

# Global **X** Network

## ***Global X-Network Annual Conference in Vienna October 26-28, 2019***



## **Theme: Xevents and Urban Futures**

### **SATURDAY OCTOBER 26**

19:30 (7:30 PM)

Informal Dinner

Meeting Moderator: **Brenda J Fox**

### **SUNDAY OCTOBER 27**

8:00 to 9:00

Welcome – Coffee and Networking

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9:00 to 10:00	<b><u>John Casti</u></b> – Keynote – Mapping the Urban Futures Urban developments have a much greater time scale than most other social and economic activities. In order to create attractive, sustainable and resilient cities, city planners and policymakers need to be able to envision what the future will be like. We need a different, scientifically based method for anticipating the future. A feature that distinguishes this from many other studies, is that it is not focused only on technology. Rather, it includes four additional major domains – social, ecological, economic and geopolitical.
10:00	Break
10:30 to 11:00	<b><u>Markku Wilenius and Ana Jones</u></b> – Ramifications of Green Urban Futures
11:00 to 12:00	Panel Discussion on the morning presentations
12:00 to 13:00	Lunch
13:00 to 14:00	<b><u>Yoshiaki Yamagata</u></b> – Global Carbon Project Activities
14:00 to 15:00	<b><u>Thomas Bruderman</u></b> - Present and future energy transitions
15:00	Break
15:30 to 16:00	<b><u>Carey Monbarren</u></b> – Global Manager Workplace Safety & Physical Security – Slack
16:00 to 16:30	<b><u>Holley Hunt</u></b> – Johnson Controls – Applying Global X-Network research in business
16:30 to 17:30	<b><u>Brenda Fox</u></b> – Fast emerging platform ecosystems Open Discussion on the presentations from the afternoon
19:30	<b>GXN Dinner</b>

## MONDAY OCTOBER 28

8:00 to 9:00	Coffee and Networking
9:00 to 10:00	<b><u>Leena Ilmola</u></b> – Platform Value Now Research Presentation Digitalization as an extreme shock to Public Sector
10:00	Break

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10:30 to 11:15	<b><u>Chihiro Watanabe</u></b> – Platform Value Now Paper Presentation - Co-evolutionary Coupling Leads a Way to Space-time Platform
11:15 to 12:00	<b><u>Jose Emmanuel Ramirez Marquez</u></b> - Platform Value Now Paper Presentation - Community Resilience During the last decade, the paradigm of resilience has emerged as an attribute of the utmost importance when considering the development, upkeep, and improvement of systems and infrastructures. Common questions include: How can resilience be designed? Can resilience improve infrastructure performance? While most engineering research has focused on these questions, the role that communities play in the resilience process and the impact has been mostly overlooked from a quantitative perspective. In this, Dr. Jose Emmanuel Ramirez-Marquez will discuss current work done at the Stevens Institute of Technology that begins to address this gap. Concepts of the quality of experience (QoE), social cohesion and community engagement will be discussed and exemplified through different real-world applications.
12:00 to 13:00	Lunch
13:00 to 13:45	<b><u>Sergio Miranda-da-Cruz</u></b> - A review on economic reversal and resilience – a historical perspective
13:45 to 14:30	<b><u>Herbert Saurugg</u></b> - Essential Infrastructure Interdependencies: Would we be prepared for significant Interruptions? Cyber Security and Critical Infrastructure Protection (CIP) are major topics almost everywhere. Priority has also increased during recent years because of rising incidents even if the focus is still on a sectoral approach and on prevention. Detection gets also more and more priority. But how to cope with significant infrastructure interruptions if protection efforts fail and possible cascading effects occur is hardly public knowledge, nor do people have the necessary capabilities to deal with them. Our belief that it won't happen is still overwhelming. But it could be also a Turkey-Illusion. DDoS, IoT-attacks, ransomware, vulnerabilities, unpatchable IT-systems and so one. The list of current IT-problems and challenges is endless. Every security expert is fighting daily an unwinnable battle. But what would it mean to our society, if infrastructure systems fail on a broad scale? How can we reduce these risks? And how make infrastructures more robust and people resilient?
14:30	Break
15:00 to 15:45	<b><u>Roger Jones</u></b> – Simulation technology used to educate on complex models
15:45 to 17:00	<b><u>Adrain Taylor and Martina Kampmann - 4sign</u></b> – “Pulling the strands together: what does it all mean for the future of urban (and consequently rural) areas?”
17:00 to 17:30	Wrap Up

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**Dr. John Casti**  
**Founder X-Center Vienna and X-event Dynamics**

**Professor John L. Casti** received his Ph.D. in mathematics under Richard Bellman at the University of Southern California in 1970. He worked at the RAND Corporation in Santa Monica, CA, and served on the faculties of the University of Arizona, Santa Fe Institute in Santa Fe, New Mexico, NYU and Princeton before becoming one of the first members of the research staff at the

International Institute for Applied Systems Analysis (IIASA) in Vienna, Austria. In 2000 he formed two companies in Santa Fe and London, Qforma, Inc. and SimWorld, Ltd, devoted to the employment of tools and concepts from modern system theory for the solution of problems in business and finance. Casti has published nearly twenty volumes of academic and popular science and received his Ph.D. in mathematics from the University of Southern California. He lives in Vienna, Austria. LinkedIn: [linkedin.com/in/john-casti-9579bb10](https://www.linkedin.com/in/john-casti-9579bb10)

**Dr. Jose Emmanuel Ramirez-Marquez**

School of Systems & Enterprises Stevens Institute of Technology



Dr. Jose Emmanuel Ramirez-Marquez is an Associate Professor of the School of Systems & Enterprises at Stevens Institute of Technology. A former Fulbright Scholar, he holds degrees from Rutgers University in Industrial Engineering (Ph.D. and M.Sc.) and Statistics (M.Sc.) and from Universidad Nacional Autonoma de Mexico in Actuarial Science. His research efforts are currently focused on the reliability analysis and optimization of complex systems, the development of mathematical models for sensor networks operational effectiveness, the computational analysis of resilience and, the development of evolutionary optimization algorithms. In these areas, Dr. Ramirez-Marquez has conducted funded research for both private industry and government. Also, he has published more than 70

refereed manuscripts related to these areas in technical journals, book chapters, conference proceedings and industry reports. Dr. Ramirez-Marquez has presented his research findings both nationally and internationally in conferences such as INFORMS, IERC, ARSym and ESREL. He is an Associate Editor for the International Journal of Performability Engineering. Nationally, he is currently serving a two year term as President Elect of the Quality Control and Reliability division board of the Institute of Industrial Engineers. Internationally, he is a member of the Technical Committee on System Reliability for the European Safety and Reliability Association.

Website: <https://web.stevens.edu/facultyprofile/?id=62>

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## Dr. Leena Ilmola

### Research Scholar at International Institute for Applied Systems Analysis (IIASA)



Leena Ilmola-Sheppard is a Senior Research Scholar in the Advanced Systems Analysis (ASA) Program. She was previously Project Manager in the Game Changers and the Global Economy 2030 project called Seven Shocks Projects for Scotland, Finland and Korea. Her research theme is uncertainty and resilience of social systems. She is developing new modeling methods for foresight and tools for pragmatic decision making. Her current projects include developing management systems for resilience. Dr. Ilmola-Sheppard is Scientific Coordinator of the Global X-Network (GXN). The GXN consists of American, British, German, Austrian, Korean, Japanese, Finnish and French researchers who dedicate their time to conducting comprehensive research on extreme events, uncertainty and resilience. The aim of the network is to build a theory of

surprise by 2018. Dr. Ilmola-Sheppard is also currently working as an expert for the Futures Committee of the Finnish Parliament (since 2013) and previously worked for the Prime Minister's Office for the Finnish Government's Futures Review process (2012-2014).

Website: <https://www.iiasa.ac.at/web/home/about/news/180326-ilmola-sheppard.html>

## Brenda J. Fox

President and CEO Global Connexus

CEO Xevents Unlimited and founding partner of the "Global X-Network". The mission of the Network is to build a new theory about uncertainty (Theory of Surprise) and develop pragmatic understandings of resilience of national/international economies and organizations and cities. The Global X-Network is a global organization of cross discipline researchers from Japan, Korea, Singapore, Austria, Germany, Czech Republic, USA and Finland. Brenda has held executive management roles as founder and CEO Global Connexus, COO Codenomicon US Operations, CIO ReadRite, VP Application Services AristaSoft, VP Professional Service CompuCom, Director IT Safeguard Business Systems and Director IT Prime Minister Trudeau's office. Brenda has been involved in several vertical markets in the US and Asia and is very familiar with their business processes, products, services and competition. Brenda was also responsible for an outsourced operation in

Hyderabad India. Co-author of book: CIO Wisdom, Publisher: Prentice Hall, Spring 2002, ISBN: 0-13-141115-2 [See more](#)

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## *Professor Chihiro Watanabe*



**Acting Director Forum of X-Center Japan (FoXc-J)**  
**Professor Emeritus, Tokyo Institute of Technology**  
**Research Scholar International Institute for Applied Systems Analysis (IIASA)**  
**Research Professor, University of Jyväskylä, Finland**

Chihiro Watanabe graduated from Tokyo University with a bachelor's degree in engineering (urban planning) in 1968 and received his Ph. D. (arts and science) in 1992, also from Tokyo University.

Watanabe joined Japan's Ministry of International Trade and Industry (MITI) in 1968 and spent 26 years there, chiefly working in the fields of industrial policy, industrial technology policy, and energy and environmental policies. He is former Deputy Director-General of

Technology Development of the Ministry.

From 1995 Professor Watanabe joined Tokyo Institute of Technology and worked as a professor at Department of Industrial Engineering and Management of the Graduate School of Decision Science and Technology of the Institute. He is former Vice-Dean of the Graduate School and also a Councilor (member of the council) of the Institute.

He was a leader of Japan's Ministry of Education, Culture, Sport, Science and Technology's (MEXT) 21st Century Center of Excellence (COE) Project: **Science of Institutional Management of Technology (SIMOT)**, and was Director of the **Research Center for the Science of Institutional Management of Technology**.

He was a pioneer in developing a postulate of the co-evolution between innovation and institutional systems in a global society. He was selected as one of the world's top seven researchers in the field of management of technology (MOT) and innovation by the International Association of Management of Technology (IAMOT), and was also identified as one of the world's top researchers in the field of innovation analysis in MOT by IEEE IEEM in 2009. In home country, he was awarded JSSPRM (Japan Society for Science Policy & Research Management) Most Significant Contributor Award, and also Minister of Education, Science & Technology Award in 2009. In addition, he was awarded by the Emperor of Japan The Order of the Sacred Treasure (Gold Rays with Rosette) in 2014. ([See more](#))

## **Professor Markku Wilenius**



**Senior Advisor, Adj. Professor Finland Futures Research Center**

Professor Markku Wilenius received his Ph. D. in Political Sciences and completed his doctoral thesis on sociology of climate change in 1997. Dr. Markku Wilenius has acted among the very few professors of futures studies in the whole world.

His genuine interests lie in understanding the challenges and possibilities of the long-term future and bringing this foresight to the strategic thinking of society and companies. During his career he has served in many major companies and high-level governmental bodies to bring new insight to their future activities.

Markku has had a deep interest in understanding how culture can be seen more clearly as an asset for the whole society as well as for the companies. In 2002-2004 he led a major study where he, together with his research group,

looked more closely at the interaction between culture and economics with the idea that this insight can

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contribute essentially to our understanding of the future competitiveness of Finnish society at large. As a result, in 2004 he published a widely appreciated book "Towards Creative Economy". He has continued this work by using values assessment methods with several companies to analyze their current organization culture. He is Vice-Chair of the advisory board of the European Futurists Conference, a body for professional European futurists. His current major research effort is to understand the long socio-economic waves and their implications particularly to Finnish economy and society. See more  
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## ***Dr. Roger Jones***

**Research Fellow at the Center for Complex Systems and Enterprises at Stevens Institute of Technology**



Roger D. Jones is an American physicist and entrepreneur. He currently serves on the board of Qforma, Inc. formerly located in Santa Fe, New Mexico, USA. Jones trained in physics at Dartmouth College, Jones worked as a staff physicist at Los Alamos National Laboratory from 1979 to 1995. His primary research interests were in laser fusion and machine learning. In the early nineties he headed projects that applied his machine learning inventions to technical problems in the private sector. At that time, he became embroiled in controversy over corporate welfare and the role of technology transfer from the national laboratories to the private sector. In 1995 in collaboration with Citibank, Jones co-founded the Center for

Adaptive Systems Applications (CASA), a company that applied neural network and adaptive technology to consumer banking. CASA was acquired by HNC Software in March 2000, at the peak of the dotcom boom. HNC Software was subsequently acquired by Fair Isaac Corporation. See more

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## ***Adrian Taylor***



**Founder 4sing Foresight to Strategy for Security and Sustainability in Governance – Hamburg, Germany**

Adrian Taylor helps both public and private sector clients to use foresight methods to formulate robust strategy options. His role is that of providing content input, process design as well as workshop moderation, especially in security and sustainability-related issues. He has experience in using a number of methods that leverage Open Source Intelligence, and the Parmenides Eidos Suite of software tools for supporting (but not in any way replacing) human reasoning to anticipate future changes in the world outside. In the course of his work he has had occasion to work in over 33 countries of the world and runs workshops in English, French, and

German. Adrian has over two decades of working experience, and has previously been a junior officer in the British Army, a lobbyist on EU matters, a scenario planner in a joint venture with Global Business Network, Desk Officer for India at the European Commission and a visiting scholar at Georgia Tech, before joining the European School of Governance (eusg) – his last job prior to becoming self-employed. He was also President of the European Open Source Intelligence Forum in parallel to his employment with the eusg.

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His education includes: Degree in Philosophy, Politics and Economics Trinity College Oxford, and a License Spéciale (Masters) in European Studies with “Grande Distinction” from the Université Libre de Bruxelles. Adrian is also the author of a number of published essays and regularly contributes editorial pieces to on-line journals. Adrian was born and raised in London, England, and has subsequently spent 24 years living elsewhere, notably Gibraltar, Brussels, Atlanta, Zurich, New York, and Munich. He currently resides in Hamburg.

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## **Sergio Miranda da Cruz** **Executive Director – MDC Institute of Advanced Studies, Brazil & Austria**



Sergio Miranda-da-Cruz studied Engineering and Economics at Campinas University – UNICAMP and Getúlio Vargas Foundation (both in Brazil) and at the Massachusetts Institute of Technology – MIT (Boston). His area of interest and professional activity is theoretical and experimental modeling of linkages between science and technology (S&T) and sustainable development. He has worked as an engineer in different capacities with development and investment banking. He lectured as Professor at the School of Food Engineering in Brazil. He worked for UNIDO from 1986-2013, including a six-year period as the Representative of UNIDO in Beijing, covering North-East Asia (People’s Republic of China, Mongolia, Democratic People’s Republic of Korea and Republic of Korea) and liaising

with UNIDO’s Investment and Technology Promotion Office in Japan. Presently, he is also linked to the Vienna University of Economics and Business (‘WU’) in the field of Macroeconomics. Since 2014 he is the Executive Director of the MDC Institute of Advanced Studies with offices in Brazil and Austria.

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## **Thomas Bruderman** **Assistant Professor – Institute for Systems Science, Innovation & Sustainability Research**



I have been working as a researcher and lecturer for various national and international research institutions, such as International Institute for Applied System Analysis, Vienna University of Economics and Business, University of Klagenfurt and University of Graz. I have been a visiting researcher at the National Institute for Environmental Studies (Japan) and a guest lecturer at Asian Institute of Technology (Thailand).

Holding a master degree in informatics and a doctoral degree in economic psychology, I consider myself a researcher with a multidisciplinary background, who does not operate within traditional disciplinary boundaries. [See more](#)

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## **Martina Kampmann, Senior Associate 4sing Foresight to Strategy for Security and Sustainability in Governance, Germany**



Ms Martina Kampmann is a Senior Policy Expert on Strategic Partnerships, multi-stakeholder knowledge sharing and mutual learning networks in various policy areas. From 2013 to 2014 she was Senior Counsellor of the 'Knowledge Sharing Alliance' (KSA) at the Office of the Secretary-General of the OECD. Previously she was a senior manager at the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). She is now Senior Associate of 4Sing GmbH Consult, founded by Adrian Taylor. She is also connected to several global city networks and initiatives at the Technical University Berlin.

At OECD her duties included the development of knowledge sharing and mutual learning in the Organisation and the establishment of the Knowledge Sharing with emerging and developing countries and with organizations with field presence, creating synergies between policy and practice. The programme involved OECD and international experts in particular on green growth and green urban development in Dynamic Asia; innovating public sector policies and civil society participation; as well as Strategic Foresight and other strategic topics of global relevance.

At the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) Martina was inter alia Director of International Strategic Alliances and Partnerships. In 2012-2013 she was President of the 'EU Practitioners Network' working closely with the European Commission, and she worked in close partnerships with the Worldbank Group, the regional banks, and civil society organizations in Asia and Latin America. During the 1980/90s she worked in several Asian countries, chiefly in Singapore, Philippines, Indonesia, Malaysia, Thailand, and in Latin America.

Martina, a German national, holds a Master of Arts in Political Science, International Affairs, Economics and Social Geography from the Ludwig Maximilian University, Munich, Germany. She served as panelist and provided lectures e.g. during the Worldbank-KDI conference on South-South cooperation (Seoul, August 2014), and attended the recent HLM3 Country led Knowledge Sharing (Washington, March 2016). She also served as a panelist for the High-Level Japan-OECD conference on Urban development and infrastructure (Tokyo, Oct 2014); and was a key speaker on City to City learning (CDIA, Manila, Nov 2014). Recent publications: OECD Series on Post 2015: Policy Dialogues, knowledge sharing and mutual learning (OECD, June 2014); The Knowledge Sharing Alliance, OECD brochure, Oct 2014.

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## Professor Yoshiki Yamagata

**National Institute for Environmental Studies - Center for Global Environmental Research**



Graduated from The University of Tokyo (PhD in System Science). In 1991, he joined the National Institute for Environmental Studies (NIES). As a principal researcher of the Center for Global Environmental Research (CGER), he is studying climate risk management modeling. His research topics include land-use scenario, risk management, policy diffusion. He has been teaching at The University of Tokyo, University of Tsukuba and Hokkaido University.

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[nies.go.jp/index.html](http://nies.go.jp/index.html) (Company Website)

[yamagatay.jimdo.com/english-bio/](http://yamagatay.jimdo.com/english-bio/) (Personal Website)

## Herbert Saurugg



Career officer for 15 years, founder of several security initiatives, researchers on systemic risks and the effects of networking and complexity. Herbert Saurugg has been a career officer in the ICT-Security Section of the Austrian Armed Forces until 2012. Since then he has been on leave and is engaged in raising awareness about the increasing systemic risks due to the rising interconnections and dependencies between many Critical Infrastructures, which is contributing to extreme events. He is known as an expert on the topic of the blackout: a Europe-wide power-cut and infrastructure collapse. He is also a founding member of the association Cyber

Security Austria which is the mastermind behind the European Cyber Security Challenge. As a result of his systemic reflections he is calling for more efforts to raise awareness and resilience throughout our societies to face major extreme events in the foreseeable future.

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## Carey Monbarren - Global Manager, Physical Security & Safety & Business

Resilience at Slack



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## Holley Hunt – Director of Business Development; Johnson Controls



Holley has been passionately involved in the Security Industry for 22 years, and currently represents Johnson Controls as Director of Business Development. In the past, Hunt has held executive positions in Access Control and Video Surveillance technology companies, including Keyscan, Bosch, and Qognify. Presently, she is focused on bringing innovative services to the C-Suite for Johnson Controls (JCI) which, uniquely positioned to drive new innovations in technology and business models to support the smart buildings, campuses and cities of the future, as well as building upon strategic, high-value add-on services driven by data analytics and connectivity in the expanding global market.

Leveraging her past experience of sitting on the board of the California Alarm Association (CAA), International Healthcare Safety and Security (IAHSS), and ASIS International, Hunt founded the WIT Program, a mentorship program for young female professionals in the security industry.

Holley's dedication to the security industry, coupled with her passion to develop innovations for a more safe and secure world, continues to influence not only her peers, but also a second generation of security leaders – including her eldest son, Parker, who just embarked on his career in security this year. Holley currently lives in San Clemente with her youngest son Liam.

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