

# Profiles of speakers



Keynote session:  
on Nov. 19

Prof. Eriko Kawai

Prof. Shuichi Kawai

Dr. Felix Matthes

Session 1:  
on Nov. 20

Prof. Yuichi Ikeda

Prof. Kengo Akimoto

Dr. John Constable

Session 2:  
on Nov. 20

Prof. Yosuke Yamashiki

Prof. Brian Mathiesen

Mr. Yutaka Kamioka

Session 3:  
on Nov. 20

Prof. Eiichi Yamaguchi

Dr. Lerwen Liu

Dr. Ryo Tamaki

Poster session:  
on Nov. 20

Dr. Marc-Henri Deroche

Panel discussion:  
on Nov. 20

Prof. Dimiter Ialnazov



**Eriko Ishida Kawai**

Professor, Graduate School of Advanced Integrated Studies for Human Survivability (GSAIS), Kyoto University

Prof. Eriko Ishida Kawai has been teaching global communication at Kyoto University since April 2012. She has had a diverse career, working for international organizations and private sector firms in Europe and Japan. From 2008 to 2012, she ran her own financial research institute in Basel, Switzerland. From 2004 to 2007, she worked at the OECD (Organization for Economic Cooperation and Development) in Paris and from 1998 to 2004 for the BIS (Bank for International Settlements) in Basel as a pension fund manager. Prior to that Prof. Kawai was Chief Investment Officer at Yamaichi Regent ABC Polska in Warsaw (involved in the Polish privatization program), a fund manager at Mercury Asset Management, S.G.Warburg in London, a management consultant

with McKinsey & Company in Paris and a researcher with the Nomura Research Institute in Tokyo. Prof. Kawai has a B.A from Harvard University and an M.B.A. from INSEAD.



**Shuichi KAWAI**

Dean, Professor

Graduate School of Advanced Integrated Studies in Human Survivability (GSAIS),  
Kyoto University

Over his 30-year career at Kyoto University, Prof. Dr. Shuichi Kawai has developed a strong research program in wood science and an outstanding international reputation for promoting wood as a sustainable structural material. His research focuses on wood composites and plant fiber composites, timber engineering, mass flow analysis, preservation of wooden cultural properties, and humanosphere science. He was the Director of the Research Institute for Sustainable Humanosphere, Kyoto University (2005-2010) and Vice President of Kyoto University (2009-2012). Since 2013, he has been the Dean of the Graduate School of Advanced Integrated Studies in Human Survivability (GSAIS or Shishukan), Kyoto University.



Some of his other noteworthy accomplishments include President of The Japan Wood Research Society (2003-05), Vice President of the Society of Material Science, Japan (2005-07), Fellow of the International Academy of Wood Science, Guest Professor of Nanjing Forestry University, China, and External Assessor of University Putra Malaysia, Malaysia. He received the Award of Japan Wood Research Society (1989), Japan Prize of Agricultural Science (2012), and 49<sup>th</sup> Yomiuri Prize of Agricultural Science (2012).

Prof. Dr. Kawai has over 200 refereed publications. He has also published 152 international conference proceeding articles, 21 reviews in books, and 12 patents.

## Curriculum Vitae

### Dr. Felix Christian Matthes

Diplom-Ingenieur, Dr. rer. pol.

born	13 May 1962 in Berlin
1981-1985	Studies in electrical engineering at the Leipzig University of Technology (Technische Hochschule Leipzig)
1985	Graduation as Diplom-Ingenieur
1986-1989	Employment at the industry
1990-1997	Senior scientist at Öko-Institut (Institute for Applied Ecology), responsible also for the set up of the Berlin branch of Öko-Institut
1993	Study visit to the USA as fellow of the German Marshall Fund of the United States
1997-2008	Coordinator of the Energy & Climate Division at Öko-Institut
1996-1997	Auditor at the Otto-Suhr-Institute for Political Science at the Free University of Berlin
1999	Doctorate ("summa cum laude", political science) at the Free University Berlin
2000-2002	Scientific Member of the Study Commission (Enquete Commission) „Sustainable Energy in the Framework of Globalization and Liberalization“ of the 14th German Bundestag (German Federal Parliament)
2002-2004	Deputy Director of Öko-Institut
2007 & 2008	Visiting scientist at the Massachusetts Institute of Technology (Joint Program on the Science and Policy of Global Change), Cambridge, MA (USA)
since 2009	Research Coordinator for Energy and Climate Policy at Öko-Institut
2011	Member of the European Commission Directorate General for Energy Advisory Group on the Energy Roadmap 2050



Numerous studies and publications on German and international energy, environmental and climate policy.  
Key research topics during the last years

- Decarbonisation strategies for Germany and the European Union (2020/2030/2050)
- Energy and emissions projections (e.g. contributions to the German and EU GHG Emission Projection Reports)
- EU energy market development and market liberalization
- Design, assessment and evaluation of policies and measures in energy and environmental policies and analysis of policy interactions
- Greenhouse gas emissions trading (numerous contributions to the National Allocation Plan (NAP), comparison of NAPs, benchmarking, auctioning, ex-post evaluation and revision of the EU ETS, competitiveness and leakage, linking of ETS, ETS in USA, Japan, China etc.)
- Technology-specific issues of the power system, e.g. with regard to Combined Heat and Power (policy advice for preparation and monitoring of the German CHP Act), infrastructure and regulation of carbon dioxide capture and storage (CCS), and nuclear power
- Regulation and market design of power markets
- International climate policy (e.g. national expert for in-depth review missions on national communications under the UNFCCC on behalf of the UNFCCC secretariat)

Member of Gesellschaft für Energiewissenschaft und Energiepolitik (German branch of the International Association for Energy Economics), of Deutsche Vereinigung für Politische Wissenschaft (DVPW – German Association of Policy Science) and of European Association of Environmental and Resource Economists (EAERE)

Member of the Advisory Council to the State Government of Baden-Württemberg on Sustainable Development, of the Steering Group of the Transdisciplinary Panel on Energy Change (TPEC) am Institute for Advanced Sustainability Studies (IASS)



**Yuichi Ikeda, Ph. D**

Professor of Physics

Graduate School of Advanced Integrated Studies in Human Survivability, Kyoto University

Biography

Prof. Yuichi Ikeda received his Ph. D from Kyushu University in 1989 for his study in nuclear physics at Brookhaven National Laboratory as a collaborator on the project on quark-hadron phase transition experiment. He studied high energy physics at Institute of Nuclear Science, the University of Tokyo as a postdoctoral fellow in 1989. He worked as a research engineer and a senior research engineer at Hitachi Research Laboratory, Hitachi Ltd from 1990 to 2010. During this period, he also studied computational plasma physics at the University of California, Berkeley as a visiting industrial fellow in 1997 and studied the global energy issues including smart grid technology as a consultant at the International Energy Agency in 2010. He was an associate professor at Institute of Industrial Science, the University of Tokyo in 2011. His current research interest includes econophysics, complex system, data science, and global energy security.

Publication

He has published 67 peer-reviewed journal papers, 39 filed patent applications, and 4 publications in a professional magazine. In addition to these papers, he has published 7 books: “Pareto Firms—Kigyo-No-Kobo-To-Tsunagari-No-Kagaku— (Pareto Firms – Rise and Fall of Firms and Science of Connectedness–)” (coauthor, in Japanese) Nihon-Keizai-Hyoron-Shya (2007), “Keizai-Butsurigaku (Econophysics)” (coauthor, in Japanese) Kyoritsu (2008), “The 7th Applications of Physics in Financial Analysis”,

Journal of Economic Interaction and Coordination, Volume 5, 2010 (joint editor, 2010), “The 7th Applications of Physics in Financial Analysis”, Journal of Physics: Conference Series, Volume 221, 2010 (joint editor, 2010), “Econophysics and companies -Statistical Life and Death in Complex Business Networks-” (Cambridge University Press, coauthor, 2010), “50-No-Kiwado-De-Yomitoku-Keizaigaku-Kyoshitsu (Economics Lectures explained with 50 keywords)” (coauthor, in Japanese) Tokyo-Shoseki (2011), and “Sougou-Seizongaku-Gairon (Introduction to Human Survivability Studies)” (joint editor, in Japanese) Kyodai-Gakujyutsu-Syupankai (2015).

Dr. Keigo Akimoto

Senior Researcher

Research Institute of Innovative Technology  
for the Earth (RITE)

Japan



Keigo Akimoto was born in Toyama, Japan, on June 16, 1970. He received Ph.D. degree from Yokohama National University in 1999. He joined Research Institute of Innovative Technology for the Earth (RITE) to work with the Systems Analysis Group in April 1999. Currently he is a senior researcher at RITE. His scientific interests are in modeling and analysis of energy and environment systems including the costs, risks and public perceptions. He received the Peccei Award from International Institute for Applied Systems Analysis (IIASA), Austria, in 1997.

Selected recent papers:

K. Akimoto et al., Costs and Technology Role for Different Levels of CO<sub>2</sub> Concentration Stabilization. In: Avoiding Dangerous Climate Change, Cambridge University Press, 2006.

K. Akimoto et al., Role of CO<sub>2</sub> sequestration by country for global warming mitigation after 2013. In: Proceeding of the 7th International Conference on Greenhouse Gas Control Technologies. Vol.1: Peer-reviewed Papers and Plenary Presentations, 2005.

K. Akimoto et al., Development of a Mixed Integer Programming Model for Technology Development Strategy and its Application to IGCC Technologies, Energy, Vol.30-7, 1176-1191, 2005.

K. Akimoto et al., A High Productivity and Flexibility Modeling Methodology for Energy and Environment Systems, Journal of the Operations Research Society of Japan, Vol.48-1, 9-23, 2005.

K. Akimoto et al., Assessment of Global Warming Mitigation Options with Integrated Assessment Model DNE21. Energy Economics, Vol.26, 635-653, 2004.





## **John Constable**

### **Document date:**

11 September 2015

### **Full name:**

CONSTABLE, John Bowden

### **Date of birth & marital status**

20 October 1963

Married, three children

### **Home address and contact information:**

Address: The White House, 46 St John's Road, Saxmundham, Suffolk, IP17 1BD

Telephone: 01728 604 216

Mobile: 07867 592 085

Email: [john.constable@ref.org.uk](mailto:john.constable@ref.org.uk)

### **Current position**

Director, The Renewable Energy Foundation (REF), De Morgan House, 58 Russell Square, London, WC1B 4HS.

### **Experience**

#### *Renewable Energy Foundation*

Since leaving university teaching and research, latterly Cambridge University where I was a senior research fellow, I have been directing policy, and for the last three of which running the UK charity, Renewable Energy Foundation ([www.ref.org.uk](http://www.ref.org.uk)), an organization which has been a very prominent and ultimately successful critic of counterproductive subsidies to renewable energy investors.

I placed a heavy emphasis on mastering and becoming a trusted source of the data underlying the sector, with key energy data being easily accessible on-line with the result that we quickly became the first point of call for journalists, politicians, and many others seeking information on the performance and consumer cost of renewables policies.

I have appeared before several parliamentary select committees, including the House Commons Environmental Audit Committee and the House of Lords Committee on Economic Affairs (twice), to give oral evidence in addition to written submissions.

In 2012, I decided that as Director of REF, I should take responsibility for dealing with the media to ensure that the REF message was efficiently disseminated. As a consequence of this personal approach, REF's media coverage in newspapers not only increased in quantity, but our views shaped the stories and set the agenda rather than merely providing contrasting views included for the sake of balance.

REF's work has not only been widely covered in the UK press, informing and transforming public and political opinion, but has also gained an international reputation, and for three years now the Japanese government's

Research Institute for Innovative Technologies for the Earth (RITE) has commissioned REF to produce a large study and dataset reporting site-by-site renewable technology performance in the United Kingdom. We have also conducted consultancy for major energy sector players, such as Drax Power Station, Calor Gas, and Barclays bank.

#### *International Climate Policy*

REF's work also brought me to the attention of the Hartwell Group of international climate policy experts, and I became one of the lead authors in the third Hartwell paper, *The Vital Spark*, and represented the group in presentations in Tokyo to the Japan Business Federation (Keidanren) and the Institute of Energy Economics of Japan (IEEJ).

#### *Environmental Law and Planning:*

I have advised lawyers and barristers working on planning public inquiries and environmental judicial reviews on energy policy, and have appeared as an expert witness in numerous Public Inquiries to defend my analyses under cross-examination.

#### *Broadcast Media*

I have made many appearances on radio and television, including from Channel 4 News and Country File, and am a confident performer under fire.

#### *Lectures*

I am also an accomplished lecturer and public speaker, and in addition to my university experience, I have given numerous talks on energy and climate policy to mixed and specialist audiences, including the 2009 Alworth International Lectures at the University of Minnesota in Duluth. In November this year I will be an invited plenary speaker at Kyoto University's 'Global Energy Problems: The Quest for Solutions from the Perspective of Human Survivability'. In February 2016 I have been invited to deliver a lecture in Newcastle University's public lecture series, under the title: "Energy, Entropy, and the Theory of Wealth".

### **Education**

PhD (Cantab) 1993. English literature.

BA Hons (Cantab) 1986. English literature.

### **Positions held**

2011– : Director, The Renewable Energy Foundation.

2004–2011: Director of Policy and Research, The Renewable Energy Foundation.

2003–2005: Senior Research Fellow, Magdalene College, Cambridge (A two-year Fellowship).

2003–2005: Leverhulme Trust Research Fellow (A two-year Fellowship).

2000–2003: College Lecturer in English, Magdalene College, Cambridge.

1992–1999: Associate Professor (tenured), Department of International Culture, Faculty of Integrated Human Studies, Kyoto University.

1989–1990: Visiting Research Fellow, Kyoto University, funded by the Kyoto University 70th Anniversary Foundation.

## **Selected Publications in the Energy Sector**

The following is a selection only; for further “Information Notes” and articles written for Renewable Energy Foundation, see [www.ref.org.uk](http://www.ref.org.uk)

### **Books**

Co-author, *The Vital Spark* (London School of Economics: London, 2013).

*Shortfall, Rebound, Backfire: Can we rely on energy efficiency to offset climate policy costs* (Renewable Energy Forum: London, 2012).

*Energy Policy and Consumer Hardship* (Renewable Energy Foundation: London).

*The Green Mirage: Why a low carbon economy may be further off than we think.* (Civitas: London, July 2011).

## **Selected Publications in English literature and linguistics**

### **Books**

*The Lymiad: a Poem in the Form of Letters from Lyme to A friend in Bath written during the autumn of 1818.* Edited by John Fowles and John Constable. (Philpot Museum: Lyme Regis, 2011).

*Selected Works of I. A. Richards 1919–1938* (Routledge: London, 2001). 10 volumes (400 pages of introductions, 3, 000 pages of text):

*Critical Essays on William Empson*, Critical Thought Series: 3 (Scolar Press: Aldershot and Brookfield, Vermont, 1993), xii + 555pp. Edited, with an introductory essay (pp. 1-14).

*Selected Letters of I. A. Richards* (Oxford University Press: Oxford, 1990), xlvi + 226pp. Introduction by Richard Luckett.



**Yosuke Yamashiki, Dr. Eng. (48)**

Professor at the Graduate School of Advanced Integrated Studies in Human Survivability (GSAIS), Kyoto University

Born in Otsu, Yosuke Alexandre Yamashiki, attended the Kyoto University where he earned his B. Eng. in Civil Engineering in 1990. From Kyoto he went to the University of São Paulo, Brazil, earning his Master of Engineering. in 1994, and then studying Global Environment Engineering in Kyoto in Graduate School of Engineering where he earned Doctor of Engineering in 1999. During his doctoral course, he worked in international NGO (ILEC) as researcher. Then he worked at UNEP-DTIE-IETC as Associate Programme Officer for two years, contributing establishment of La Plata River Basin Environmental Management Network (RIGA) and 3<sup>rd</sup> La Plata River Basin Workshop held in the City of Posadas, Argentina in 2001.

Yosuke then joined the Department of Urban Environmental Engineering at the Kyoto University as Assistant Professor in 2001 and then, in 2004 moved to Nihon University where he has been Lecturer in Civil Engineering. He also worked at Faculty of Science, the University of Tokyo as visiting lecturer. After his promotion to Associate Professor at Nihon University, he joined again to Kyoto University, Disaster Prevention Research Institute. During the period of research, he worked on disaster mitigation for flood and



sediment disaster, environmental monitoring focusing on radioactive contaminants, and water resource management. Yosuke then joined Graduate School of Advanced Integrated Studies in Human Survivability, Kyoto University since 2013, where he got current position. Yosuke has received Best Paper Award in 2014 for his research in monitoring of environmental radioactivity through Japan Society of Hydrology and Water Resources. In Jul 2015, he was nominated as Chairperson of the UNESCO-IHP International Initiative of Water Quality (IIWQ) Experts Advisory Group for the next two years.



**Name:** Brian Vad Mathiesen

**Date of birth & location:** 10 October 1978, Denmark

**Work address:** Aalborg University, A.C. Meyers Vænge 15, DK-2450 Copenhagen SV

**Work phone, email:** +45 9940 7218, bvm@plan.aau.dk

**URL for web site:** <http://people.plan.aau.dk/~bvm/>

#### • EDUCATION

PhD, 2008 (December), “Fuel cells and electrolyzers in future energy systems” Department of Development and Planning, Aalborg University, Denmark

MSc. Eng. in Environmental Management, 2003, Aalborg University, Denmark

ECIU Leadership Development Programme – International personal leadership and strategic management development programme of the European Consortium of Innovative Universities, 2011

#### • EMPLOYMENTS

Professor with Specific Responsibilities in Energy Planning in the design of 100% Renewable Energy Systems, Department of Development and Planning, Aalborg University, Denmark, 2014 – today

Associate Professor in energy planning, Aalborg University, 2010 – 2013, Assistant Professor in energy planning, Aalborg University, 2008 – 2010, PhD Fellow, Aalborg University, Denmark, 2005 – 2008

Energy and environmental planner, Public Utility Company, Aalborg, 2004 – 2005

#### • GUEST PROFESSORSHIP

Visiting researcher at the Department of Energy, Power Engineering and Environment at the University of Zagreb, 2009 - 2010

Visiting researcher at DTU Riso, part of the research programme: Efficient conversion of renewable energy with solid oxide cells, 2006

#### • EDITORIAL POSITIONS

Editorial board member, Journal of Energy Storage, 2014 – today

Editor, International Journal of Sustainable Energy Planning and Management, 2013 - today

Guest editor for five Special Issues for Elsevier international journal *Energy* and one special issue for *Applied Energy*

#### • PUBLICATIONS & CITATIONS

42 papers in refereed international journals, 42 papers and presentations in international proceedings,

33 reports, books, book chapters etc., 12 popular articles and essays

54 documents registered in SCOPUS

1897 total citations (excluding self-citations) (h-index 23) (SCOPUS)

Thomson Reuters Highly Cited Researcher 2015

#### • MANAGEMENT

Program Director of the MSc in Sustainable Cities program, Aalborg University, Denmark, 2012 – today

Deputy head of the 4DH Centre, Aalborg University, Denmark, 2012 - today

Research coordinator of The Sustainable Energy Planning Research Group, 2012 - today

PhD co-organiser and lecturer, advanced energy system analysis, Aalborg University, Department of Development and Planning, Denmark, 2009 - 2013

#### • SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

4 PhDs, 3 at the Department of Development and Planning, Aalborg University, 2009 - today; 1 at the Department of Physics and Energy, University of Limerick, Ireland, 2008 – 2011

Master thesis (approximately 25), Aalborg University, Denmark

- **INTERNATIONAL SCIENTIFIC ACTIVITIES**

Special session organiser, 10th Conference on Sustainable Development of Energy, Water and Environment Systems, Smart Energy Europe - Challenges and opportunities for a fossil and nuclear free European continent, Dubrovnik, 2015

Member of Management Board, International Centre for Sustainable Development of Energy, Water and Environment (SDEWES centre) organisers of annual conferences, 2012 – today

Scientific Steering Committee, International Renewable Energy Storage Conference and Exhibition (IRES), 2014 – today

Member of Review Committee, 8<sup>th</sup> International Renewable Energy Storage Conference and Exhibition in Berlin (EUROSOLAR – IRES), 2013

Special session organiser, 8<sup>th</sup> Conference on Sustainable Development of Energy, Water and environmental systems, 2013

- **SCIENTIFIC ADVISORY**

Member of Advisory Board, Analyses of the Future Heating System in Copenhagen conducted by HOFOR, CTR and VEKS, 2013 – today

Scientific Advisor at the Danish Board of Technology on sustainable transport scenarios, technical advisory board for Danish parliament, 2010 – 2012

Scientific Advisor on renewable energy scenarios, Danish Society of Engineers (IDA), 2006 – 2009

Professional representative in the partnership network Gate 21 for companies and public authorities in the greater Copenhagen region, 2010 - today

Member of Scientific Advisory Board, SDEWES, 2010 - today

Member of Scientific Advisory Board, Denmark 2050 Project (DK2050), Danish Architecture Centre (DAC), 2014

Reviewer in the Italian National Agency for the Evaluation of Universities and Research Institutes (ANVUR), eValuation of Quality of Research, 2012 –2013

- **MAJOR COLLABORATIONS AND PROJECTS**

Deputy head of the Strategic Research Centre for 4<sup>th</sup> Generation District Heating Technologies and Systems, collaboration with eight other universities, and 19 private partners, 2012 - today

Work package leader in the Coherent Environmental System Analysis project (CEESA), collaboration with five other universities, 2007 – 2011

Energy system analyser, Heat Roadmap Europe 2050: 1st & 2nd pre-study for EU27 – Shows how district heating and individual heat pumps can serve as an energy efficiency measure that can be combined with heat savings in buildings. Financed partly by the Danish Council for Strategic Research (4DH) and partly by Euroheat and power, 2011 – 2013

Energy system analyser, IEA Annex 28 – Integration of Renewable Energies by distributed Energy Storage Systems in all sectors of the energy system. Financed by EUDP., 2014 – today

Principal Investigator, IEA Task 52 – Solar Energy and Energy Economics in Urban Environments – Future role of solar thermal energy in energy supply systems in urban environments in future sustainable energy systems in four European country contexts. Financed by EUDP, 2014 - today

Work package leader, CITIES – Centre for IT-Intelligent Energy System in Cities - Make decision support and pathways for cities to transform to 100% renewable energy. Centre involves five universities and 35 private partners and is financed by The Danish Council for Strategic Research, 2014 - today

Principal Investigator, 100% renewable energy vision: Copenhagen 2050 – Research collaboration financed by the Danish Council for Strategic Research (4DH) and by Copenhagen Municipality, 2013 – today

PhD dissertation, part of the research programme: Efficient conversion of renewable energy with solid oxide cells. Collaboration between six Danish universities and contained a total of eight sub-projects, 2005 – 2008.

Involved in > 20 other projects from 2006 - today





## **Yutaka Kamioka**

1331-6 Uekami Sano Tochigi, 327-0832 /+81-283-23-9758

/yutaka@social-ecology.jp

---

### **QUALIFICATIONS**

- ♦ 8 years' experience in marketing in music industry.
- ♦ Worked for a major publisher as a writer for 10 years.
- ♦ Founded several NPOs in Japan.
- ♦ Have a deep connection with the Ministry on the Environment and the Forestry Agency in Japan.

### **EXPERIENCE**

***Satoyama Energy, Inc, Sano Tochigi*** **2013-present**

*Providing greener energy solutions for local companies and communities.*

#### **Job title**

- ♦ CEO

***Social Ecology Institute, Inc , Sano Tochigi*** **2001-present**

*Providing social and ecological marketing solutions for companies and communities.*

#### **Job title**

- ♦ CEO

***Ecology Online, Sano Tochigi*** **2000-present**

*Providing environmental information via internet.*

#### **Job title (肩書き・特別な功績など)**

- ♦ Administrative director

***Sony Music Entertainment*** **1983-1991**

*Japanese major record company*

#### **Job title (肩書き・特別な功績など)**

- ♦ Marketing director

### **EDUCATION (学歴)**

Bachelor degree

International Christian University

Mitaka Tokyo

1983

**Eiichi YAMAGUCHI, D.Sc.**

**Professor, Graduate School of Advanced Integrated Studies for Human Survivability (GSAIS), Kyoto University**



He was born in Fukuoka in 1955. He graduated the Department of Physics, The University of Tokyo in 1977, and received a Master of Science (M.Sc.) degree and a Doctor of Science (D.Sc.) degree, respectively in 1977 and 1984 both from The University of Tokyo.

He has been a physicist, since he joined NTT Basic Research Laboratory in 1979. He also served as a visiting scholar of University of Notre Dame, U.S.A., from 1984 to 1985, and as a guest scientist of IMRA Europe, France, from 1993 to 1998. Since he joined The 21st Century Public Policy Institute of Keidanren as an executive senior fellow in 1999, he has been investigating science of science, technology and innovation policy as well as innovation and technology management. In 2003, he was appointed as a professor of Doshisha University and also as a deputy director of ITEC (Institute for Technology, Enterprise and Competitiveness), Doshisha University. He served as a visiting fellow of Clare Hall, University of Cambridge from 2008 to 2009. In 2014, he became a professor of Kyoto University. He has serially founded four venture companies since 1998.

He published “Innovation: Paradigm Disruption and Fields of Resonance” (NTT Publishing) in 2006, "Recovering from Success: Innovation and Technology Management in Japan" (Oxford University Press) in 2006, “JR Fukuchiyama Train Incident: Rethinking Corporate Social Responsibility from Science” (NTT Publishing) in 2007, “Fukushima Report” (Nikkei BP Consulting) in 2012, “Five Physics Theories to Learn before You Die” (Chikuma Publishing) in 2014, and “Science of Science, Technology and Innovation Policy: Assessing the SBIR Program and Creating Future Industries” (Tokyo University Press) in 2015, etc.

*Lerwen LIU, PhD (lerwen@nano-globe.biz)  
Managing Director of NanoGlobe Pte Ltd  
Senior Lecture (Part-time) of Faculty of Science, Yale-NUS College  
Founding Secretary of Asia Nano Forum*



**Lerwen LIU** is one of the most connected persons in the field of nanotechnology specializing in nanotechnology business development and education. Since 1999 she has been actively building nanotechnology networks with government agencies, R & D institutions and industries around the world, promoting nanotechnology policy, innovation, commercialization and international collaboration, especially in the Asia Pacific region. Together with a number of nanotechnology leaders in Asia, she co-founded Asia Nano Forum ([www.asia-anf.org](http://www.asia-anf.org), a nanotechnology society linking 15 Asia Pacific economies) and has been serving as its Secretary since 2004 fostering collaborations among ANF members in nanotech policy, R&D and education.

Dr Liu is passionately promoting sustainability. She created in 2014 an innovative interdisciplinary module at National University of Singapore titled “Nanotechnology for Everyone –From Smartphone, Innovation, to Entrepreneurship” with a unique focus on developing transversal skills for undergraduate students including innovation, entrepreneurship, communication, and leadership towards sustainability.

Dr Liu has been an invited speaker and organizer in numerous international conferences, workshops and roundtables focusing on nanotechnology commercialization. Together with her team, she educates EMBA participants on nanotechnology innovation and its impact on industry competitiveness and economic transformation.

She is an evaluation panel member for the Proof-of Concept (POC) grant scheme of the National Research Foundation (NRF) and the Technology Innovation Fund of Ministry of Education of Singapore. She has been recognized by the World Islamic Forum and Islamic Development Bank as well as United Nation organizations as a key expert in nanotechnology and to whom they seek advice for strategic development in future innovation policy and sustainable development.

Dr Liu has a PhD in physics specializing in many-body effects and transports in semiconductor nanostructures, and has conducted research work in Australia, Italy, Japan, Singapore and USA. Dr Liu is an Australian citizen and currently based in Singapore.



# RYO TAMAKI, Ph.D.

CONNEXX SYSTEMS

E-mail: [ryo.tamaki@gmail.com](mailto:ryo.tamaki@gmail.com), [ryo@connexsys.com](mailto:ryo@connexsys.com)

## EDUCATION

- **Ph.D.**, Polymer Chemistry, Kyoto University, Kyoto, Japan 1999  
Thesis title: “**New Preparative Methods for Organic-Inorganic Polymer Hybrids**”  
Advisor: Professor Yoshiki Chujo
- **M.S.**, Polymer Chemistry, Kyoto University, Kyoto, Japan, 1996
- **B.S.**, Synthetic Chemistry, Kyoto University, Kyoto, Japan, 1994

## RESEARCH/WORK EXPERIENCES

- 2013- **CTO, CONNEXX SYSTEMS**, 1W Mountain St. Pasadena, CA 91103 USA, 448-5 Kajicho, Kamigyo, Kyoto 6020841 Japan ([www.connexsys.com](http://www.connexsys.com))
- Current
- Developed rechargeable novel stand alone high energy storage device, iron-air battery (Shutte-battery™)
  - Led R&D and commercialization efforts of high energy silicon carbon composite (SCC)
  - Managed development and commercialization of lithium ion battery – lead acid battery hybrid system (bindbattery™)
  - Managed development and commercialization of a novel high power lithium ion battery (hyper-battery™)
- 2007- **R&D manager, Quallion LLC**, 12744 San Fernando Rd. Sylmar, CA, 91342 ([www.quallion.com](http://www.quallion.com))
- 2013
- Developed lithium ion battery anode active materials
  - Conducted extensive research on lithium ion battery cathode active materials
  - Developed lithium ion batteries using solid electrolyte
  - Developed lithium-air batteries
  - Developed lithium ion batteries for extremely high temperature environment
  - Managed multiple projects including above topics and moved from Phase 1 to Phase 3.
  - Managed commercial scale plant construction for the high capacity negative materials
- 2003- **Lead Professional, General Electric Global Research Center**, Niskayuna, NY, USA
- 2007
- Developed proton exchange membranes for fuel cell applications and accomplished high proton conductivity
  - Developed ionic sensors using polymeric films and alkoxysilanes
  - Developed scratch resistant polymer films from polyarylate-polycarbonate copolymers
  - Developed low CTE & high heat polymers from polyimides
  - Led team and developed organic / inorganic nanocomposites
  - Filed 8 US patent applications
- 2001- **Staff Scientist, Technology Division (R&D), Tyco Electronics (Supplier of electronic/electric components)**, Menlo Park, CA USA
- 2003
- Developed thermal interface materials
  - Developed conductive polymer diodes for touch screen application
  - Developed nano-composite materials and xerogels / aerogels
- 1999- **Postdoctoral Research Associate, University of Michigan**, Ann Arbor, MI USA;
- 2001
- Mentor: Professor Richard M. Laine
- Developed new materials for **organic light emitting diodes** (e.g., electron/hole transport materials, conjugated organic polymers) based on cubic silsesquioxanes
  - Developed new **nano-composites** with excellent thermal and mechanical properties





Dr. Marc-Henri Deroche is Associate Professor at Kyoto University's Graduate School of Advanced Integrated Studies in Human Survivability (GSAIS, Shishu-Kan) where he teaches cross-cultural philosophy, comparative religion and intangible cultural heritage.

Born in Poitiers, France, he has studied philosophy, sociology and ethnology in Bordeaux University (Bachelor of ethnology, 2000; Master I of ethnology, 2002) with a focus on Asian ethno-sciences, philosophies and religions, particularly Buddhism. Then he deepened a specialization on the Himalayas and Tibet at the École Pratique des Hautes Études, Paris (Master II, 2005; PhD *summa cum laude* in Asian studies, 2011). He has travelled extensively in Asia and since 2008 until 2013, he has also studied Buddhist studies at Kyoto University, thanks to a scholarship of the Japanese Ministry of Education. During his studies, he has worked for a variety of cultural preservation projects of Tibetan and Himalayan culture, as well for interreligious dialogues at the UNESCO, the Asia-Europe Foundation, etc.

In 2013, he was selected as Hakubi Assistant Professor of Kyoto University and appointed to the Graduate School of Letters. During this time, he has organized major interdisciplinary conferences bridging Buddhist philosophy and contemporary cognitive sciences (featuring notably H.H. the Dalai Lama Tenzin Gyatso), or studying the diffusion of Buddhism as an Asian transcultural phenomenon or proto-globalization.

In 2015, he was appointed at this current position in GSAIS. His research interests focus on the role of the traditional knowledge heritage of Asia for sustainable development, or survivability studies, with an emphasis on the cultural heritage of Buddhism, and its dialogue with contemporary science, philosophy and ethics. Thus he is also engaged in various reflections on knowledge management, knowledge transmission, digital

humanities, preservation and innovation, as well as on models of interdisciplinary science.



Professor Dimiter IALNAZOV (GSAIS, Kyoto University, Japan)

Obtained his PhD from Kanazawa University (Japan) and his MSc (Econ.) from Moscow State University “M. V. Lomonosov” (Russia). His PhD dissertation was about Japan’s postwar economic development strategy and the possibilities for its application in the former communist countries.

Prof. IALNAZOV started his career as a researcher at Sofia University (Bulgaria) and worked briefly for a UNIDO-sponsored project on green FDI. After obtaining his PhD, he served as Research Associate at the Graduate School of Decision Science and Technology, Tokyo Institute of Technology, and Associate Professor at the Graduate School of Economics, Kyoto University.

Since April 2013, Prof. IALNAZOV has been at the Graduate School of Advanced Integrated Studies in Human Survivability (GSAIS), Kyoto University. His most recent research topics are the transition to a green economy in emerging and developing countries, and the impact of EU membership on South Eastern European economies (in particular, Bulgaria and Romania).