

Conference Schedule

27/09/2016	28/09/2016	29/09/2016	30/09/2016	01/10/2016
Tuesday	Wednesday	Thursday	Friday	Saturday
09:00 - 09:20	Registration desk opens at 8:00		Keynote 7 Hisato Okamoto, Frontier of Socio-Science studies	
09:20 - 09:40			Keynote 8 Clemens Deilmann, Leibniz-Institute of Ecological and Regional Development	
09:40 - 10:00	Opening session: Addresses by the Conference Chair, Nagoya University's president, Representative of the Ministry of the Environment		Keynote 9 Yuichi Moriguchi, University of Tokyo	
10:00 - 10:20	Keynote 1 Chris Kennedy, University of Victoria		Coffee	
10:20 - 10:40	Keynote 2 Masako Yamato, Toyota Motor Corporation		5A The environmental impacts of material stock accumulation Room ES021	
10:40 - 11:00			5B Special session: Next-generation Material Stocks that Realize the Full Potential of Resources Room ES022	
11:00 - 11:20	Lunch		5C Industrial symbiosis, eco-industry, and production 3 Room ES024	
11:20 - 11:40			5D Supply chains and global networks 2 Room ES025	
11:40 - 12:00			Lunch	
12:00 - 12:20	Lunch		6A Sustainable transportation systems Room ES021	
12:20 - 12:40	1A Indicators of resource consumption Room ES021		6B Material stocks of the built environment Room ES022	
12:40 - 13:00	1B Material stock-flow dynamics on the national and global scales Room ES022		6C The Industrial Ecology of consumer products Room ES024	
13:00 - 13:20	1C Water as a nexus of IE research Room ES024		6D An Industrial Ecology approach to energy and electricity Room ES025	
13:20 - 13:40	1D Supply chains and global networks 1 Room ES025		Closing session	
13:40 - 14:00	Coffee			
14:00 - 14:20	Poster session S1 (coffee will continue being served)			
14:20 - 14:40				
14:40 - 15:00	2A Cities: focal points of sustainable planning Room ES021			
15:00 - 15:20	2B Innovations in formulation of policy-relevant data Room ES022			
15:20 - 15:40	2C Sustainable management of primary & secondary Room ES024			
15:40 - 16:00	2D Mitigating emissions in industry Room ES025			
16:00 - 16:20	Poster session S2 (coffee will continue being served)			
16:20 - 16:40				
16:40 - 17:00	4A Drivers of resource use and consumption Room ES021			
17:00 - 17:20	4B Multi-scale Metabolism Studies Room ES022			
17:20 - 17:40	4C Industrial symbiosis, eco-industry, and production 2 Room ES024			
17:40 - 18:00	4D The Industrial Ecology of municipal & household solid Room ES025			
18:00 - 18:20	ISIE Socio-economic metabolism (SEM) section meeting Room ES022			
18:20 - 18:40				
18:40 - 19:00				
19:00 - 19:20				
19:20 - 19:40				
19:40 - 20:00				
20:00 - 20:20				
20:20 - 20:40				
20:40 - 21:00				

Student day (separate registration required)

Travel to the Toyota headquarters (chartered bus)

Toyota global headquarters & factory tour (separate registration required)

Return to Nagoya (chartered bus)

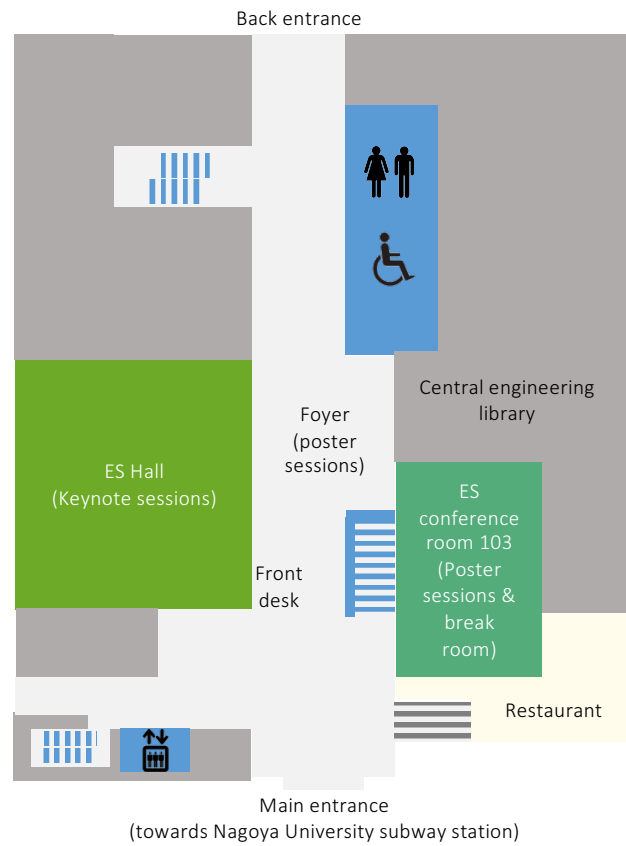
Casual dinner

Nagoya history & culture tours (separate registration required)

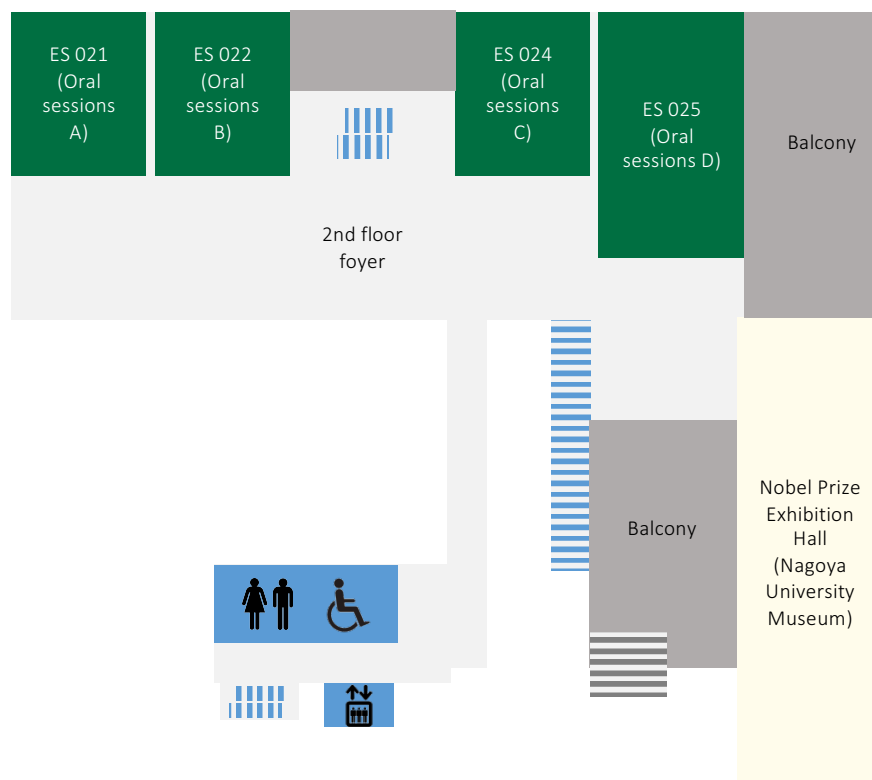
Conference dinner: Koshoji temple, Yagoto subway station (separate registration required)

ES Building floor plan

1st floor (ground level)



2nd floor



1A Indicators of resource consumption

Wednesday 28 Sept. 2016

Chair: Anthony Chiu

Time	Title	Presenter	Authors
13:00 - 13:20	What are Key Factors of Nickel and Ni-based Stainless Steel Productions	Eiji Yamasue (Ritsumeikan University)	Eiji Yamasue, Jordi C. Cravioto, Benjamin C. McLellan, Kenichi Nakajima, Kazuyo Matsubae And Ichiro Daigo
13:20 - 13:40	Material Flow and Stock Accounts in the Philippines: Drivers and Impacts to the Environment	Marianne Faith G. Martinico-Perez (Nagoya University)	Marianne Faith G. Martinico-Perez, Tomer Fishman, Eme Tan, Keijiro Okuoka, Hiroki Tanikawa, Anthony Sf Chiu
13:40 - 14:00	Material flow analysis for sustainable resource use in Lao PDR: potentials and challenges	Xaysackda Vilaysouk (Tokyo University)	Xaysackda Vilaysouk, Shinsuke Murakami
14:00 - 14:20	Automatic spatial detection and estimation of domestic extraction and hidden material flows	Keisuke Yoshida (Nagoya University)	Keisuke Yoshida, Tomer Fishman, Okuoka Keijiro, Hiroki Tanikawa
14:20 - 14:40	Trends in Austrian resource efficiency. Material use, energy and exergy use, CO2 emissions and land use from 1960 to 2013.	Nina Eisenmenger (Alpen Adria University)	Nina Eisenmenger, Anke Schaffartzik, Dominik Wiedenhofer

1B Material stock-flow dynamics on the national and global scales

Wednesday 28 Sept. 2016

Chair: Christopher Kennedy

Time	Title	Presenter	Authors
13:00 - 13:20	Dwelling stock dynamics in countries with housing deficit: the case of Colombia	Luis Felipe Vasquez (Norwegian University of Science and Technology)	Luis Felipe Vasquez, Yris Olaya Morales, Daniel B. Mueller
13:20 - 13:40	Lifespan modelling uncovers urban stock and flow behaviour	Alessio Miatto (Nagoya University)	Alessio Miatto, Heinz Schandl, Tomer Fishman, Hiroki Tanikawa
13:40 - 14:00	Material stock and flow analysis of Hungarian households	Mihaly Dombi (University of Debrecen)	Mihaly Dombi, Andrea Karcagi-Kovats, Istvan Kuti
14:00 - 14:20	Towards a Circular Economy? Understanding global dynamics of in-use material stocks and flows in buildings and infrastructure, from 1900 -2010	Dominik Wiedenhofer (Alpen Adria University)	Dominik Wiedenhofer, Lauk, C., Fishman, T., Tanikawa, H., Krausmann, F.
14:20 - 14:40	Classification of Secondary Aluminum Resources of Nations	Kyaw Nyunt Maung (Ritsumeikan University)	Kyaw Nyunt Maung, Cherry Myo Lwin, Gang Liu, Daniel B. Muller, Seiji Hashimoto

1C Water as a nexus of IE research

Wednesday 28 Sept. 2016

Chair: Keijiro Okuoka

Time	Title	Presenter	Authors
13:00 - 13:20	Regional water stress by power generation in Mongolia	Tomohiro Okadera (National Institute for Environmental Studies)	Tomohiro Okadera, Eerdeni, Qinxue Wang, Masataka Watanabe
13:20 - 13:40	Water reclamation to quench the thirst of cities in China:A water-material- energy nexus analysis	Xuepeng Qian (Ritsumeikan Asia Pacific University)	Xuepeng Qian, Tao Wang And Seiji Hashimoto
13:40 - 14:00	Analysis of Provincial Gray Water Footprint in China from 1997 to 2007: Based on Input-Output-Structural Decomposition Method	Hui Li (Beijing Normal University)	Hui Li, Gengyuan Liu, Zhifeng Yang
14:00 - 14:20	Separating waste water at the source: Impacts on energy efficiency in decentralized energy systems	Witold-Roger Pogonietz (Karlsruhe Institute of Technology (KIT))	Witold-Roger Pogonietz, Helmut Lehn, Monica Vergara Araya
14:20 - 14:40	Design and evaluation of a collaborative updating plan for sewage treatment and waste incineration plants: urban typology and collaboration effect analysis	Toyohiko Nakakubo (Ochanomizu University)	Toyohiko Nakakubo, Noboru Yoshida

1D Supply chains and global networks 1

Wednesday 28 Sept. 2016

Chair: Yasushi Kondo

Time	Title	Presenter	Authors
13:00 - 13:20	Visualization of supply chain risks behind phosphorus resource consumption	Kazuyo Matsubae (Tohoku University)	Kazuyo Matsubae, Kenichi Nakajima, Eiji Yamasue, Elizabeth Webeck, Keisuke Nansai, Tetsuya Nagasaka
13:20 - 13:40	Tracing materials through global supply chains	Stefan Pauliuk (Freiburg University)	Stefan Pauliuk, Shinichiro Nakamura, Yasushi Kondo, Richard Wood
13:40 - 14:00	From feedstocks to final products: Mapping the global chemical sector	Peter G. Levi (University of Cambridge)	Peter G. Levi, Jonathan M Cullen

14:00 - 14:20	Value chain and statistical entropy analysis based on the iron flow in China in 1990-2010	Qiang Yue (Northeastern University)	Yue Qiang, Li Xue, Du Tao, Lu Zhongwu
14:20 - 14:40	Does a more integrated steel supply chain lead to greater material efficiency?	Iain Patrick Flint (University of Cambridge)	Iain Patrick Flint, Julian Allwood, Rick Lupton, Andre Cabrera Serrenho

2A Cities: focal points of sustainable planning

Wednesday 28 Sept. 2016

Chair: Tim Baynes

Time	Title	Presenter	Authors
16:20 - 16:40	Assessment of scenarios and options towards low-carbon and resource efficient China in 2050: analysis combining CGE and hybrid LCA model	Hancheng Dai (National Institute for Environmental Studies)	Hancheng Dai, Liang Dong, Toshihiko Masui
16:40 - 17:00	Analysis of Life Cycle Energy and Environmental Impact of the Biogas Utilization for Electricity Generation of Cassava-Based Bio-Refinery in Thailand	Thanapan Tantiwatthanaphanich (Ritsumeikan Asia Pacific University)	Thanapan Tantiwatthanaphanich, Li Yan
17:00 - 17:20	Towards deep Urban Carbon Emissions: A Case of Planning in the Electricity Sector in Philadelphia	Sabrina Spatari (Drexel University)	Sabrina Spatari, Romano Foti, Rob Zolitor, Eliya Hurd, Sean-Erik O'Donnell, Michael Schickling, Patrick L. Gurian
17:20 - 17:40	Environmental Impacts of Changes in Product Lifetime and Energy Efficiency: A Case Study of Life-Cycle of Air Conditioner in Japan	Daisuke Nishijima (Kyushu University)	Daisuke Nishijima, Shigemi Kagawa, Masahiro Oguchi
17:40 - 18:00	Ecological network analysis of nitrogen metabolic processes in Beijing	Hanjing Lu (Beijing Normal University)	Hanjing Lu, Yan Zhang

2B Innovations in formulation of policy-relevant data

Wednesday 28 Sept. 2016

Chair: Gang Liu

Time	Title	Presenter	Authors
16:20 - 16:40	Determining Product, Age, and Spatial Distributions of In-Use Material Stocks	Weiqliang Chen (Chinese Academy of Sciences)	Weiqliang Chen, Ji Han
16:40 - 17:00	Mapping the material stock of City of Melbourne's buildings using a bottom-up approach and open data	André Stephan (The University of Melbourne / Université Libre de Bruxelles)	André Stephan, Aristide Athanassiadis
17:00 - 17:20	Shedding light on material stocks: towards a global database of the built environment using satellite imagery	Tomer Fishman (Nagoya University)	Tomer Fishman, Shohei Kuroda, Keiji Ookuoka, Kenji Sugimoto, Hiroki Tanikawa
17:20 - 17:40	Chinese Environmentally Extended Input-Output (CEEIO) Database	Ming Xu (University of Michigan)	Sai Liang, Tiantian Feng, Shen Qu, Anthony S.F. Chiu, Xiaoping Jia, Ming Xu
17:40 - 18:00	Ecological relationship analysis of global trade carbon transfer network and its dynamic variation	Qiong Wu (Beijing Normal University)	Qiong Wu, Yan Zhang

2C Sustainable management of primary & secondary resources

Wednesday 28 Sept. 2016

Chair: Peter-Paul Pichler

Time	Title	Presenter	Authors
16:20 - 16:40	Material Flow Analysis for Better Recovery of Construction and Demolition Waste in Europe	Mingming Hu (Leiden University)	Mingming Hu
16:40 - 17:00	Impurities in EAF steel bars contaminated by non-functional recycling	Leo Fujimura (Tokyo University)	Leo Fujimura, Ichiro Daigo, Hideo Hayashi, Eiji Yamasue, Tran Duc Huy, Benjamin Sprecher, Yoshikazu Goto
17:00 - 17:20	A Circular Economy Index to promote Innovation in Recycling	Francesco Di Maio (Delft University of Technology)	Francesco Di Maio, Peter Carlo Rem
17:20 - 17:40	Dynamic Waste IO and the Mechanics of Material Flow	Shinichiro Nakamura (Waseda University)	Shinichiro Nakamura, Yasushi Kondo, Kazuyo Matsubae, Kenichi Nakajima
17:40 - 18:00	The role of the mining industry in a circular economy: a framework for resource management at the mine site level	Artem Golev (University of Queensland)	Eleonore Lebre, Glen Corder, Artem Golev

2D Mitigating emissions in industry

Wednesday 28 Sept. 2016

Chair: Jonathan Cullen

Time	Title	Presenter	Authors
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16:20 - 16:40	The macro-control on CO2 emissions of China's cement industry	Jian Wang (Northeastern University)	Heming Wang, Jian Wang, Tao Du, Fengmei Ma, Zhongwu Lu
16:40 - 17:00	The Effects of Optimal Production Resource Reallocation on Carbon Footprint of Nations	Hiroataka Takayabu (Kyushu University)	Hiroataka Takayabu, Shigemi Kagawa, Hidemichi Fujii And Shunsuke Managi
17:00 - 17:20	Changes in air pollutant emissions in China's industrial sectors: based on environmental input-output analysis	Xiaofei Han (Hefei University of Technology)	Xiaofei Han, Jiaoling Jiao, Fangyi Li
17:20 - 17:40	Exploring Greenhouse Gas Mitigation Strategies in Chinese Industrial Parks from the Perspective of Energy Infrastructure	Jinping Tian (Tsinghua University)	Jinping Tian, Yang Guo, Lujun Chen
17:40 - 18:00	Calculating and analyzing energy carbon footprint of China's steel industry	Cheng Kang Gao (Northeastern University)	Cheng Kang Gao, Du Tao

3A IE-informed Policy and education

Thursday 29 Sept. 2016

Chair: Marina Fischer-Kowalski

Time	Title	Presenter	Authors
13:00 - 13:20	When motivation isn't enough: household perceptions and consumption of energy and water	Walter Reinhardt (Australian National University)	Walter Reinhardt
13:20 - 13:40	Management of Chinese Waste Electrical and Electronic Equipment Industrial Fund: to Set a Dynamic Adjustment Mode	Jinghan Di (Tsinghua University)	Jinghan Di
13:40 - 14:00	Application of a Multifaceted MRV System for Supporting the Development of a Low Carbon Society	Remi Chandran (National Institute for Environmental Studies)	Remi Chandran, Minoru Fujii, Tsuyoshi Fujita, Shuichi Ashina, Kei Gomi, Kengo Aizawa, Kenji Uchida
14:00 - 14:20	A case study of information flow among government, enterprise and public under the construction of industrial ecosystem	Ling Han (Peking University)	Ling Han, Cong Wei
14:20 - 14:40	To think deeply about Sustainable Society and Environment: Moral Philosophy, Ethics and Education for Realizing SEM and Material Stock Style Society and Sustainable Society	Takahide Matsui (Kyushu International University)	Takahide Matsui

3B Drivers & footprints of carbon and other emissions

Thursday 29 Sept. 2016

Chair: Kazuyo Matsubae

Time	Title	Presenter	Authors
13:00 - 13:20	Analyzing Material and Energy Implications of Structural Changes	Kayoko Shironitta (Kyushu University)	Kayoko Shironitta, Shigemi Kagawa, Keisuke Nansai, Sangwon Suh
13:20 - 13:40	Carbon Footprints of Global Cities	Helga Weisz (Potsdam Institute for Climate Impact Research)	Helga Weisz, Timm Zwickel, Peter-Paul Pichler, Abel Chavez, Tino Kretschmer
13:40 - 14:00	Carbon Dioxide Emissions with Economic Growth in China: Patterns, Trends, and Drivers with Regional Perspective	Xin Tian (Beijing Normal University)	Xin Tian, Yan Zhang
14:00 - 14:20	Spatial pattern and factor analysis of Nitrogen emissions from rural and urban food consumption in 31 provinces and cities of China	Yu Zhao (Institute of Urban Environment, Chinese Academy of Sciences)	Yu Zhao, Tao Lin, Xinhui Li, Hong Ye, Guoqin Zhang
14:20 - 14:40	Regional Disparity of Correlations between Need-based Household Carbon Footprint and Household Dilution	Li Zhaoling (National Institute for Environmental Studies)	Yin Long, Ishikawa Masahiro, Li Zhaoling, Zhang Runsen

3C Identifying key material flows and lifecycles

Thursday 29 Sept. 2016

Chair: Tomer Fishman

Time	Title	Presenter	Authors
13:00 - 13:20	Hotspot analysis for global dissipative losses of metals and metalloids	Christoph Helbig (University of Augsburg)	Christoph Helbig, Andrea Thorenz, Axel Tuma
13:20 - 13:40	Wealth from Waste in the circular economy: opportunities for metals	Damien P. Giurco (University of Technology Sydney)	Damien P. Giurco, Scott Kelly, Nick Florin, Jacob Fry
13:40 - 14:00	Managing urban nutrient biogeochemistry for sustainable urbanization	Tao Lin (Institute of Urban Environment, Chinese Academy of Sciences)	Tao Lin, Valerie Gibson, Shenghui Cui, Chang-Ping Yu, Shaohua Chen, Zhilong Ye, Yong-Guan Zhu
14:00 - 14:20	Critical metals in an export-focused economy: The story of indium in Australia	Tim T. Werner (Monash University)	Tim T. Werner, Gavin Mudd, Simon Jowitt, Andrew Hoadley, Luca Ciacci, Barbara Reck, Xuan Zhu

14:20 - 14:40	Tradeoff between material loss and closed-loop recycling in the global steel cycle: An application of MaTrace Global	Yasushi Kondo (Waseda University)	Yasushi Kondo, Stefan Pauliuk, Shinichiro Nakamura, Kenichi Nakajima
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3D Industrial symbiosis, eco-industry, and production 1

Thursday 29 Sept. 2016
Chair: Ichiro Daigo

Time	Title	Presenter	Authors
13:00 - 13:20	Understanding the complexity of industrial metabolism	Lei Shi (Tsinghua University)	Lei Shi, Yang Li, Ye Liu
13:20 - 13:40	Achieving Energy Efficiency through Industrial Symbiosis: A Preliminary Conceptual Framework	Yuanjun Chen (University of Cambridge)	Yuanjun Chen, Yongjiang Shi
13:40 - 14:00	ENSAI Index: A New Methodological Framework For Assessing The Environmental Sustainability Of Industrial Facilities	George Gaidajis (Democritus University of Thrace)	George Gaidajis, Komninos Angelakoglou, Georgios Gaidajis
14:00 - 14:20	Regional Planning and Assessment System for Heat Exchange Network between Incineration Facilities and Industries: Case of Tokyo Metropolis	Yi Dou (Nagoya University)	Yi Dou, Satoshi Ohnishi, Minoru Fujii, Liang Dong, Takuya Togawa, Hiroki Tanikawa, Tsuyoshi Fujita
14:20 - 14:40	Revealing the evolution characteristics and driving forces of China's industrial parks: a case of Shenyang	Lu Sun (National Institute for Environmental Studies)	Huijuan Dong, Zuoxi Liu, Yong Geng, Tsuyoshi Fujita, Fujii Minoru, Lu Sun

4A Drivers of resource use and consumption

Thursday 29 Sept. 2016
Chair: Heinz Schandl

Time	Title	Presenter	Authors
16:20 - 16:40	Exploring China's materialization process with economic transition on regional level - A structural decomposition analysis of resource use in Liaoning Province	Heming Wang (Northeastern University)	Heming Wang, Fengmei Ma, Tao Du, Zhongwu Lu
16:40 - 17:00	Environmental Productivity Growth of Resource Accumulation in the cities of Japan	Shogo Eguchi (Kyushu University)	Shogo Eguchi
17:00 - 17:20	Long-term sociometabolic transition trajectories of China and India compared	Marina Fischer-Kowalski (Alpen Adria University)	Marina Fischer-Kowalski, Anke Schaffartzik
17:20 - 17:40	Measuring Resource Efficiency	Jonathan Cullen (University of Cambridge)	Jonathan Cullen
17:40 - 18:00	Estimation of Future Global Urban Metabolism	Timothy M. Baynes (CSIRO)	Timothy M. Baynes, Josephine K. Musango

4B Multi-scale Metabolism Studies

Thursday 29 Sept. 2016
Chair: TBD

Time	Title	Presenter	Authors
16:20 - 16:40	Closed Loop MFA – An Approach to Quantify Material Loops	Regine Ortlepp (Leibniz Institute of Ecological and Regional Development (IOER))	Karin Gruhler, Clemens Deilmann, Regine Ortlepp
16:40 - 17:00	Decreasing the Materials Footprint of a University Campus: Case Study of MIT	Rachel Perlman (Massachusetts Institute of Technology)	Rachel Perlman, John Fernandez
17:00 - 17:20	Urban material flow analysis: New results from multiscale analyses, Rennes and Le Mans (France)	Jean-Baptiste Bahers (Ecole des Metiers de l'Environnement de Rennes (EME))	Jean-Baptiste Bahers, Sabine Barles, Mathieu Durand
17:20 - 17:40	Resource consumption and waste management in the process of urban development: a comparison between Beijing and other large cities	Qiang Li (Institute of Process Engineering, Chinese Academy of Sciences)	Qiang Li, Huiquan Li, Wenjuan Zhang, Xue Guan, Chenye Wang
17:40 - 18:00	Empirical Research Methods for Urban Metabolism in a Teaching Context	Lynnette Widder (Columbia University)	Lynnette Widder

4C Industrial symbiosis, eco-industry, and production 2

Thursday 29 Sept. 2016
Chair: Shinsuke Murakami

Time	Title	Presenter	Authors
16:20 - 16:40	Smart urban industrial symbiosis: framework, design approach and implications in China	Liang Dong (Leiden University)	Liang Dong, Mingming Hu, Arnold Tukker
16:40 - 17:00	Key Technology Developments of New Ecological Phosphate Industry Parks	Daijun Liu (Sichuan University)	Daijun Liu, Jiajun Chen, Chengfa Jang, Tao Yang
17:00 - 17:20	Insects as Symbiotic Connectors in the Bioeconomy	Maria Real Perdomo (Heilbronn University)	Maria Real Perdomo, Klaus Fichter

17:20 - 17:40	A comprehensive study in sustainable manufacturing of natural rubber: A case study of a Sri Lankan crepe rubber processing mill	Pasan Tharuka Dunuwila (ToyoHashi University of Technology)	Pasan Tharuka Dunuwila, Naohiro Goto, Vhl Rodrigo
17:40 - 18:00	Transforming to Smart and Energy Efficient Industrial Symbiosis— A Case Study on an Aluminium Industrial Park	Mingming Hu (Chongqing University)	Dan Liu, Mingming Hu, Liang Dong

4D The Industrial Ecology of municipal & household solid waste

Thursday 29 Sept. 2016
Chair: Sabrina Spatari

Time	Title	Presenter	Authors
16:20 - 16:40	Amended Life Cycle Assessment on Recycling Organic Wastes for Practice	Yu Qi (Nankai University)	Yu Qi, Xudong Chen, Wen Wang
16:40 - 17:00	Evaluation of cost-benefit and GHG emission reduction potentials of regional municipal solid waste (MSW) management system -- case of Tokyo Metropolis, Japan	Lu Sun (Tokyo University)	Lu Sun, Minoru Fujii, Satoshi Ohnishi, Huijuan Dong, Yi Dou, Zhaoling Li And Tsuyoshi Fujita
17:00 - 17:20	Developing a Multi-Agent HSW recycling and disposal simulation model for Suzhou City in China	Xiaoyan Meng (Tsinghua University)	Xiaoyan Meng, Zongguo Wen, Yi Qian
17:20 - 17:40	Horeca food waste and its ecological footprint in Lhasa, Tibet, China	Gang Liu (University of Southern Denmark)	Gang Liu
17:40 - 18:00	Sophistication of energy recovery system from municipal solid waste	Minoru Fujii (National Institute for Environmental Studies)	Minoru Fujii, Satoshi Ohnishi, Yi Dou, Lu Sun, Rokuta Inaba

5A The environmental impacts of material stock accumulation

Friday 30 Sept. 2016
Chair: Keisuke Nansai

Time	Title	Presenter	Authors
11:20 - 11:40	Evaluation of environmental impact resulting from building materials consumption in Shanghai, China	Beijia Huang (University of Shanghai for Science and Technology)	Beijia Huang
11:40 - 12:00	Taking stock of Germany's anthropogenic resources considering the significance of the built environment	Regine Ortlepp (Leibniz Institute of Ecological and Regional Development (IOER))	Regine Ortlepp, Clemens Deilmann, Karin Gruhler, Georg Schiller
12:00 - 12:20	Assessment of demolition activity in the city of Vienna using aerial images	Fritz Kleemann (Technische Universität Wien)	Fritz Kleemann, Jakob Lederer, Johann Fellner
12:20 - 12:40	Estimating a City's Greenhouse Gas Inventory: Discrepancies between Top-down Method and Bottom-up Method	Yan Li (Ritsumeikan Asia Pacific University)	Yan Li

5B Special session: Next-generation Material Stocks that Realize the Full Potential of Resources

Friday 30 Sept. 2016
Chair: Hiroki Tanikawa

Time	Title	Presenter	Authors
11:20 - 11:40	Introduction to the special session	Hiroki Tanikawa (Nagoya University)	
11:40 - 12:00	Material stock accounting based on material functionality	Ichiro Daigo (The University of Tokyo)	Ichiro Daigo, Daisuke Matsui, Yoshikazu Goto
12:00 - 12:20	Stocked material use efficiency of housing: Comparison of Japan and Norway	Arisa Yatsuyanagi (Ritsumeikan University)	Arisa Yatsuyanagi, Havard Bergsdal, Daniel B. Muller, Hiroki Tanikawa, Seiji Hashimoto
12:20 - 12:40	Recent global trends in flows and apparent consumptions of nickel copper and iron	Kenichi Nakajima (National Institute for Environmental Studies)	Kenichi Nakajima, Ichiro Daigo, Keisuke Nansai, Kazuyo Matsubae, Wataru Takayanagi, Makoto Tomita, Yasunari Matsuno

5C Industrial symbiosis, eco-industry, and production 3

Friday 30 Sept. 2016
Chair: Tsuyoshi Fujita

Time	Title	Presenter	Authors
11:20 - 11:40	Reduction of GHG Emission with Sewage Sludge Fuels Utilization by Nation-Wide Collaboration of Industrial and Environmental Infrastructures	Noboru Yoshida (Wakayama University)	Noboru Yoshida, Takuya Okuda, Akifumi Nakao, Yugo Yamamoto, TohoHiko Nakakubo

11:40 - 12:00	Role of Public-Private-Partnerships in Circular Economy ~ Experience from IPLA ~A Rio+20 Partnership	Anupam Khajuria (United Nations Centre for Regional Development)	Anupam Khajuria, Choudhury Rudra Charan Mohanty
12:00 - 12:20	The application of substance flow analysis as a management tool into a production process: a case study of lead smelting	Lu Bai (Chinese Research Academy of Environmental Sciences)	Lu Bai, Qi Qiao, Minghui Xie
12:20 - 12:40	Study on factors influencing price of industrial waste treatment and disposal in Japan	Hirofumi Nakayama (Kyushu University)	Hirofumi Nakayama, Takayuki Shimaoka

5D Supply chains and global networks 2

Friday 30 Sept. 2016
Chair: TBD

Time	Title	Presenter	Authors
11:20 - 11:40	Resilience in Material Supply Chains, With a Case Study from the 2010 Rare Earth Crisis	Benjamin Sprecher (Leiden University)	Benjamin Sprecher, Ichiro Daigo, Shinsuke Murakami, Rene Kleijn, Matthijs Vos, Gert Jan Kramer
11:40 - 12:00	Intermediaries in the emergence of eco-industrial networks	Santiago Mejia-Dugand (Universidad de los Andes)	Santiago Mejia-Dugand, Jooyoung Park, Bart Van Hoof
12:00 - 12:20	A multi-regional input-out analysis of domestic ferrous metal trade and provincial ferrous metal footprint in China	Tao Wang (Tsinghua University)	Tao Wang, Xiaoyang Zhang, Dingjiang Chen, Bing Zhu
12:20 - 12:40	The Changing Role of the Global South in Global Trade Between 1995 and 2014	Peter Paul Pichler (Potsdam Institute for Climate Impact Research)	Peter Paul Pichler, Helga Weisz

6A Sustainable transportation systems

Friday 30 Sept. 2016
Chair: Minoru Fujii

Time	Title	Presenter	Authors
13:40 - 14:00	Are the numbers of vehicles in Asian countries overestimated?	Takuya Hara (Toyota Central R&D Labs., Inc)	Takuya Hara
14:00 - 14:20	Prioritization of Climate Change Mitigation Measures from Urban Transport Sector: The Dynamic Perspective of Engineers	Xiao Luo (Shanghai Tongji Urban Planning & Design Institute)	Xiao Luo, Jingzheng Ren, Yi Dou
14:20 - 14:40	Spatial distribution and correlation of traffic-related carbon emissions and land use: a case study for Changzhou City	Runsen Zhang (National Institute for Environmental Studies)	Runsen Zhang, Yin Long
14:40 - 15:00	Impact of the mobile sources on air pollution in Ulaanbaatar city	Bayasgalan Batjargal (Kitakyushu University)	Bayasgalan Batjargal, Toru Matsumoto

6B Material stocks of the built environment

Friday 30 Sept. 2016
Chair: Helga Weisz

Time	Title	Presenter	Authors
13:40 - 14:00	Evaluation Material Stock of Roadways: The Case Study of Vietnam	Cuc Thi Nguyen (Nagoya University)	Cuc Thi Nguyen, Hiroki Tanikawa, Keijiro Okuoka, Tomer Fishman
14:00 - 14:20	Investigation of Material Stocks of Non-residential Buildings	Liselotte Schebek (Technische Universitat Darmstadt)	Liselotte Schebek, Benjamin Schnitzer, Daniel Blesinger, Antonia Kohn, Britta Miekley, Hans Joachim Linke, Andreas Lohmann, Christoph Motzko, Axel Seemann
14:20 - 14:40	Padua through the centuries: urban metabolism and lifespan analysis through 4D-GIS	Luigi Forlin (Padua University)	Luigi Forlin, Alessio Miatto, Paolo Borin, Andrea Giordano, Hiroki Tanikawa
14:40 - 15:00	A Study on Metabolism of Urban Buildings by Using 4D-GIS in Hubei Province, China	Dong Yang (Nagoya university)	Dong Yang, Chang Chen, Feng Shi, Keijiro Okuoka, Hiroki Tanikawa, Yiling Guo

6C The Industrial Ecology of consumer products

Friday 30 Sept. 2016
Chair: Eiji Yamasue

Time	Title	Presenter	Authors
13:40 - 14:00	The application of Consequential LCA in waste mobile phone management	Bin Lu (Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences)	Bin Lu, Wenyan Zhao, Jianxin Yang

14:00 - 14:20	Examining threats and opportunities for e-waste in Australia	Artem Golev (University of Queensland)	Artem Golev, Glen Corder
14:20 - 14:40	Varieties of Business Model for Recycling in China	Xin Tong (Peking University)	Xin Tong, Tao Wang, Dongyan Tao
14:40 - 15:00	Expected product lifetimes of consumer durables — Do product lifetimes meet consumers' expectations?	Masahiro Oguchi (National Institute for Environmental Studies)	Masahiro Oguchi, Tomohiro Tasaki, Ichiro Daigo, Tim Cooper, Christine Cole, Alex Gnanapragasam

6D An Industrial Ecology approach to energy and electricity

Friday 30 Sept. 2016

Chair: Noboru Yoshida

Time	Title	Presenter	Authors
13:40 - 14:00	Variations from the use of economic, subjective and objective well-being indices in a holistic assessment of the energy-well-being link.	Jordi Cravioto (Kyoto University)	Jordi Cravioto, Eiji Yamasue
14:00 - 14:20	Evaluation of carbon and cost tradeoffs for district heating in the Northeastern US	Sabrina Spatari (Drexel University)	Sabrina Spatari
14:20 - 14:40	Evaluating the flow of renewable natural resource with an GIS-Energy approach: a case study of Hokkaido, Japan	Chengdong Wang (Shandong University)	Chengdong Wang, Shenyang Zhang, Wanglin Yan, Renqing Wang, Junying Zhang, Yutao Wang
14:40 - 15:00	Estimation of cost reduction by the lifetime extension of waste incineration facilities	Rokuta Inaba (National Institute for Environmental Studies)	Rokuta Inaba, Tomohiro Tasaki

No.	Title	Presenter	Authors
1	Life cycle assessment of Chinese radial passenger vehicle tyre	Xin Sun (China Automotive Technology & Research Center)	Xin Sun, Jingru Liu
2	Global steel production towards 2050	Reina Kawase (Lake Biwa Environmental Research Institute)	Reina Kawase
3	Cost combined life cycle assessment of common portland cement manufacture-a case study in China	Feng Shi (Shandong Academy of Sciences)	Dong Yang, Feng Shi, Qian Liu, Hiroki Tanikawa
4	Material stock and flow analysis of transportation systems in Debrecen, Hungary	Mihaly Dombi (University of Debrecen)	Mihaly Dombi, Andrea Karcagi-Kovats, Istvan Kuti
5	The Political Suggestion: Necessity of Change from 'Flow-Type Society' to 'Stock-Type Society' in Japan for Sustainable life of Next Generation	Takahide Matsui (Kyushu International University)	Takahide Matsui, Keiji Utsunomiya, Sola, Takehiko Fukuyama, Tomoki Saito, Jouji Akimoto, Yusuke Yamaji
6	Modelling and Analysis of In-use Stock of Products and Substitutional and Complementary Goods and Resulting Increased Energy Consumption: Case of Air conditioners, Fans and Houses in Asia	Tomohiro Tasaki (National Institute for Environmental Studies)	Tomohiro Tasaki, Masahiro Oguchi, Aya Yoshida, Panate Manomaiwibool, Pattayaporn Unroj
7	Estimating environmental impacts of resources and materials use in Japan: a case of fossil resources	Chika Aoki-Suzuki (Ritsumeikan University)	Chika Aoki-Suzuki, Daisuke Tanaka, Sebastien M.R. Dente, Seiji Hashimoto
8	Converting weight of resources into environmental impact: A case study of biomass	Sebastien M.R. Dente (Ritsumeikan University)	Sebastien M.R. Dente, Chihiro Kayo, Chika Aoki-Suzuki, Seiji Hashimoto
9	Global Dynamics of In-Use Stocks for Products:Evidence from Automobiles	Hiroshi Akamatsu (Hiroshima University)	Hiroshi Akamatsu, Masaaki Fuse
10	Advance Method to Estimate International Trade Flows of Used Products	Kohei Endo (Hiroshima University)	Kohei Endo, Masaaki Fuse
11	Advanced Risk Identification for New Energy Carrier: A case of hydrogen transport system	Tatsuro Omachi (Hiroshima University)	Tatsuro Omachi, Masaaki Fuse
12	Analysis of Developing Driving Force Based on Coal and Coal Chemical Industry	Jin Li (Tsinghua University)	Jin Li, Shanying Hu
13	Flexible Additional Modules To Counteract The Environmental Burdens Of Increasing Urban Population	Luigi Forlin (Padua University)	Luigi Forlin, Marco Campagnola, Marco Cecchetto
14	Estimating Carbon Emissions from the Pulp and Paper Industry: A Case Study	Xuechun Yang (Shandong University)	Xuechun Yang, Yutao Wang, Mingxing Sun, Lei Ma, Xiao Li, Lei Shi
15	Study of Phosphogypsum Decomposition Reaction in Microwave Field	Tao Yang (Sichuan University)	Tao Yang, Daijun Liu
16	The Influence of Material Flow on Ecological Cost in the Waste Paper Recycling and Manufacturing Process	Xinrui Zhao (Beijing University Of Technology)	Xinrui Zhao
17	Calculation of Mining Anthropogenic Disturbance Using Remote Sensing in Caraga Region, Philippines	Keisuke Yoshida (Nagoya University)	Mitchell Cua Castillon, Tanikawa Hiroki, Okuoka Keijiro, Yoshida Keisuke
18	Material and Energy Flow of Electricity Generation in Cambodia	Suguru Suzugaki (Nagoya University)	Chansophea Cheak, Hiroki Tanikawa, Keijiro Okuoka, Tomer Fishman, Suguru Suzugaki
19	Spatial Analysis of Building Lifespan and Distribution of Building Age in Kitakyushu City with Geo-information	Sato Hiroki (Nagoya University)	Sato Hiroki, Hiroki Tanikawa, Keijiro Okuoka
20	Strategic niche and technological choices in the development of photovoltaic industry in China	Mo Li (Peking University)	Mo Li, Xin Tong
21	Examining the feasibility of applying PV in a community in Northern China	Tao Wang (Peking University)	Tao Wang, Xin Tong, Wei Wang
22	Structural Equation Modeling Of Municipal Solid Waste Management System Condition Related To Society Readiness Toward The System'S Modification Into Separation-Based System (Study Case: Padang City, Indonesia)	Nova Ulhasanah (Tooyohashi University of Technology)	Nova Ulhasanah, Naohiro Goto
23	Hybrid Material Stock Analysis for Urban Mine Assessment: A Case Study of Construction Material Stock of Taiwan	Kuang-Ly Cheng (National Taiwan University)	Kuang-Ly Cheng, Hwong-Wen Ma, Pi-Cheng Chen, Yi-Shin Wang
24	Dynamic material flow analysis of Cr and Ni in steel alloys by using MaTrace	Kentaro Takeyama (Tohoku University)	Kentaro Takeyama, Hajime Ohno, Kazuyo Matsubae, Kenichi Nakajima, Yasushi Kondo, Shinichiro Nakamura, Tetsuya Nagasaka
25	Identification of Factors Influencing the Acceptance of Waste Bank Project : The Case Study of Tangerang City, Indonesia	Naoki Yoshikawa (Ritsumeikan University)	Sri Elda Mariani, Koji Amano, Naoki Yoshikawa , Teti Armiami Argo
26	Analysis of Energy-Water-Carbon Nexus in Jing-Jin-Ji Metropolitan Area Based on Multi-Regional Input-Output Framework	Gengyuan Liu (Beijing Normal University)	Fanxin Meng, Gengyuan Liu, Zhifeng Yang
27	Assessment of S-NPP VIIRS nighttime lights for modeling in-use steel stock of buildings and civil engineering infrastructure	Liang Dong (Nanjing University of Information Science & Technology)	Hanwei Liang, Hiroki Tanikawa, Liang Dong
28	Industrial ecology in the Asia-Pacific region: diverse, collaborative and multicultural	Tomer Fishman (Nagoya University)	Karin Hosking, Tomer Fishman
29	Revealing In-use Carbon Retention in Our Society	Hajime Ohno (Tohoku University)	Hajime Ohno, Yasunori Kikuchi, Yasuhiro Fukushima

No.	Title	Presenter	Authors
30	Study for the sustainable stock type society formation in the population onus society	Iwashita Youichi (Polytechnic University)	Iwashita Youichi
31	Carbon emission reduction potential assessment of China's Iron and Steel industry by simulation analysis	Zhaoling Li (University of Tsukuba)	Zhaoling Li, Lu Sun, Helmut Yabar, Yoshiro Higano
32	Rural's energy metabolism: a multi-scale integrated analysis across different households	Lishan Xiao (Institute of Urban Environment, Chinese Academy of Sciences)	Xiao Lishan, Guo Qinghai
33	How does low-carbon economy affect China's exports activities?	Xueliu Xu (Dalian University of Technology)	Xueliu Xu, Didaer, Wenqiang Ma.
34	The Eco-industrial Park Construction of Chengdu Economic and Technological Development Zone: A Case of EIPs Development in the West of China	Haiyan Song (Tsinghua University)	Haiyan Song, Lei Shi
35	Examining the Urbanization's Driving Forces to Food Consumption and the Effects of Carbon, Nitrogen and Phosphorus Discharges	Shenghui Cui (Institute of Urban Environment, Chinese Academy of Sciences)	Shenghui Cui
36	Analising the influence of zoning on urban metabolism, using 4d-GIS	Ikko Nonaka (Nagoya University)	Ikko Nonaka
37	Feasibility study for the economic improvement of small E-wastes recycling	Yoichi Korea (National Institute of Advanced Industrial Science & Technology (AIST))	Yoichi Kodera
38	Material stock estimation using nighttime lights data	Kenji Sugimoto (Nagoya University)	Kenji Sugimoto, Shohei Kuroda, Keijiro Okuoka And Hiroki Tanikawa
39	Driving factors of industrial land use intensity in China: based on micro-data of industrial enterprises in developed areas	Lin Zhang (Dalian University of Technology)	Lin Zhang, Yahui Wang, Yuna Guo
40	Optimal Solution on the Vehicle Routing Problems for establishing the Plastic Waste Recycling System in Tianjin	Richao Cong (Kitakyushu University)	Richao Cong, Toru Matsumoto, He Xu, Wenchao Li
41	Consumer behaviors of small-size WEEE use and disposal	Haruhisa Yamamoto (Tokyo University)	Haruhisa Yamamoto
42	The characteristics and trends of the socio-metabolism in China	Wanjun Wang (The Institute of Recycling Economy)	Tiejun Dai, Wanjun Wang
43	Analysis on Risk Factors behind the International Supply Chain of Nickel	Sho Sasaki (Tohoku University)	Sho Sasaki, Kazuyo Matsubae, Kenichi Nakajima, Tetsuya Nagasaka
44	Environmental impact of resources and materials use: a case study of non-metallic minerals	Daisuke Tanaka (Ritsumeikan University)	Daisuke Tanaka, Chika Aoki, Sebastien Dente, Seiji Hashimoto
45	Multi-criteria Analysis for Determination of River Restoration Priority A case Study Sugutamu River, Indonesia	Imas Komariah (Kitakyushu University)	Imas Komariah, Toru Matsumoto
46	Analysis of amount and age of material stock in buildings in Nagoya	Serika Akiyama (Nagoya University)	Serika Akiyama, Hiroki Tanikawa, Keijiro Okuoka
47	From feedstocks to final products: Mapping the global chemical sector	Peter G. Levi (University of Cambridge)	Peter G. Levi, Jonathan M Cullen
48	Substitution of photovoltaic materials and their environmental impact	Steffi Weyand (Technische Universitat Darmstadt)	Steffi Weyand, Liselotte Schebek
49	An evaluation of efficient usage of herbaceous biomass using the road network	Satoshi Ono (Nagoya University)	Satoshi Ono
50	The research of eco-efficiency in the view of coupling the monetary flow and the material flow in the case of aluminum industry in Guiyang, China	Xin Xu (Peking University)	Xin Xu, Ling Han
51	Construction minerals for a low-carbon society: stocks and flows analysis	Kengo Matsui (Nagoya University)	Kengo Matsui, Keijiro Okuoka, Hiroki Tanikawa
52	Material stock and flow in the "Greater Tokyo"	Takaya Yamashita (Nagoya University)	Takaya Yamashita, Keijiro Okuoka, Hiroki Tanikawa
53	Evaluation on benefit of industrial links made in chemical and metallurgical industrial parks	Peng He (Institute of Process Engineering, Chinese Academy of Sciences)	Huiquan Li, Peng He, Qiang Li, Wenjuan Zhang, Xue Guan, Chenye Wang
54	Urban Energy Transition in China: the De-coal Process and Driving Forces Analysis	Pengpeng Zhang (Beijing Normal University)	Pengpeng Zhang, Lixiao Zhang, Xin Tian
55	Identifying unintentionally mixed impurities in EAF steel using WIO-MFA	Satoshi Ohta (Tokyo University)	Satoshi Ohta, Ichiro Daigo, Yuichiro Sato, Kenichi Nakajima, Yoshikazu Goto
56	Does the turning point of carbon dioxide emissions in Beijing really arrive? New evidence and implications from analysis on the impacts of socioeconomic transition	Xin Tian (Beijing Normal University)	Xin Tian