

## DAY 1: Monday 12 June

Venue: Session	Katariina	Eerik	Kristiina	Pietari	Juhana	Kustaa	Dining Room
13:00– 14:30 Session I	Complexity and Systems Thinking	Futures of Energy: Methodol- ogies	Education on Futures Studies	Futures Or- ganizations and Business Innovation	Methods and Method- ology of Fu- tures Re- search	<b>Special Session with a Keynote Speech:</b> Aging Society and Ur- banization	Futures of University and Scientific Knowledge <i>Workshop</i>
15:00– 16:30 Session II	Complexity and Systems Thinking	Futures of Consump- tion and the Econ- omy	Futures of Education, Learning and Work	Foresight in Technology	Methods and Method- ology of Fu- tures Re- search	Security Fore- casting in a Complex World	Futures of Democracy, Society and Values
16:45– 18:00 Session III	Challenges and Oppor- tunities for Global Gov- ernance	Futures Education	Futures of Consump- tion and the Econ- omy	Technology Foresight: An Era of Transfor- mation, Hu- man and Technology Interaction	Methods and Method- ology of Fu- tures Re- search	Futures Studies in Science and Technology	Futures Consciousness <i>Participatory Workshop</i>

## DAY 2: Tuesday 13 June

Venue Session	Katariina	Eerik	Kristiina	Pietari	Juhana	Kustaa	Dining Room
9:00– 10:30 Session IV	Futures Education	Resilient Futures: Food Safety	Innovation in Future Energy	Futures Tech- nology in Health and Well- Being	Methods and Methodology of Futures Research	Curating the Complexity <i>Futures Work- shop</i>	The Role of Visions in a Scenario Pro- cess - Case “Winland”
10:45– 12:00 Session V	Futures of Education, Art and Cultural Studies	Resilient Futures: Water Safety	Complex- ity in Future Cities	Case Studies: China and Other Coun- tries Outside Europe	Gaming and Virtual Reality in Futures Research	Curating the Complexity <i>Futures Work- shop</i>	Hallituksen tu- levaisuusse- lonteko työn murroksesta <i>(in Finnish)</i>
<b>13:00–13:30</b> Chaired Poster Session							
13:30– 15:00 Session VI	Futures Research, Cognitive Neurosci- ence and Transfor- mation	Complex- ity and Systems Thinking in Govern- ance	Futures of Energy	Strategic Thinking and Security Fore- sight	Methods and Methodology of Futures Research	The Future of Work: An In- teractive Workshop on Perspectives among Europe	City of Turku, Foresight Sys- tem <i>Round Ta- ble</i>

# MONDAY 12 JUNE

## SESSION I

### Complexity and Systems Thinking

Time: Monday 12 June at 13:00–14:30

Room: Katariina

Chair: Professor Markku Wilenius

#### **Complex systems studies and predictability of sociopolitical phenomena**

Czeslaw Mesjasz

Management Process Department, Cracow University of Economics, Poland

#### **Will the future of public administrations be innovative though disruptive? Insights from Wallonia**

Vincent Calay<sup>a</sup>, Jean-Luc Guyot<sup>b</sup> & Maxime Petit Jean<sup>c</sup>

<sup>a</sup> Foresight and Statistics, Walloon Institute for Evaluation, Belgium, <sup>b</sup>Foresight and Statistics, Catholic University of Louvain and Walloon Institute for Evaluation, Belgium & <sup>c</sup>Political Science Department, University of Liege, Belgium

#### **The future of deliberative policy-making in Finnish welfare services**

Hanna-Kaisa Pernaa

Faculty of Philosophy/Administrative Sciences, University of Vaasa, Finland

#### **How to overcome barriers for innovations in organizations from the public sector – the Local governments for the future**

Karolina Mackiewicz

Finland Futures Research Centre, University of Turku, Finland

### Futures of Energy: Methodologies

Time: Monday 12 June at 13:00–14:30

Room: Eerik

Chair: Dr. Jyrki Luukkanen

#### **Strangers in the night? Analysing the developer - User nexus in scenario practice through concepts of plausibility**

Ricarda Scheele

Stuttgart Research Center for Interdisciplinary Risk and Innovation Studies (ZIRIUS), University of Stuttgart, Germany

#### **Understanding smart energy transition: Tapping into experts' views on future energy market disruption in Finland**

Tatu Marttila<sup>a</sup>, Tero Ahonen<sup>b</sup>, Mikko Jalas<sup>a</sup> & Mikko Rask<sup>c</sup>

<sup>a</sup>School of Arts, Design and Architecture, Aalto University, Finland, <sup>b</sup>School of Energy Systems, Lappeenranta University of Technology, Finland & <sup>c</sup>Consumer Society Research Centre, University of Helsinki, Finland

#### **What are the conditions for scenarios to configure policy making? A comparative analysis of four energy foresight studies for Wallonia (Belgium)**

Aurore Fransolet

Center for Studies on Sustainable Development (IGEAT), Université libre de Bruxelles, Belgium

## **Synergies and trade-offs between energy efficiency and sustainability indicators: The EU-28 study of sustainable energy use**

Jari Kaivo-oja, Jyrki Luukkanen & Jarmo Vehmas  
Finland Futures Research Centre, University of Turku, Finland

## **Education in Futures Studies**

Time: Monday 12 June at 13:00–14:30  
Room: Kristiina  
Chair: Dr. Tamás Gáspár

## **When futures meets engineering: Pedagogical journey and learning**

Mei-Mei Song<sup>a</sup> & Shang-Hsien Hsieh<sup>b</sup>  
<sup>a</sup> Graduate Institute of Futures Studies, Tamkang University, Taiwan; <sup>b</sup> Department of Civil Engineering, National Taiwan University, Taiwan

## **Educational foresight-event and personal-resource mapping as methods of developing future thinking**

Tatiana Yakubovskaya<sup>a</sup> & Tatiana Kovaleva<sup>b</sup>  
<sup>a</sup> Head of Scientific-Educational Centre for Foresight-competence development, National Research Tomsk State University, Russia; <sup>b</sup> Moscow Pedagogical State University, Russia

## **Future scenarios: A tool to make students and citizens more aware of future technological change**

Cristina Pozzi<sup>a</sup> & Andrea Dusi<sup>b</sup>  
<sup>a</sup> Impactscool, CEO and Founder, Italy; <sup>b</sup> Impactscool, Chairman and Founder, Italy

## **Strategic foresight as experiential education**

Tamás Gáspár  
Budapest Business School, College of International Management and Business, Hungary

## **Futures Organizations and Businesses Innovation**

Time: Monday 12 June at 13:00–14:30  
Room: Pietari  
Chair: Director Vicente Marrama Zorrilla

## **Future software organizations – Agile goals and roles**

Maarit Laanti<sup>a</sup> & Petri Kettunen<sup>b</sup>  
<sup>a</sup> Nitor Delta, Finland; <sup>b</sup> Department of Computer Science, University of Helsinki, Finland

## **From interactions to cocreation. A systems view on digitalisation and the thereby changing management practices**

Sanna Ketonen-Oksi  
Information Management and Logistics, Tampere University of Technology, Finland

## **How strategic foresight is used in strategy implementation: Exploring cases of business model innovation**

Christina Bidmon<sup>a</sup>, Kirstin Bosbach<sup>b</sup> & Anne-Sophie Brillinger<sup>c</sup>  
<sup>a</sup> Department of Management, Aarhus University, Denmark, <sup>b</sup> Technische Universität Berlin, Faculty of Economics and Management, Germany & <sup>c</sup> Chair for Organisation and Human Resources, FI Ingolstadt school of Management, Germany

## **FUTURING -the future intelligence for organizations**

Vicente Marrama

La Escuela de Futuring, Barcelona & Florida Universitaria, Valencia, Spain

## **Methods and Methodology of Futures Research**

Time: Monday 12 June at 13:00–14:30

Room: Juhana

Chair: Dr. Ted Fuller

## **No theory, methodological chaos in scenario planning**

Matthew J. Spaniol<sup>a</sup> & Nicholas J. Rowland<sup>b</sup>

<sup>a</sup>Danish Maritime, Dept of Philosophy, Roskilde University, Denmark & <sup>b</sup>Sociology and Science and Technology Studies, the Pennsylvania State University, USA

## **Methods for sustainability assessments of future scenarios**

Eléonore Fauré<sup>a, b</sup>, Yevgeniya Arushanyan<sup>a, b</sup>, Elisabeth Ekener<sup>a, b</sup>, Sofiiia Miliutenko<sup>a, b</sup> & Göran Finnveden<sup>a, b</sup>

<sup>a</sup>KTH Royal Institute of Technology, Division of Environmental Strategies Research, Sweden & <sup>b</sup>KTH Royal Institute of Technology, Centre for Sustainable Communications (CESC), Sweden

## **The past and the future are both foreign countries**

Carlos López Galviz

Institute for Social Futures, Lancaster University, United Kingdom

## **A discussion on the complex consequences of Anticipatory Systems theories on futures methodologies**

Ted Fuller

Professor of Entrepreneurship and Strategic Foresight, University of Lincoln. Brayford Pool, Lincoln, Lincolnshire, the United Kingdom

## **Special Session with Keynote Speech: Aging Society and Urbanization**

Time: Monday 12 June at 13:00–14:30

Room: Kustaa

Chair: Professor Sirkka Heinonen

## **Plenary Speech:**

### **Towards multi-generational cohabitation in the era of matured aging society; from the perspective of S&T foresight in Japan**

Naoki Saito

Deputy Director General, National Institute of Science and Technology Policy (NISTEP), Japan

### **Critical futures of aging in society- enabling futures of intergenerational knowledge creation**

Nourhan Hegazy,

Strategic Foresight and Innovation, OCAD University, Toronto, Canada

### **Engineering future cities – The value of extreme scenario methodologies**

Christopher D. F. Rogers

Department of Civil Engineering, School of Engineering, University of Birmingham & UK Government Foresight Future of Cities Project, United Kingdom

## **Futures of University and Scientific Knowledge Workshop**

Time: Monday 12 June at 13:00–14:30

Room: Dining Room & Library

Moderator: Education Manager Leena Jokinen

### **Åbo Akademi University's present role in the Nordic scientific community and its future prospects**

Nina Kivinen, Åbo Akademi University, Finland

### **Tampere New University - Guidelines for remodeling the university**

Pirjo Kuhanen, Tampere New University, Finland

The session will include an idea workshop of the future universities and scientific knowledge in society. We wish to see to the future of knowledge-production, the ways in which science can and will change, and challenge the notion of the university. In other words, we want to imagine and re-imagine the university in numerous ways.

## **SESSION II**

### **Complexity and Systems Thinking**

Time: Monday 12 June at 15:00–16:30

Room: Katariina

Chair: Dr. Osmo Kuusi

#### **Systems analytics: what is it? And why is it necessary?**

Veerendra K Rai

Tata Research Development and Design Center, Tata Consultancy Services, India

#### **Complexity, systems thinking and the development of new business models to support investment in municipal solid waste infrastructure**

Christopher J. Bouch & [Christopher D. F. Rogers](#)

Department of Civil Engineering, School of Engineering, University of Birmingham, United Kingdom

#### **Using systems thinking to design actionable futures: a nuclear weapons example**

Leon Young

Future Strategic Thinking, Australia

#### **Why do firms engage in forward-looking search? Performance, slack resource, and environmental determinants**

Tymen Jissink<sup>a</sup>, [René Rohrbeck](#)<sup>a</sup> & Eelko Huizingh<sup>b</sup>

<sup>a</sup>Department of Management, School of Business and Social Sciences, Aarhus University, Aarhus, Denmark & <sup>b</sup>Department of Strategic Innovation Management, faculty of Economics and Business, University of Groningen, Groningen, Netherlands

## **Futures of Consumption and the Economy**

Time: Monday 12 June at 15:00–16:30

Room: Eerik

Chair: Dr. Tuomas Kuhmonen

### **Scenarios of consumption and wellbeing in the EU to 2050: exploring the missing dimension of transition**

Tadhg O. Mahony & Jyrki Luukkanen

Finland Futures Research Centre, University of Turku, Finland

### **The role of governments in a circular economy, a transition narrative**

Peter De Smedt<sup>a</sup> & Kristian Borch<sup>b</sup>

<sup>a</sup>Transition Lab, Belgium & <sup>b</sup>DTU Department of Management Engineering, Denmark

### **Managing complexity - the cultural dynamics and change linked to temporal processes**

Anna Kirveennummi & Katariina Heikkilä

Finland Futures Research Centre, University of Turku, Finland

### **The future of consumer decision-making**

Hanna Willman-livarinen

Miratio (Marketing research company), Finland

## **Futures of Education, Learning and Work**

Time: Monday 12 June at 15:00–16:30

Room: Kristiina

Chair: Dr. Maria Höyssä

### **The Cogitaire 5 model – Thinking our way into the future**

Jude Walker, FutureWorking, Australia

### **Human-centric organisations and the culture of work in a complex world**

Sofi Kurki

Finland Futures Research Centre, University of Turku, Finland

### **Exploring the future of work in drama workshops**

Mikko Dufva, Minna Halonen, Mika Kari, Tapio Koivisto, Raija Koivisto & Jouko Myllyoja

VTT Technical Research Centre of Finland Ltd, Finland

### **Envisioning future innovative experimental ecosystems through foresight approach- How Design Factory educates students/ change makers by year 20x6, x = {2, 3}**

Vikram Munigala

Design Factory, Aalto University, Finland

## Foresight in Technology

Time: Monday 12 June at 15:00–16:30

Room: Pietari

Chair: Professor Sirkka Heinonen

### **Participatory foresight and the future internet: Building futures through communication**

Mario Guillo<sup>a</sup>, Ana Bossler<sup>b</sup> & Enric Bas<sup>c</sup>

<sup>a</sup>IMEP-University Miguel Hernandez, Spain, <sup>b</sup>Bossler and Bourscheid Associates, Brazil & <sup>c</sup>FUTURLAB, University of Alicante, Spain

### **The strategic transformation for future societal vision – Japan’s innovative approach**

Miki Kuribayashi, Kazuhiro Hayashi & Shinichi Akaike

Ministry of Education, Culture, Sports, Science, Technology (MEXT), National Institute of Science and Technology Policy (NISTEP), Japan

### **To understand creativity in virtual work: identification of leadership toward creativity in different types of companies**

Iris Humala

Faculty of Education, University of Tampere, Finland

### **The capability of Strategic Foresight – A cultural approach**

Stefan Josef Marquart<sup>a</sup> & Michael König<sup>b</sup>

<sup>a</sup>INVENSITY GmbH, Business Development, Germany

<sup>b</sup> Department of Strategy and Innovation, Vienna University of Economics and Business, Austria

## Methods and Methodology of Futures Research

Time: Monday 12 June at 15:00–16:30

Room: Juhana

Chair: Kaisa Oksanen

### **Methods and tools to place foresight at the forefront of democratic renewal**

Alun Rhydderch

Soif-Horizons, United Kingdom

### **Learning from mistakes – A modified backcasting approach to investigate success and failure in reaching the preferred future**

Liisa Haapanen & Petri Tapio

Finland Futures Research Centre, University of Turku, Finland

### **The participation paradox. Critical reflections on the design and conduct of participatory foresight interventions in organizations**

Christina M. Bidmon & René Rohrbeck

Aarhus University, Department of Management, Denmark

### **Future dreams of young people – Tools to promote young people’s civic participation**

Katariina Heikkilä<sup>a</sup>, Tuulia Nevala<sup>a</sup>, Ira Ahokas<sup>a</sup> & Liisa Hyttinen<sup>b</sup>

<sup>a</sup> Finland Futures Research Centre, University of Turku & <sup>b</sup> Helsinki-Uusimaa Regional Council, Finland

## Security Forecasting in a Complex World

Time: Monday 12 June at 15:00–16:30

Room: Kustaa

Moderator: Mikko Lappalainen, Defence Research Agency, Finland

### Presentation

Rhett Hatcher and Simon Cole, UK MOD DCDC

### Panelists:

PhD Vesa Valtonen, Security Committee Secretariat, Finland

Dr. Olaf Theiler, Future Analysis, Bundeswehr, Germany

Joachim Isacson, Futures UK DCDC (Armed Forces, Sweden)

Jasmin Diab, Future Concepts, Department of Defence, Australia

Björn de Heer, Land Warfare Centre, Netherlands

This session will focus on the long-term strategic security foresight. The session will begin with an introduction of a current best practice: UK MOD's Global Strategic Trends (GST) –program. The International panel will then give prepared comments sharing their latest national insights. The researchers in the audience will gain knowledge about the evolving customer needs in the times of complexity and will be informed about the joining opportunities in various security foresight programs.

## Futures of Democracy, Society and Values

Time: Monday 12 June at 15:00–16:30

Room: Dining Room

Chair: Dr. Katriina Siivonen

### The future of Belgian democracy according to political science students

Sébastien Brunet<sup>a</sup>, Jean-Luc Guyot<sup>b</sup>

<sup>a</sup> University of Liege (Political Science Department) and Walloon Institute for Evaluation, Foresight and Statistics, Belg

### Transdisciplinary agenda setting for future research and innovation - Comparing results of expert based foresight to large scale citizen centred forward-looking

Niklas Gudowsky<sup>a</sup>, Philine Warnke<sup>b</sup>, Aaron Rosa<sup>b</sup>, Nora Häuser<sup>b</sup>, Walter Peissl<sup>a</sup>,

<sup>a</sup>Institute of Technology Assessment, Austrian Academy of Sciences, Austria & <sup>b</sup>Fraunhofer Institute of Systems and Innovation Research ISI Karlsruhe, Germany

### Utopias, dystopias and atopias in Jerusalem 2060

Julia Lampert

Institut Futur, Institute for Educational Science and Future Research, Germany

### Deconstructing survivalism as futures knowledge

Marjukka Parkkinen

Finland Futures Research Centre, University of Turku, Finland



## SESSION III

### Challenges and Opportunities for Global Governance

Time: Monday 12 June at 16:45–18:00

Room: Katariina

Chair: Dr. Juha Kaskinen

#### **Reaching zeitgeist: on complexity, decision making and participatory foresight**

Eric Bas<sup>a</sup> & Michal Pazour<sup>b</sup>

<sup>a</sup> FUTURLAB-University of Alicante, Spain & <sup>b</sup> Department of Strategic Studies at Technology Centre of the Academy of Sciences, Czech Republic

#### **(A)Political futures: Examining the rise and role of fiscal councils in global governance and policy making**

Stuart Connor

Faculty of Education, Health and Wellbeing, University of Wolverhampton, United Kingdom

#### **The science of laws: Impact on 21st century governance**

David G. Schrunk

Science of Laws Institute, USA

#### **Exploring the future of science and innovation diplomacy**

Jos Leijten & Daniel Gehrt

Joint Institute for Innovation Policy, Belgium

### Futures Education

Time: Monday 12 June at 16:45–18:00

Room: Eerik

Chair: Senior Advisor Sari Söderlund

#### **Ugly and its interpretations in craft**

Ana Nuutinen, Textile and Clothing Design, University of Lapland, Finland

Riikka Räisänen & Päivi Fernström, Craft Studies, University of Helsinki, Finland

#### **Particularities of educational practice for developing futures and foresight literacy in Finland and Russia (comparative analysis)**

Tatiana Yakubovskaya

Head of Scientific-Educational Centre for Foresight-competence development, National Research Tomsk State University, Russia

#### **On futures of geographic information**

Toni Ahlqvist

Geography Research Unit, University of Oulu, Finland

## **Futures of Consumption and the Economy**

Time: Monday 12 June at 16:45–18:00

Room: Kristiina

Chair: Dr. Riel Miller

### **Measuring tomorrow's economy: Which tools for measuring and analyzing circular and collaborative economies?**

Sébastien Brunet<sup>a</sup>, Vincent Calay<sup>b</sup> & Jean-Luc Guyot<sup>c</sup>

<sup>a</sup> Political Science Department, University of Liege, Foresight and Statistics, Walloon Institute for Evaluation, Belgium; <sup>b</sup> Walloon Institute for Evaluation, Foresight and Statistics, Belgium & <sup>c</sup> Catholic University of Louvain and Walloon Institute for Evaluation, Foresight and Statistics, Belgium

### **What future for businesses in Visegrad countries?**

Anna Kononiuk<sup>a</sup>, Anna Sacio-Szymańska<sup>b</sup> & Judit Gaspar<sup>c</sup>

<sup>a</sup> Białystok University of Technology, Poland, <sup>b</sup> Institute for Sustainable Technologies – National Research Institute, Poland & <sup>c</sup> Corvinus University of Budapest, Hungary

### **Longevity – postmoney – immortality: Value function in the domain of postmoney**

Boyan Ivantchev

Economics, University of National and World Economy, Bulgaria

### **Future studies of tacit knowledge innovation in exploring generational change and enterprise development in family business**

Lee Kean Yew

Asia Europe Institute, University of Malaya, Malaysia

## **Technology Foresight: an Era of Transformation, Human and Technology Interaction**

Time: Monday 12 June at 16:45–18:00

Room: Pietari

Chair: Dr. Fiona Kerr

### **Partnering with AI for a humane future**

Fiona Kerr

Faculties of Professions, Engineering and Health Sciences, University of Adelaide, Australia

### **Options for future human evolution: Technology/transhumanist, sustainability, civilization, consciousness, and space-based perspectives**

Linda Groff

Global Options & Evolutionary Futures Consulting, USA

### **The role of technology futures analysis in e-government: A systematic literature review**

Jenny Marcela Sánchez-Torres<sup>a</sup> & Ian Miles<sup>b</sup>

<sup>a</sup> Computing Systems and Industrial Engineering Department, Universidad Nacional de Colombia, Colombia & <sup>b</sup> Manchester Institute of Innovation Research, Manchester Business School, University of Manchester, United Kingdom

## Methods and Methodology of Futures Research

Time: Monday 12 June at 16:45–18:00

Room: Juhana

Chair: Dr. Tuomas Kuhmonen

### **Beyond internal consistency: An alternative technique to choose most relevant scenarios for cross-impact balance (CIB) method**

Arash Shojachaikar & Wolfgang Weimer-Jehle

Stuttgart Research Center for Interdisciplinary Risk and Innovation Studies (ZIRIUS), University of Stuttgart, Germany

### **Axiom method for cross-impact modelling and analysis**

Juha Panula-Ontto

University of Turku, Finland Futures Research Centre FFRC, Finland

### **Hybrid scenarios for the future**

Petri Tapio & Akhgar Kaboli

Finland Futures Research Centre, University of Turku, Finland

### **Integration of trends monitoring and bibliometric analysis into technology road mapping:**

#### **The case of unmanned aerial vehicles (UAVs)**

Nadezhda Mikova

Department for Private-Public Partnership in Innovation Sector, National Research University Higher School of Economics, Institute of Statistical Studies and Economics of Knowledge, Russia

## Futures Studies in Science and Technology

Time: Monday 12 June at 16:45–18:00

Room: Kustaa

Chair: Professor Piero Dominici

### **Beyond Turing? The notion of economic performance in the new normal**

Michael König

Department of Strategy and Innovation, Vienna University of Economics and Business, Austria

### **Science and Technology: enablers or inhibitors of fairness and sustainability in a complex world?**

Carlos Alvarez-Pereira

Innaxis Research Institute, Spain

### **For an Inclusive Innovation. Healing the fracture between the human and the technological**

Piero Dominici

Department of political Science, University of Perugia, Italy

## **Futures Consciousness – Participatory Workshop**

Time: Monday 12 June at 16:45–18:00

Room: Dining Room

Moderator: Sanna Ahvenharju, Matti Minkkinen & Fanny Lalot

### **The five dimensions of futures consciousness and how to measure them**

Sanna Ahvenharju<sup>a</sup>, Matti Minkkinen<sup>a</sup> & Fanny Lalot<sup>b</sup>

<sup>a</sup>Finland Futures Research Centre, University of Turku, Finland, <sup>b</sup>University of Geneva, Switzerland

The session presents and discusses a novel five-dimensional model and a psychometric test scale of futures consciousness. This conceptualization integrates theoretical thinking from futures studies with related psychological literature and relevant research-based psychological constructs.

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## **TUESDAY 13 JUNE**

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### **SESSION IV**

#### **Futures Education**

Time: Tuesday 13 June at 9:00–10:30

Room: Katariina

Chair: Conscious Future Designer Erica Bol, Teach the Future

#### **ICT impact on the future of education**

Reyhan Huseynova,

Azerbaijan Future Studies Society, Millennium Project Node, Azerbaijan

#### **Plan Ceibal 2020: Future scenarios for technology and education**

Matías Mateu<sup>a</sup>, Cristóbal Cobo<sup>a</sup> & John Moravec<sup>b</sup>

<sup>a</sup>Plan Ceibal, Uruguay & <sup>b</sup>Education Futures LLC, USA

#### **Futures guidance as a means to promote futures thinking**

Leena Jokinen, Johanna Ollila, [Sari Miettinen](#), Nina Pietikäinen & Katariina Heikkilä

Finland Futures Research Centre, University of Turku, Finland

#### **Teach the Future**

Peter Bishop & [Erica Bol](#)

Teach the Future, USA & EU

#### **Resilient Futures: Food Safety**

Time: Tuesday 13 June at 9:00–10:30

Room: Eerik

Chair: Dr. Maria Höyssä

#### **Food safety and nutrition – How to prepare for a challenging future?**

Anne-Katrin Bock & Laurent Bontoux

DG Joint Research Centre of the European Commission, Unit Foresight, Behavioural Insights and Design for Policy, Belgium

### **Institutional interventions to prepare Indian farmers for a complex future**

M.V. Ashok

National Bank for Agriculture & Rural Development (NABARD), Mumbai, India

### **Transformative spaces for agriculture? Analysing how Finnish farmers discuss their work**

Maria Höyssä

Finland Futures Research Centre, University of Turku, Finland

### **How to utilize resilience approach when constructing scenarios?**

Titta Tapiola

Natural Resources Institute Finland, Finland

## **Innovation in Future Energy**

Time: Tuesday 13 June at 9:00–10:30

Room: Kristiina

Chair: Dr. Jyrki Luukkanen

### **Surprise as the new normal – Implications for energy security**

Sirkka Heinonen<sup>a</sup>, Joni Karjalainen<sup>a</sup> & Karlheinz Steinmüller<sup>b</sup>

<sup>a</sup> Finland Futures Research Centre, University of Turku, Finland & <sup>b</sup> Z-punkt, Germany

### **Transition towards long-term sustainability of the Finnish energy system**

Michael Child & Christian Breyer

Department of Energy, Lappeenranta University of Technology, Finland

### **The postnormality of renewable energy – Complexity, contradictions and chaos in a world of abundance**

Juho Ruotsalainen, Sirkka Heinonen, Joni Karjalainen & Marjukka Parkkinen

Finland Futures Research Centre, University of Turku, Finland

### **Understanding smart energy transition: Insights to the future energy technologies and their market disruption in Finland**

Tero Ahonen<sup>a</sup>, Tatu Marttila<sup>b</sup>, Igor Dyukov<sup>a</sup> & Mikko Jalas<sup>b</sup>

<sup>a</sup> School of Energy Systems, Lappeenranta University of Technology, Finland; <sup>b</sup> School of Arts, Design and Architecture, Aalto University, Finland

### **Key trends of energy efficiency in the EU-28 region**

Jarmo Vehmas, Jyrki Luukkanen & Jari Kaivo-oja

University of Turku, Finland Futures Research Centre, Finland

## **Futures Technology in Health and Well-Being**

Time: Tuesday 13 June at 9:00–10:30

Room: Pietari

Chair: Dr. Fiona Kerr

### **Drivers, trends and scenarios for the future of health in Europe: Impressions from the FRESHER project**

Susanne Giesecke & Beatrix Wepner

Center for Innovation Systems and Policy (Crisp), Austrian Institute of Technology, Austria

### **Quantification of selves – The future of personal data**

Daniela Gutierrez

Universidad Pedagógica (UNIPE) & Argentina/Fundación Medifé, Argentina

### **Nursing and technology foresight in futures of a complex world**

Mohammad Reza Dawuodi,  
Turku University of Applied Sciences, Finland

### **The future of drug development and pricing**

Philippe Vandebroek<sup>a</sup>, Irina Cleemput<sup>b</sup> & Lydia de Heij<sup>c</sup>  
<sup>a</sup> shiftN, Belgium, <sup>b</sup> Belgian Healthcare Knowledge Centre (KCE), Belgium & <sup>b</sup> Zorginstituut Nederland (ZIN), The Netherlands

## **Methods and Methodology of Futures Research**

Time: Tuesday 13 June at 9:00–10:30

Room: Juhana

Chair: Dr. Juha Kaskinen

### **Futures knowledge management in and after a futures workshop**

Hanna Heino  
Department of Geology and Geography, University of Turku, Finland

### **Towards a larger Delphi panel: Delphi study of 200 experts completed with futures workshops on lake restoration**

Nina A. Nygrén & Petri Tapio  
Finland Futures Research Centre, University of Turku, Finland

### **Experiencing insight: Engaging complexity with 'scalable fruit'**

Amos Taylor  
Finland Futures Research Centre, University of Turku, Finland

### **Methods mashup for generating visions of a good anthropocene in Southern Africa: From seeds to scenarios**

Tanja Hichert  
Centre for Complex Systems in Transition (CST), Stellenbosch University, South Africa

## **Curating the complexity – Futures workshop session, part 1.**

Time: Tuesday 13 June at 9:00–10:30

Room: Kustaa

Moderators: Katriina Siivonen, Pasi Hario, Marjukka Parkkinen & Satu Tuittila  
Finland Futures Research Centre, University of Turku, Finland

Futures workshop will be organised on theme Futures Museum. It focuses on the methodological possibilities of a participatory futures processes in tackling the complexity of the world. What could be the possibilities of museums to curate people to understand and create everyday activities in order to be able to tackle our current, rapidly changing and complex world?

\*\* The capacity of the session is limited \*\*

## **The Role of Visions in a Scenario Process – Case “Winland”**

Time: Tuesday 13 June at 9:00–10:30

Room: Dining Room

Moderators: Dr. Burkhard Auffermann and Dr. Marko Keskinen

Introduction to the session: what visions, what scenarios, what Winland?

### **Winland research project – Introduction to the case study**

Marko Keskinen

Aalto University, Finland

### **Scenario process and future visioning in Winland**

Matti Minkkinen, Burkhard Auffermann & Riikka Saarimaa

Finland Futures Research Centre, University of Turku, Finland

### **Visioning Winland from the point-of-view of the relationship of human agency to planning and complexity – Comment speech**

Riel Miller, UNESCO, Paris

Presentations are followed by discussion and facilitated participatory workshop on the role of visions in the scenario process and values.

## **SESSION V**

### **Futures of Education, Art and Cultural Studies**

Time: Tuesday 13 June at 10:45–12:00

Room: Katariina

Chair: Senior Advisor Sari Söderlund

### **Learning entangled empathy with trees: Experiences from the joint drama educational arts-science project concerning connection of climate change and loss of biodiversity**

Heli Aaltonen

Department of Arts and Media Studies, Theatre and Drama Studies, Norwegian University of Science and Technology (NTNU), Norway

### **Political and cultural transformation in an accelerated warming world**

Christopher Burr Jones

Core Faculty, School of Public Policy and Administration, Walden University, USA

### **FUTURES of learning and negotiation, policy-making, and awareness/consciousness**

Heiner Benking

Journalist, futurist, activist, tutor

Member of the Advisory Board of the European Citizen Sciences Association (ECSA)

Future Worlds Center (FWC), Re-Inventing Democracy project, UN-Democracy Fund (UNDEF)

Academic Board member of the International Encyclopedia of Systems and Cybernetics

## Resilient Futures: Water Safety

Time: Tuesday 13 June at 10:45–12:00

Room: Eerik

Chair: Dr. Jarmo J. Hukka

### **Global water ecosystem – Past, present, future?**

Tarja Meristö & Jukka Laitinen

Laurea University of Applied Sciences & FuturesLab CoFi, Finland

### **Ignorance of economics undermines water services – and our resilient future**

Jarmo. J. Hukka

Construction Management and Economics, Department of Civil Engineering, Faculty of Business and Built Environment, Tampere University of Technology, Finland

### **How complex technological systems act as a mediator between City's socio-technological system and nature's materiality – A case study of the Helsinki's water supply system**

Lassi Lemponen

Politics of environment and -regions department, University of Tampere, Finland

## Complexity in Future Cities

Time: Tuesday 13 June at 10:45–12:00

Room: Kristiina

Chair: Dr. Sari Puustinen

### **Fast forward: Multimodal transportation in the Greater Golden Horseshoe**

Helen Kerr

Strategic Foresight and Innovation, OCAD University, Canada & Kerr Smith Design, Canada

### **Do cities need systematic futures thinking?**

Waltraut Ritter

Knowledge Dialogues, Hong Kong, S.A.R. China

### **People and mobility in Turku: Futures of mobility as a subsystem of a complex city**

Nicolas A. Balcom Raleigh, Anna Kirveenummi, Ellinoora Leino-Richert, Hoa Nguyen, Sari Puustinen & Markku Wilenius

Futures of Cities and Communities Research Group, University of Turku, Finland

## Case Studies: China and Countries outside Europe

Time: Tuesday 13 June at 10:45–12:00

Room: Pietari

Chair: Professor Petri Tapio

### **China 2030 or the way towards a viable cooperation with China**

Epaminondas Christofilopoulos<sup>a</sup>, Stavros Mantzanakis<sup>b</sup>, Tomas Larsson<sup>c</sup> & Constantine Styliaras<sup>d</sup>

<sup>a</sup> Foundation of Research and Technology & Millennium Project Greek Node, Greece; <sup>b</sup> Phemonoe Lab, Greece, <sup>c</sup> KAIROS Future, Sweden, <sup>d</sup> University of Macedonia

### **Economic growth and gross domestic expenditure on R&D in G7-countries and BRICS –countries: A long run comparative synergy analyses in 1997–2014**

Jari Kaivo-oja, Jyrki Luukkanen & Teemu Haukioja

University of Turku, Finland Futures Research Centre FFRC & University of Turku, University Consortium of Pori, Finland



### **Disruptive factors affecting the E-Commerce industry in China up to 2030: A consumer Delphi study**

Yuan Qi<sup>a</sup> & Petri Tapio<sup>b</sup>

<sup>a</sup> Graduate in Futures Studies, Turku School of Economics, University of Turku, Finland & <sup>b</sup> Finland Futures Research Centre, University of Turku, Finland

### **The application of Causal Layered Analysis to understand the present conditions & possible futures of media politics in Iran**

Sara Talebian<sup>a</sup> & Hamed Talebian<sup>b</sup>

<sup>a</sup> Media and Global Communication, University of Helsinki, Finland

<sup>b</sup> International Relations, University of Kharazmi, Instructor of Culture, Art & Communication Research Institute, Iran

## **Gaming and Virtual Reality in Futures Research**

Time: Tuesday 13 June at 10:45–12:00

Room: Juhana

Chair: Professor Markku Wilenius

### **Virtual reality in future studies: Chances and risks of using VR-technology for and in future studies**

Aileen Moeck & Markus Meißner

Free University, Institut Futur, Freie Universität Berlin, Germany

### **Gaming, a non-linear method to think and navigate the current complex world**

Camille Souhard

proGective & LAMPA, France

### **Narrative gaming - gaming narratives**

Nele Fischer & Sascha Dannenberg,

Freie Universität Berlin, Germany

## **Curating the Complexity – Futures workshop session, part 2.**

Time: Tuesday 13 June at 10:45–12:00

Room: Kustaa

Moderators: Katriina Siivonen, Pasi Hario, Marjukka Parkkinen & Satu Tuittila

University of Turku, Finland Futures Research Centre, Finland

## **Hallituksen tulevaisuusselonteko työn murroksesta (in Finnish)**

Time: Tuesday 13 June at 10:45- 12:00

Room: Dining Room

Moderator: Dr. Kaisa Oksanen

### **Hallituksen tulevaisuusselonteko työn murroksesta**

Kaisa Oksanen

Prime Minister's Office, Finland

Tulevaisuusselontekojen tehtävä on tunnistaa tulevaisuudessa huomiota vaativia asioita yli hallituskautien ja niissä linjataan valtioneuvoston yhteistä tahtotilaa tulevaisuuden rakentamiseksi. Sessiossa keskustellaan hallituksen tulevaisuusselonteosta, jonka aiheena on työn murros

## **CHAired POSTER SESSION**

**Tuesday 13 June at 13:00–13:30**

### **Higher education is at a crossroads of globalization, social changes and technical developments**

Krisztina Némethy<sup>a</sup> & Dr. József Gáti<sup>b</sup>

<sup>a</sup> University Research and Innovation Center, Óbuda University, Hungary & <sup>b</sup> Rector Office, Vice Rector, Óbuda University, Hungary

### **Students are the future of experts**

Johanna Hautamäki & Tarja Mäkitalo

Research and Development, Centria University of Applied Sciences, Finland

### **Futures guidance and tools in Omasi and Utua projects**

Leena Jokinen, Johanna Ollila, Sari Miettinen, Nina Pietikäinen & Katariina Heikkilä

Finland Futures Research Centre, University of Turku, Finland

### **Futures of lake restoration**

Nina A. Nygrén & Petri Tapio

Finland Futures Research Centre, University of Turku, Finland

### **Energy security analysis and future recommendations to enhance energy security based on expenditures for R&D and education and levels of rule of law and democracy**

Abdelrahman Azzuni & Christian Breyer

Energy Technology, School of Energy system, Lappeenranta University of Technology (LUT), Finland

### **Futures Platform – Strategic foresight tool**

Tuomo Kuosa

Futures Platform Oy, Finland

### **Diagnosis process in foresight research using network visualization**

Alicja Ewa Gudanowska

International China and Central-Eastern Europe Institute of Logistics and Service Science, Faculty of Management, Bialystok University of Technology, Poland

## SESSION VI

### Futures Research: Cognitive Neuroscience and Transformation

Time: Tuesday 13 June at 13:30–15:00

Room: Katariina

Chair: Dr. Osmo Kuusi

#### **Towards the scientific integration of futures research and cognitive neuroscience**

Osmo Kuusi

Aalto University & University of Turku, Finland

#### **Towards a society of living: Connecting transformation, complexity theory and life sciences**

Joséphine von Mitschke-Collande

Innaxis Research Institute, Switzerland

#### **Cultivating physiological coherence with possible futures**

Tyler Mongan

Heart Lab LLC and Quantum Medicine University, Hawaii, USA

#### **Only human: Towards a neuroscience-based understanding of futurefacing organizational culture**

Medina Abdelkader

OCAD University, Canada

### Complexity and Systems Thinking in Governance

Time: Tuesday 13 June at 13:30–15:00

Room: Eerik

Chair: Professor Czesław Mesjasz

#### **The future of government workforces: Serving the people in the 21<sup>st</sup> century**

Katherine LY Green<sup>a</sup>, Jennifer Jarratt<sup>b</sup> & John B. Mahaffie<sup>b</sup>

<sup>a</sup> Green Consulting Group LLC & <sup>b</sup> Leading Futurists, LLC, Jennifer Jarratt

#### **Business and Peacebuilding: Towards a framework for mapping governance linkages**

Aviva Silburt

University of Waterloo & Balsillie School of International Affairs, Canada

#### **Ignorance and politically correct worst case scenarios of sociopolitical phenomena**

Czesław Mesjasz

Management Process Department, Cracow University of Economics, Poland

### Futures of Energy

Time: Tuesday 13 June at 13:30–15:00

Room: Kristiina

Chair: Dr. Juha Kaskinen

#### **Future for bio-fuel consumption and energy security: India's policy advocacy**

E. N. Ashok Kumar

Centre for Foresight Studies, Solapur University, Maharashtra State, India

#### **Futures images of a bioeconomy**

Päivi Pelli<sup>a</sup>, Teppo Hujala<sup>a</sup>, Elena Kulikova<sup>b</sup> & Timo Karjalainen<sup>a,c</sup>

<sup>a</sup> School of Forest Sciences University of Eastern Finland, Joensuu, Finland, <sup>b</sup> European Forest Institute EFI, Joensuu, Finland & <sup>c</sup> Natural Resources Institute Finland, LUKE

### **Can we overcome complexity with anticipation for climate compatible governance?**

Joni Karjalainen & Juho Ruotsalainen  
Finland Futures Research Centre, University of Turku, Finland

### **Clean transformation as a complex endeavour – The case study of Chile**

Noora Vähäkari, Joni Karjalainen & Sirkka Heinonen,  
Finland Futures Research Centre, University of Turku, Finland

## **Strategic Thinking and Security Foresight**

Time: Tuesday 13 June at 13:30–15:00

Room: Pietari

Chair: Dr. Burkhard Auffermann

### **Navigating the great transition: Futures for a complex world**

Fabienne Goux-Baudiment  
proGective & University of Angers, France

### **Cyber security is likely to fail because we architect on the wrong assumptions – The flip side of exponential Internet growth will lead to massive security challenges**

Michiel Jonker, Grant Thornton, South Africa

### **Strategic foresight in the German armed forces**

Henning Hetzer, Dr. Annika Vergin & Dr. Olaf Theiler  
Bundeswehr Office for Defence Planning, Branch Future Analysis, Germany

### **Rethinking the unthinkable – Revisiting the classics of nuclear strategy**

Jan Hanska  
Finnish Defence Research Agency (FDRA) Doctrines and Concepts Division, Finland, & Faculty of Social Sciences, University of Lapland, Finland

## **Methods and Methodology of Futures Research**

Time: Tuesday 13 June at 13:30–15:00

Room: Juhana

Chair: Dr. Ted Fuller

### **Grasping the future of digital society**

Tomi Dufva<sup>a</sup> & Mikko Dufva<sup>b</sup>  
<sup>a</sup>The School of Arts, Design and Architecture, Aalto University, Finland; <sup>b</sup>VTT Technical Research Centre of Finland Ltd., Finland

### **Dancing with a wicked problem – Approaching designer's deeper understanding of multisensory user experience through design diaries**

Laura Mononen, Rebekah Rousi, Johanna Silvennoinen, Emma Vuorenmaa & Tiia-Elina Kokko  
Faculty of Information Technology, University of Jyväskylä, Finland

### **How futures thinking can benefit from design thinking and strategic thinking**

Leon Young, Future Strategic Thinking, Australia

### **A recipe for making deep, meaningful images of the future**

Akhgar Kaboli & Petri Tapio  
Finland Futures Research Centre, University of Turku, Finland

## The Future of Work: An Interactive Workshop on Perspectives among Europe

Time: Tuesday 13 June at 13:30–15:00

Room: Kustaa

Moderators and panelists: Cornelia Daheim<sup>a</sup>, Epaminondas Christofilopoulos<sup>b</sup>, Sirkka Heinonen<sup>c</sup>, Ondrej Valenta<sup>d</sup>, Ole Wintermann<sup>e</sup> & Ibon Zugasti<sup>f</sup>

<sup>a</sup> Future Impacts Consulting, Germany

<sup>b</sup> Phemonoe Lab, Greece

<sup>c</sup> Finland Futures Research Centre, University of Turku, Finland

<sup>d</sup> Technology Centre ASCR, Czech Republic

<sup>e</sup> Bertelsmann Foundation, Germany

<sup>f</sup> Prospektiker, Mondragon Corporation, Spain

The Millennium Project, an international think tank on global future perspectives, has developed long-term scenarios on the future of work and technology until 2050. This workshop brings in different perspectives on the scenarios and the question how work might develop, by contrasting different national or regional perspectives and facilitating an interactive discussion.

## City of Turku, Foresight System Round Table

Time: Tuesday 13 June at 13:30–15:00

Room: Dining Room

Moderator: Education Manager Leena Jokinen

### **The development process of the foresight and innovation system for city of Turku**

Tarja Vuorinen, City of Turku, Finland

### **The case study of foresight capacity amongst leaders within the city of Turku**

Anna Einola, Turku School of Economics, University of Turku, Finland

### **Comment the foresight system elements and methods for enhancing foresight culture in organizations**

René Rohrbeck, the Aarhus School of Business and Social Sciences, Aarhus University, Denmark

In the special session Project Manager Tarja Vuorinen will present the development process of the foresight and innovation system for the city of Turku. A masters' student Anna Einola will present her study of foresight capacity amongst leaders within the city of Turku. The conference key note speaker René Rohrbeck will comment the foresight system elements and methods for enhancing foresight culture in organizations. The round table discussion welcomes attendee's questions and reflections on the development of foresight systems in different organizations.