Together, these tracks cover the entire supply chain, from wood preparation and reconditioning, to planning efficient production processes using business information, to the marketing of the products.

Invited Speakers were Prof. Dr. Martin Faulstich, Chair of the German Advisory Council on the Environment, Prof. Dr. Barry Goodell from the Virginia Polytechnic Institute and State University (USA), Prof. Dr. Adisa Azapagic, University of Manchester (UK), and Prof. Dr. Daniela Kleinschmit from the Swedish University of Agricultural Sciences in Uppsala.

The conference proceedings comprising the extensive versions of the contributions to the

conference are published under Open Access terms at <http://webdoc.sub.gwdg.de/univerlag/2013/ResEff>.

Industrial Ecology Lab

The NeCTAR consortium in Australia has awarded \$1.1 million for a new project on compiling MRIO databases in a Virtual Laboratory called the Industrial Ecology Lab. NeCTAR is an Australian Government project conducted as part of the Super Science initiative and financed by the Education Investment Fund.

Supported by the Australian Bureau of Statistics, researchers from nine collaborating Australian institutions will establish electronic infrastructure to address the challenge of creating a time series of sub-national MRIO tables for Australia. The Industrial Ecology Lab will dramatically enhance Australia's analytical capabilities in Life-Cycle Assessment (LCA), carbon footprinting, water footprinting, and other approaches to environmental impact assessment. It will also improve Australia's capacity for modelling the future effects of changes in economic and social policy.

The Industrial Ecology Lab will integrate a diverse set of data streams with a calculation engine that can rapidly react as new information becomes available, and this capability will mark a new era in sustainability research. A number of researchers are already using the Industrial Ecology Lab for their purposes, for example in studies on future biofuel industries for Australia and on industrial symbiosis and material efficiency.

The Industrial Ecology Lab concept was conceived by Prof Manfred Lenzen, of ISA at the University of Sydney. The IE Lab's architecture and infrastructure will be developed throughout 2013 under the lead of Prof Manfred Lenzen. From 2014 onwards, the Lab will be operated under the lead of Prof Tommy Wiedmann of the University of New South Wales.

For more information see <http://www.isa.org.usyd.edu.au/ielab/ielab.shtml>.

Industrial Symbiosis on Global Stage

The last few weeks has seen industrial symbiosis raised to new awareness levels with both a session hosted by International Synergies at the Global Green Growth Forum (3GF) on the 22nd October and just a couple of weeks later the launch of the European Industrial Symbiosis Association (EUR-ISA) on the 6th November by European Environment Minister **Janez Potocnik** in Brussels. In addition industrial symbiosis will make its first appearance at Globe 2014 in March 2014 and also be the subject of a session at Eurocities Environment Forum later in the year.

The 3GF industrial symbiosis track included a presentation from Jenny Cargill special advisor to the premier of the Western Cape Government in South Africa. The first at scale industrial symbiosis programme was launched there earlier this year and there are excellent grounds to

believe it will develop into a full national programme. Also speaking was Dr Wilfried Haensel, Executive Director, PlasticsEurope who announced the creation of the World Plastic Council and how they believe that industrial symbiosis can play a significant part in achieving their goals such as zero plastic waste to landfill by 2020.

The EUR-ISA launch saw 10 facilitated industrial symbiosis networks across Europe coming together for the first time and EUR-ISA has the ambition to cover all EU member states by 2020. Just today (November 8th) industrial symbiosis was presented at Ecomundo in Italy by Dr Rachel Lombardi from International Synergies.

GREET.net 2013, a fresh design for GREET life cycle analysis tool

Amgad Elgowainy and David Dieffenthaler

With support from the U.S. Department of Energy, Argonne National Laboratory released the first full version of the Greenhouse gases Regulated Emissions and Energy in Transportation (GREET) model in the .net platform.

GREET.net offers more flexibility over its sister version, GREET1 2013, which has been developed in the Microsoft Excel platform since 1995. GREET.net 2013 provides the user with an easy-to-use and fully graphical toolbox to perform life cycle analysis simulations of alternative transportation fuels and vehicle technologies in a matter of a few clicks.



This new tool includes the data of the GREET model, a fast algorithm for processing it and an interactive user interface. The interface allows faster development using graphical representation of each element in the model, and a drag & drop editing approach to add and modify data. The recent GREET.net release includes features and capabilities such as stochastic simulations, merging of data between users, and GREET Application Program Interface (API) for developers. GREET is available free-of-charge for download and use. For more information about this new edition of the GREET model, please visit <http://greet.es.anl.gov/greet>.

Following the first lecture in the Roland Clift lecture series on Industrial Ecology there is now a section for this series on CES' website under Key events where, if you were unable to attend the lecture, you can see more information about the event and watch the video of the lecture in full at:

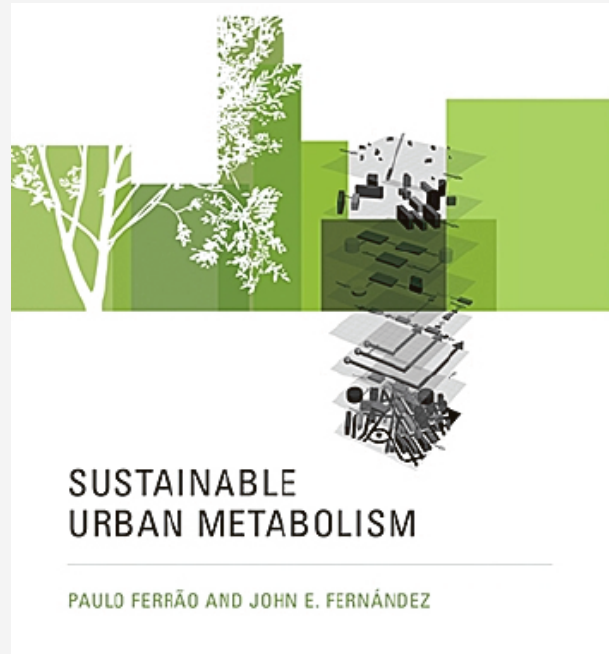
http://www.surrey.ac.uk/ces/news/key_events/roland_clift/

Members' News

New Book - How Green is Your City and How do You Know?

Suppose a real-estate developer in Manhattan is constructing a new office building, and the architect decides to use granite as a primary material. There is a good chance the granite will come from a quarry in Minas Gerais, in southeastern Brazil. From there, it may well be shipped to Carrara, in northern Italy, where much high-grade stone is processed into building-ready form. Then the granite will be shipped to New York, although some of it may be rejected, leading to new rounds of cutting, shipping, and inspections on three continents. In short, a whole lot of carbon emissions have been produced in the service of that impressive new skyscraper in New York.

Such an example is “cautionary,” as Paulo Ferrão and John Fernandez write in their new book about making cities more environmentally sustainable. It suggests, they observe, “the ease with which one individual, a well-educated modern professional, can set forth the movement of massive amounts of materials and the expenditure of enormous amounts of energy globally in the effort to provide a service locally.”



For this reason, in the book, “Sustainable Urban Metabolism,” newly published by MIT Press, the authors set out a new program for doing something that has not yet been achieved: understanding just how many resources cities consume, and establishing, in effect, a holistic framework for producing an environmental balance sheet for every city.

New Positions

Arnold Tukker named Chair of Industrial

Ecology and Director of the Institute of Environmental Sciences, Leiden University. Prof. dr. Arnold Tukker will be appointed on 1 October 2013 as Chair of Industrial Ecology at the Faculty of Science of Leiden University. He will work at the Institute of Environmental Sciences (CML), and also become the new director of this institute.



Tukker will support and expand CML's internationally well-known research and educational programs in Industrial Ecology and Conservation Biology. Furthermore, on behalf of CML, he will have an important role in the development of the Leiden-Delft-Erasmus Centre for Sustainability, that recently has been established by the three universities involved.

Miguel Brandão will take the post of Senior Lecturer in Environmental Life Cycle Approaches at Massey University, New Zealand.



Iddo Wernick began his fourth year teaching "Industrial Ecology and Life Cycle Analysis" in the Masters in Sustainability program at City College of New York. This Spring will mark the third year of another CCNY course, Energy Systems Engineering for Global Sustainability. For copies of the syllabus either course please contact Iddo at iddo99@yahoo.com.

University of Illinois at Chicago Group Awarded New NSF Cyber-Enabled Sustainability Science and Engineering (CyberSEES) Grant

Six researchers from the University of Illinois at Chicago have been awarded a grant from the

National Science Foundation's Cyber-Enabled Sustainability Science and Engineering program entitled "Data Integration for Urban Metabolism". Led by Computer Science Professor Isabel Cruz, with Co-PIs Ning Ai (Urban Planning and Policy/IESP), Sybil Derrible (Civil and Materials Engineering/IESP), Samuel Dorevitch (Occupational and Environmental Health/IESP), Thomas Theis (Director IESP), and senior personnel Dr. Cynthia Klein-Banai (UIC Office of Sustainability).

The grant takes a highly interdisciplinary approach to the study of Urban Metabolism (UM), a concept that attempts to capture the essential functions of cities and their inhabitants through the study and analysis of the flows and transformations of materials and energy, the movement of people, the creation of capital, the establishment of systems of education and of justice, the maintenance and renewal of facilities, and the generation and use of services.

UM has been touted as a promising approach for ascertaining levels of resilience and approaches to sustainability of urban systems, but has been limited by the complex nature of the interactions involved, the wide array of data required for analysis, the need for robust methods for integrating data, and the requirement for integrative metrics and indicators that show the relative directionality of the system over time.

The main hypothesis of the research is that UM, when adequately characterized and tracked over time, is an indicator of the dynamic regime that a city or urban region inhabits and can be used to detect regime shifts over time, regime being a term borrowed from the ecological sciences that refers to the system's stability in the face of perturbations (which can be both natural or human-induced). Detecting such shifts is the first step in assessing the resilience and sustainability of an urban system. Of course regime shifts may result in a more or less resilient system, with overall movement in the direction of greater or lesser sustainability.

In order to study UM, large amounts of heterogeneous data need to be accessed, integrated, and analyzed. This need has been facilitated by the emergence of the concept of digital or smart city, under which large amounts of data and metadata are being published by governments and federal agencies at an increasing rate.

Under this concept, citizens are empowered in their daily lives, for example by having information on public transportation schedules and parking availability displayed on their mobile devices. Other in-time information could help in the management of well-known problems that arise in big cities, such as waste or misuse of resources. The abundance of data in itself is not sufficient to bring the concept of digital city to its full potential because meaningful connections need to be established across datasets.

The classic concept of data integration, which provides a unified virtual view over distributed databases using semantic models, has become a central building block in a digital city. Open data initiatives across the globe translate a variety of data stored in common formats into a semantic language such as RDF (Resource Description Framework). Using a semantic language, domain concepts can be organized as ontologies and correspondences among those concepts can be established using schema or ontology matching. By revealing the connections between physical flows and environmental, social, health, and economic impacts, this research aims to demonstrate the critical need of the systems approach to urban planning, rather than focusing on the end-of-pipe and post-crisis management, as is the case for the current paradigm. In addition, the multi-disciplinary collaboration and knowledge transfer through international collaborators

provide unique opportunities to educate students in the analysis and design of sustainable urban regions in a variety of socio-cultural contexts in the global system.

Dr. Anthony Halog and his wife were blessed with the birth of his son, **Austin Gregory Halog** (born in Brisbane, Australia on August 22, 2013). Anthony has two other lovely daughters, Benz (born in Germany) and Niabelle (born in Canada).



His three undergraduate advisees have been awarded scholarships to conduct the following projects during Australian summer period (November 2013 until February 2014).

- Modelling Urban Metabolism of Cities
- Life Cycle Sustainability Analysis of Deployment of Renewable Technologies
- Consequential Life Cycle Assessment of Liquefied Natural Gas from Coal Seam Gas

In case you have interest on the above projects, feel free to contact Dr. Anthony Halog

Upcoming Conferences

The 7th Annual **International Symposium for Sustainable Systems and Technology** (ISSST) will take place in Oakland, California from May 18th – 24th, 2014 at the Marriott City Central Hotel. The theme for 2014 is *Entrepreneurship* and will feature speakers and panels that explore issues related to intellectual property, clean tech entrepreneurship, social entrepreneurship, University-business relationships and venture capital. Attendees can also attend the Editor's Roundtable, featuring editors of new sustainability-related journals. Building on last year's digital conference proceedings, we'll be doing more with video streaming, online participation, and offering participants the option to record their presentations and produce a YouTube video for the ISSST channel. For more information, visit <http://issst2014.net>.

Efficient Utilization of Renewable Resources

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Contact:

Prof. Dr. Jutta Geldermann

Georg-August-Universität Göttingen

DFG-Research Training Group 1703 „Resource Efficiency in Interorganizational Networks“

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Industrial Ecology in the Asia-Pacific Century: Interdisciplinary science for building sustainable industrial systems and human settlements

We are pleased to announce that the next ISIE Socio-Economic Metabolism section conference will be held from 17 to 19 November 2014 at the Melbourne Convention Centre in Melbourne, Australia. The conference will be organised by the CSIRO and will be hosted jointly with the ISIE Asia-Pacific meeting. The next Industrial Symbiosis Research Symposium is also being planned in Melbourne.

11th SEM Conference and 4th ISIE Asia-Pacific Conference

Conference co-chairs: Heinz Schandl (CSIRO Ecosystem Sciences), Sarah King (CSIRO Materials Science and Engineering), and Tsuyoshi Fujita (NIES).

We will announce a conference website shortly and launch a call for abstracts by 30 November 2013.

Open Positions

Remember to check www.is4ie.org/jobs regularly for job postings. Send your postings to is4ie@yale.edu

Post-Doctoral Fellow: Integrated Urban Energy Systems Analysis and Design

Principal Investigator: Dr. Noel Keough, Faculty of Environmental Design, University of Calgary, Alberta, Canada

There is a global imperative to transition to low-carbon sustainable cities. An emerging research focus for this transition is the opportunity afforded by abandoned or under-utilized inner city industrial sites - brownfield and greyfield.

This two-year post-doc position will work within the Manchester Project Research Team at the University of Calgary, Faculty of Environmental Design and Institute for Sustainable Energy, Environment and Economy. Annual Stipend: \$50,000.00 + \$5000.00 conference travel support.

The Manchester Project envisions that over a 50-year time horizon the 500 hectare Manchester district, Calgary, Alberta, Canada will become a mixed use (residential, commercial/retail, industrial/manufacturing) district with a population of 80-100,000 and 40-50,000 jobs. The district will require an integrated energy system that facilitates the move toward a post-carbon, sustainable, liveable city district.

The energy system for the district will emphasize energy transitions to a low carbon energy powered district including transportation, heat and electrical energy systems.

Key theoretical concepts that drive this Manchester transition are complex systems theory, industrial ecology, sustainable cities, place-making, and sustainability transitions.

Sustainable Urban Energy Systems design and analysis will be the core competency required of this position. The ideal candidate will also have a capacity to work with life cycle analysis, industrial ecology and urban design. The candidate will work with the Research Team to elaborate a 50-year build-out conceptual design for The Manchester District. The core task for the position is to investigate energy system alternatives to achieve a Net-Zero Carbon energy system for the district.

The candidate will be expected to:

1. identify and evaluate alternative technologies for energy capture and delivery
2. investigate scalar issues - i.e. delivery and capture options from the building scale, district scale and through to regional scale and national network scale.

The key parameters driving the research will be carbon reduction, energy efficiency and livable/sustainable cities.

The candidate will also work in collaboration with a larger group of energy researchers at the Institute for Sustainable Energy, Environment and Economy working in fields as diverse as energy modeling, technology development, lifecycle analysis and building science.

Inquiries can be directed to:

Dr. Noel Keough, Assistant Professor of Sustainable Design
Faculty of Environmental Design
University of Calgary
e-mail: nkeough@ucalgary.ca; Phone: 403-220-8588

Applications are being accepted immediately. The position will remain open until a suitable candidate is found. The position will be begin January 1, 2014

Candidates should first of all contact Dr. Keough and expect to follow-up with a statement of interest, resume and three references.

members informed about the latest and greatest ISIE news from around the globe. We can only do it with your help! Please send us any information you think is worth including in the newsletter (conference summary, important publications, job posting, new appointments, etc.) to Vered Blass, isienewsletter@gmail.com

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