

9:00 - 9:15

Opening

**N100 Opening**

Odessa Primus, Executive Director, Global Arena Research Institute  
 Paul Samson, President, Center for International Governance Innovation  
 Ann Fitz-Gerald, Director, Balsillie School of International Affairs

9:15 - 9:45

Spotlight

**Tech and the global order now and in 2050: possible paths**

**Jim Balsillie**

Founder, Centre for International Governance Innovation (CIGI), former Chairman and co-CEO of Research In Motion (BlackBerry), founder of Balsillie School of International Affairs, co-founder of the Council of Canadian Innovators and CIO Strategy Council.

9:45 - 10:30

One-on-One

**CERN for Climate Change | Destination Earth**

**Tim Palmer & Peter Bauer**

Tim Palmer, Royal Society research professor in climate physics, University of Oxford, Pioneered probabilistic ensemble forecasting techniques for weather & climate prediction. He now calls for a "CERN for Climate Change".

**Peter Bauer (virt), Director of Destination Earth**

DestinE is developing a global scale highly accurate digital model of the Earth to monitor and predict the interaction between natural phenomena and human activities

The presentations will be followed by a discussion, an exploration of our capabilities to understand and mitigate climate change.

10:30 - 11:00

Spotlight

**Social Robotics**

**Theresa Kushner**

Head of North America Innovation Center (NTT Data), Data-vangelist  
 The changing relationship between humans and machines and what it could mean for the social fabric of societies

11:00 - 11:30

**Break**

11:30 - 13:00

**Discussion Roundtables**

See next page for details on each session

**Room**

**Destination Earth**

**142**

Peter Bauer (virt), Tim Palmer (virt), Frederick Bordry, Adam Pease, Odessa Primus, Paul Samson

**Changing Social Fabric**

**120B**

Jeffrey Saunders, Michael Lawrence, Edward Wilson-Smythe

**Governance, ethics, & future of technology**

**123**

Bob Fay (virt), Claudia May del Pozo, Tony Curzon Price (virt), Andrew Thompson, Theresa Kushner, Nestor Maslej

**Weaponization of Trade**

**120A**

Dan Ciuriak, Patricia Goff, Michal Koran

**Disruptive Technologies and Defense**

**132**

David Welch, Ann Fitz-Gerald, Trevor McCrisken (virt), Daniel Araya, Shmuel Bar (virt), Ian Anthony (virt)

13:00 - 14:45

**Lunch**

Discussing a topic in detail with clear positions, suggestions, application possibilities, and strategic or structural designs for a topic solution or illumination. N100 Roundtables are the core of the program.

3-6 N100 speakers along with N100 guests discuss the topic as a group with anyone able to contribute.

11:30 - 13:00

Room

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**Destination Earth**      **Peter Bauer (virt), Tim Palmer (virt), Frederick Bordry, Adam Pease, Paul Samson, Odessa Primus**      **142**

An exploration of our capabilities to understand and mitigate climate change. DestinE is developing a global scale, highly accurate digital model of the Earth to monitor and predict the interaction between natural phenomena and human activities. Key to predicting the effects and building resilience to climate change. Joined by Frederick Bordry, scientific advisor to start-ups using particle accelerators, and former director of CERN, and Adam Pease, who has advanced expertise of managing complex data sets and building ontologies.

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**Changing Social Fabric**      **Jeffrey Saunders, Michael Lawrence, Edward Wilson-Smythe**      **120B**

Over the past several decades, families have grown smaller, and people are living longer. Many people in high, middle, and low-income countries have become more prosperous than ever. Yet, the social fabric in many countries is changing and, in some cases, fraying. This roundtable will discuss various topics like aging, changes in labor market participation, housing costs and inflation, along with more subtle topics like anxiety and stress, that are at an all-time high, tribalization and other features of modern society, linked often to the digital and technological transformation of our daily lives. This roundtable will discuss ways in which societies can become more resilient in the face of societal disruption and “win back” the trust of their citizens.

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**Governance, ethics, & future of technology**      **Bob Fay, Claudia May del Pozo, Tony Curzon-Price (virt), Andrew Thompson, Theresa Kushner, Nestor Maslej**      **123**

“Trust”, or lack thereof, has been a recurring theme during the preparatory N100 online roundtables as one of the key features of the digitized society. The general tenor is that it is technology, innovation and the digitalization of everyday life that that contributes to the new social pathologies. This roundtable will look both at the possible root causes of the interplay between technology, society and governance but will also try to bring a more tech-positive perspective, while keeping big future trends on the discussion table.

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**Weaponization of Trade**      **Dan Ciuriak, Patricia Goff, Michal Koran**      **120A**

While there is a general consensus that global trade and its future is not what it used to be a decade ago, it is less clear whether the world of politics is undergoing such a massive transformation as to suggest that existing trade dependencies are already strategically utilized as a blunt tool of power. Which way the wheel of history will turn, though, is a critical question for the future of global order: if trade dependencies and related vulnerabilities present an opportunity to leverage potential global adversaries, what does it mean for the global politics? Is there a way of preserving a liberal global trade narrative under the circumstances of multifaceted opposing forces that render liberal global trade less of an opportunity and more of a source of vulnerability? What future of the global trade regime do we envision and how do we get there? Last, but not least, how do the world’s economies see this issue and what are the differences between them?

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**Disruptive Technologies and Defense**      **David Welch, Ann Fitz-Gerald, Trevor McCrisken (virt), Daniel Araya (CIGI), Shmuel Bar (virt), Ian Anthony (virt)**      **132**

Technological supremacy has been historically one of the key factors for military supremacy. The trend in recent years is a growing complexity of intertwining of civil and defence technologies (dual use). Since February 2021, NATO came up with a new guide with disruptive technologies, such as AI, Quantum, advanced manufacturing or biotech in mind. This roundtable will discuss the potential futures of defense technologies, what are the relative positions of (emerging) world powers, and what the tech race means for global stability and security.

# Day I - 21. September - afternoon

13:00 - 14:45 **Lunch**

14:45 - 15:30

Trio

## **Taming the Black Swan in Times of Irrationality**

### **Edward Wilson-Smythe**

Director of Digital Innovation and Transformation at AlixPartners

### **Michal Koran**

Founder, Global Arena Research Institute

### **Jeffrey Saunders**

Founder & CEO, Nordic Foresight

15:30 - 16:00

Spotlight

## **Taming Digital Volatility: Using Logic for Mutual Understanding**

### **Adam Pease**

CEO & principal consultant, Articulate Software

How do we use mathematical logic to make sure that people and computers are saying what they mean and meaning what they say. But, I promise, no formulas!

16:00 - 17:00

Global Barroom

- CIGI Foyer -

## **Global Barroom**

### **All Speakers & Guests**

Global barroom of knowledge and idea development. Grab a beer, wine or soft drink and journey through the N100 program areas with our distinguished speakers. The purpose is to promote interdisciplinarity on questions in the program and explore possible opportunities and futures. N100 speakers will shepherd you through.

Taming Volatility

Globally Unchained

Keeping the Lights ON

Geopolitics & Defense

17:00 - 17:15

## **Mini Break**

17:15 - 18:00

Trio

## **Technology, Trust & Governance and Human Rights**

### **Nestor Maslej**

Stanford Institute for Human Centric AI, AI Index Report 2022

### **Claudia May Del Pozo**

Executive Director, C Minds Eon Resilience Lab

### **Andrew Thompson**

Balsillie School of International Affairs

18:00 - 18:10

Closing

## **Closing**

Odessa Primus & Michal Koran, GARI

Ann Fitz-Gerald & Andrew Thompson, BSIA

9:00 - 9:45

Morning  
Reflections

## Morning Reflections from Day I

### Andrew Thompson

Balsillie School of International Affairs, CIGI

### Nestor Maslej

Stanford Institute for Human Centric AI, AI Index Report 2022

### Claudia May Del Pozo

Executive Director, C Minds Eon Resilience Lab

### Adam Pease

CEO & principal consultant, Articulate Software

10:00 - 10:15

Opening

## Opening of Day II

Odessa Primus & Michal Koran, GARI

10:15 - 10:45

Spotlight

## Future of Energy & Physics

### Frederick Bordry

Scientific Advisor, Former Director of CERN

Scientific Advisor to various start-ups and projects using particle accelerators. Recently SLAC National Accelerator Laboratory, operated by Stanford University, USA.

10:45 - 11:30

One on One

## War and Security in the Digital Age

### David Welch

Research Chair, University of Waterloo

### Ann Fitz-Gerald

Director, Balsillie School of International Affairs

11:30 - 12:00

**Break**

12:00 - 13:30

**Discussion Roundtables**

See next page for details on each session

**Room**

### Trends & Common Misconceptions in AI, & | AI for Reasoning

**142**

Josef Urban, Tomas Mikolov (virt), Nestor Maslej, Theresa Kushner, Adam Pease, Daniel Araya, Claudia May Del Pozo, Odessa Primus, Vijay Ganesh

### The Next Black Swan? Building Resilience

**120B**

David Welch, Jeffrey Saunders, Edward Wilson-Smythe, Dan Ciuriak, Michal Koran

### Disruptive technologies in energy and the green transition

**123**

Tim Palmer (virt), Jatin Nathwani, Frederick Bordry, Ann Fitz-Gerald, Peter Bauer (virt)

13:30 - 15:00

**Lunch**

Discussing a topic in detail with clear positions, suggestions, application possibilities, and strategic or structural designs for a topic solution or illumination. N100 Roundtables are the core of the program.  
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12:00 - 13:30

Room

## Trends in AI & Common misconceptions in AI, AI for Reasoning

Josef Urban, Tomas Mikolov (virt), Nestor Maslej, Theresa Kushner, Adam Pease, Daniel Araya, Claudia May Del Pozo

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This roundtable will focus on the most recent advances in the field of AI reasoning, one of the key areas for AI-assisted processing and understanding of natural language in a complex environment, thus, leading to large-scale problem-solving and decision-making assistance. This roundtable will discuss news trends, obstacles, and goals of AI-reasoning research, its implication for decision-making across various socio-economic fields, but also on popular misconceptions when it comes to AI and its role in the future of humanity.

## The Next Black Swan? Building Resilience

David Welch, Jeffrey Saunders, Edward Wilson-Smythe, Dan Ciuriak

120B

The Next Black Swan? (forecasting, building resilience, scenarios, risk management capacity, innovation capacity, tools, radar - awareness, past (true/false) "Black Swans")

"Black Swans" and perhaps "Grey Rhinos" quickly became part of everyday's vocabulary of the policy wonks. This roundtable will, first, take a closer look at what we actually mean - or should mean - by the "black swan" events. Second, the roundtable will dive deep into the question, whether the marriage of big-data, AI-driven analytics and human-centered scenario and forecasting techniques can offer more responsive tactics to deal with unexpected unknowns, thus contributing to a more solid resilience of institutions, businesses and society as a whole.

## Disruptive technologies in energy and the green transition

Tim Palmer (virt), Jatin Nathwani, Frederick Bordry, Peter Bauer (virt)

123

What are the transformative technologies and solutions when it comes to green transition? What are the most promising fields of innovation, what is the low-hanging fruit and what should be our ambitions in this area? Also, the round table will reflect the unavoidable - and often negative - social impact on those regions and societies that are more vulnerable and less prepared for the complex socio-economic transformation that both green and digital transition bring about. The roundtable will - among others - cover the governmental and business perspectives and their struggle to reconcile the short-term need for affordable energy with longer-term need to transition to renewal sources of energy.

13:30 - 15:00

Lunch

13:30 - 15:00 Lunch

15:00 - 15:45

Trio

## Disruptive technologies in supply chains and trade

### Dan Ciuriak

CIGI Fellow, Consulting Economist specializing in International Trade, Finance and Development with Ciuriak Consulting, previously deputy chief economist at the Department of Foreign Affairs and International Trade (now Global Affairs Canada)

### Paul Samson

President of the Center for International Governance Innovation (CIGI)

### Michal Koran

Founder, Global Arena Research Institute

15:45 - 16:15

Spotlight

## Digital Twin of the Globalised World - GARI

### Michal Koran

Founder & President, Global Arena Research Institute

Leveraging Big Data & AI to understand and project global processes

16:15 - 16:30

Closing

## Closing

Odessa Primus, Michal Koran & Ann Fitz-Gerald



Centre for International  
Governance Innovation



T A  
Č R

Tento projekt je spolufinancován se státní podporou Technologické agentury ČR v rámci Programu Centra kompetence.

[www.taacr.cz](http://www.taacr.cz)  
Výzkum užitečný pro společnost.

# Speakers

## Ian Anthony

Dr Ian Anthony is Director of SIPRI's European Security Programme. He has published numerous books on issues related to arms control, disarmament and export control. Subject expertise: Arms control, disarmament, export control, nuclear security, non-proliferation and threat reduction, methodology. Regional expertise: Europe, Russia, China.

## Daniel Araya

CIGI senior fellow, a senior partner with the World Legal Summit, and a consultant and an adviser with a special interest in artificial intelligence, technology policy and governance. At CIGI, his work contributes to research on autonomous systems in global governance and looks specifically at the best ways to mitigate the negative effects of the widespread deployment of new technologies. Daniel is a regular contributor to various media outlets and organizations such as Forbes, the Brookings Institution, Futurism and Singularity Hub. He has been invited to speak at a number of universities and research centres, including the US Naval Postgraduate School and Harvard University.

## Jim Balsillie

Jim Balsillie's career is unique in Canadian business. He is a former Chairman and co-CEO of Research In Motion (BlackBerry), a Canadian technology company he scaled from an idea to \$20 billion in sales globally. He is the co-founder of the Institute for New Economic Thinking, the Council of Canadian Innovators (CCI), the Centre for International Governance Innovation (CIGI) and the CIO Strategy Council. He currently chairs the boards of CCI and CIGI and a co-Chair of CIOSEC. He is the founder of the Balsillie School of International Affairs, Arctic Research Foundation and the Centre for Digital Rights. He is a member of the Global Advisory Board of the Stockholm Resilience Centre and an Honorary Captain of the Royal Canadian Navy.

Mr. Balsillie was the only Canadian ever appointed to US Business Council and the sole private sector representative on the UN Secretary General's High Panel for Sustainability. He is the only Canadian member of the US Council on Competitiveness and an internationally renowned voice on innovation strategy, competitiveness and international economic policy. He testified to the US Senate on America Innovates Act, a landmark legislation for management of intellectual property.

Mr. Balsillie holds degrees in a Bachelor of Commerce from University of Toronto, an MBA from Harvard Business School and is a fellow with Institute of Chartered Accountants of Ontario.

His awards include: several honorary degrees, Mobile World Congress Lifetime Achievement Award, India's Priyadarshni Academy Global Award, GSMA Lifetime Achievement Award, Canadian Business Hall of Fame, Time Magazine's World's 100 Most Influential People and three times Barron's list of "World's Top CEOs."

## Shmuel Bar

Peter Bauer is the Director of Destination Earth at ECMWF and responsible for implementing ECMWF's contribution to this European Commission-funded flagship action. This responsibility requires a strong engagement with the European Space Agency and with wider stakeholder communities from academia, national research centres and meteorological-hydrological services across the EU. Peter began as a scientist for the ECMWF, then becoming Heads of divisions for a number of years before becoming Director in January of 2022. Peter has a Master's degree in meteorology from the University of Cologne, Germany, and a Doctorate degree in meteorology from the University of Hamburg, Germany.

## Peter Bauer

Peter Bauer is the Director of Destination Earth at ECMWF and responsible for implementing ECMWF's contribution to this European Commission-funded flagship action. This responsibility requires a strong engagement with the European Space Agency and with wider stakeholder communities from academia, national research centres and meteorological-hydrological services across the EU. Peter began as a scientist for the ECMWF, then becoming Heads of divisions for a number of years before becoming Director in January of 2022. Peter has a Master's degree in meteorology from the University of Cologne, Germany, and a Doctorate degree in meteorology from the University of Hamburg, Germany.

### **Frederick Bordry**

Frederick Bordry served as the director for Accelerators and Technology at CERN until December 2020. He is an electrical engineer who has spent years teaching and conducting energy conversion research. Bordry came to CERN in 1986, joining the group working on power converters for the Large Electron-Positron Collider (LEP). In 2009, Bordry was promoted to Head of the CERN Technology Department - responsible for technologies specific to existing particle accelerators, facilities and future projects – where he remained until 2013. From 2014 he acted as the Director for Accelerators and Technology, where he is responsible for the operation and exploitation of the whole CERN accelerator complex, with particular emphasis on the LHC and for the development of new projects and technologies.

### **Dan Ciuriak**

Senior fellow at CIGI, where he is exploring the interface between Canada's domestic innovation and international trade and investment, including the development of better metrics to assess the impact of Canada's trade agreements on innovation outcomes. Based in Ottawa, Dan is the director and principal of Ciuriak Consulting, Inc.

Dan is also a fellow in residence with the C. D. Howe Institute, a distinguished fellow with the Asia Pacific Foundation of Canada and an associate with BKP Economic Advisors GmbH of Munich, Germany. Previously, he had a 31-year career with Canada's civil service, retiring as deputy chief economist at the Department of Foreign Affairs and International Trade (now Global Affairs Canada).

### **Bob Fay**

Robert (Bob) Fay is the managing director of digital economy at CIGI. He is also a member of the 2020–2021 Information and Privacy Commissioner of Ontario (IPC) Ad Hoc Strategic Advisory Committee, providing feedback on the priorities the IPC will focus on over the next five years. Prior to joining CIGI, Bob held several senior roles at the Bank of Canada (BoC), most recently as senior director overseeing work to assess developments and implications arising from the digitization of the Canadian economy. He has also led the BoC's Canadian short-term forecasting team and set up and led its first research division related to structural analysis, focusing on labor markets, productivity and exchange rate analysis. Bob was also special assistant to BoC Governor Mark Carney, serving as the governor's chief of staff.

### **Vijay Ganesh**

Dr. Vijay Ganesh is an associate professor at the University of Waterloo and the Co-Director of the Waterloo Artificial Intelligence Institute. Prior to joining Waterloo in 2012, he was a research scientist at MIT (2007-2012) and completed his PhD in computer science from Stanford in 2007. Vijay's primary area of research is the theory and practice of SAT/SMT solvers aimed at AI, software engineering, security, mathematics, and physics. In this context he has led the development of many SAT/SMT solvers, most notably, STP, Z3 string, MapleSAT, and MathCheck. He has also proved several decidability and complexity results in the context of first-order theories.

### **Ann Fitz-Gerald**

Ann Fitz-Gerald is the Director of the Balsillie School of International Affairs and a Professor in Wilfrid Laurier University's Political Science Department. She has worked at both at King's College, London University's International Policy Institute, and at Cranfield University, where she was the Director, Defence and Security Leadership.

Ann is widely published on issues concerning conflict, national security and security sector governance. She holds Visiting Professor at other universities including Nkumba University (Uganda), Jimma University (Ethiopia), Njala University (Sierra Leone) and Queen's University (Canada). Ann has advised, and has been seconded to work with, a number of countries on issues relating to national security policy/strategy issues including Ukraine, Lebanon, Canada, Ethiopia, Afghanistan, Nepal, Botswana, Jamaica, Indonesia, Sierra Leone, Albania, Montenegro and Nigeria. She has also supported internationally sponsored peace talks including support to the AU High Implementation Panel during the post-referendum peace talks between North and South Sudan.

### **Patricia Goff**

Patricia Goff (PhD Northwestern) is Professor of political science at Wilfrid Laurier University and Senior Fellow at the Centre for International Governance Innovation, Waterloo, Canada. She has held visiting positions at the School of International Relations, University of Southern California and the Graduate Institute of International and Development Studies in Geneva. *Continuation on next page*



Author of *Limits to Liberalization: Local Culture in a Global Market Place* (Cornell University Press) and editor of *Trade and Culture: The Ongoing Debate* (Routledge Press). She is co-editor of *Identity and Global Politics: Empirical and Theoretical Elaborations*, *Irrelevant or Indispensable: The UN in the 21st Century* and *The Multilevel Politics of Trade*.

### **Florian Kerschbaum**

Associate professor in the David R. Cheriton School of Computer Science at the University of Waterloo (since 2017), a member of the CrySP group, and NSERC/RBC chair in data security (since 2019). Before he worked as chief research expert at SAP in Karlsruhe (2005 – 2016) and as a software architect at Arxan Technologies in San Francisco (2002 – 2004). Florian holds a Ph.D. in computer science from the Karlsruhe Institute of Technology (2010) and a master's degree from Purdue University (2001). He served as the inaugural director of the Waterloo Cybersecurity and Privacy Institute (2018 – 2021). An ACM Distinguished Scientist (2019) and a winner of the Outstanding Young Computer Science Researcher Award from CS-Can/Info-Can (2019). Interested in security and privacy in the entire data science lifecycle. Florian extends real-world systems with cryptographic security mechanisms to achieve (some) provable security guarantees. His work is used in several business applications.

### **Michal Koran**

Michal Kořan is the President of the Board and founder of the Global Arena Research Institute an Assistant Professor at the Faculty of Social Sciences, Masaryk University in Brno. In 2017 and 2018, he has served as a Deputy Executive Director of the Aspen Institute Central Europe. Until June 2017, he was a Senior Research Fellow at the Institute of International Relations based in Prague (Czech Republic) where he previously acted as a Deputy Director (2013 – 2016) and a Head of Research (2009 – 2013). In 2012, he was a Fulbright Visiting Scholar at the Weatherhead Center for International Affairs at Harvard University. In 2007 – 2017, he was the lead-author of an annual book analyzing Czech foreign policy and founder and programme chair of an annual International Symposium Czech Foreign Policy. In 2013 – 2014 he was a vice-chairman of the Program Council of the Czech-Polish Forum. He was, among others, a national co-coordinator of the Think Visegrad platform, a main coordinator of the Strategic Grant of the International Visegrad Fund The Visegrad Group in the Post-Lisbon EU: Getting Closer to Move Further as well as the strategic IVF grant V4 CARE ARSEC.

### **Theresa Kushner**

Theresa Kushner is the Head of the North American Innovation Center for NTT DATA Services. For over 25 years she has led companies - like IBM, Cisco Systems, VMware, Dell/EMC, and NTT DATA - in recognizing, managing, and using information and data. Using her expertise in journalism, she co-authored two books on data and its use in business. Theresa has a Master's in journalism from the University of North Texas which she has turned into a career in technology.

### **Michael Lawrence**

Dr. Michael Lawrence uses complexity science to understand the coevolution of conflict, violence, and social structure, and through this work he has developed expertise on global governance, societal collapse, the psychology of dehumanization, transnational organized crime, and peacebuilding. Michael Lawrence is a Post-Doctoral Researcher at the Cascade Institute (CI) at Royal Roads University, where he leads the Complexity Education for Action project, which integrates complexity thinking into multiple levels of education to better address the global challenges of the twenty-first century. He has published several CI policy briefs on COVID-19 recovery in relation to a Green New Deal, global inequality, and the risks of economic depression.

### **Nestor Maslej**

Nestor Maslej is a Research Associate at Stanford's Institute for Human-Centered Artificial Intelligence (HAI). In this position, he uses a combination of quantitative and qualitative methodologies to conduct research for the AI Index and Global AI Vibrancy Tool. Nestor also leads research projects that study AI in the context of technical advancement, ethical concerns and policymaking. In developing tools that track the advancement of AI, Nestor hopes to make the AI space more accessible to both policymakers and citizens. His work is also oriented towards building knowledge about AI in a way that facilitates more productive dialogues surrounding its future and can lead to its development in ethically responsible ways. Prior to joining HAI, Nestor worked in Toronto as an analyst in several startups. He graduated from the University of Oxford in 2021 with an MPhil in Comparative Government, where he used machine learning methodologies to study the Canadian Indian Residential schooling system and Harvard College in 2017 with an A.B. in Social Studies.

### **Trevor McCrisken**

Associate Professor in US Foreign Policy, US Politics & Culture at the University of Warwick. His main research currently focuses on the narratives being constructed around the use of Unmanned Aerial Vehicles (UAVs), commonly known as drones, and their use for targeted killing.

Trevor McCrisken's research and teaching interests are in US foreign policy and US politics with a focus on the use of US military force, counterterrorism, national security policy and the ideational bases for US foreign policy. His current major research project focuses on the narratives constructed around the use of drones for 'targeted killing'. He is also researching the prospects for 'transformative' US security policy. Furthermore he has published research on the co-constitutive relationship between international relations and popular culture. He has been a North America Region Head with the political consultancy group Oxford Analytica since 2002 and was Chair of the British American Security Information Council (BASIC) from 2007-2020. Recent publications include a co-authored book with Jon Herbert and Andrew Wroe, *The Ordinary Presidency of Donald J. Trump* (Palgrave, 2019).

### **Tomas Mikolov**

Internationally recognized capacity in artificial intelligence research, who has worked to improve the Google translator, among other things. His arrival at CIIRC ČVUT was also possible thanks to the project of the new RICAIP center, by which CIIRC ČVUT, together with partners from the Czech Republic and Germany, wants to strengthen its role in the European field of artificial intelligence and robotics research for advanced industry. Tomáš Mikolov is known to the scientific community and the general public mainly for his leap improvement in the functioning of language recognition and processing applications, such as the Google machine translator. He succeeded in creating new models of neural networks that significantly surpassed previous approaches to language modeling. The improvements that have taken place in the field of natural language processing have been the greatest in the last few decades. At the beginning of 2019, he won the Neuron Award for Significant Discovery in Computer Science.

### **Jatin Nathwani**

Professor Jatin Nathwani is the founding Executive Director, Waterloo Institute for Sustainable Energy (WISE) at the University of Waterloo. As the inaugural Ontario Research Chair in Public Policy for Sustainable Energy (2007-2020), he has led research initiatives on accelerating energy transitions for a zero-carbon economy through systems assessments of technology, financing strategies, risk management and public policy. He also co-Directs with Prof Joachim Knebel (Karlsruhe Institute of Technology, Germany) the Global Change Initiative – Affordable Energy for Humanity (AE4H). The consortium comprises 150+ leading STEM and social science researchers, energy access thought leaders and practitioners from 50 institutions in 30 countries committed to eradicating energy poverty by 2030. His organization, WISE, aims to foster research and development for clean energy solutions that remain accessible and affordable for all. Professor Nathwani has also worked in a leadership capacity in the Canadian energy sector for 30 years.

### **Tim Palmer**

Tim Palmer is a Royal Society Research Professor in Climate Physics, and a Senior Fellow at the Oxford Martin Institute. He was involved in the first five IPCC assessment reports and was co-chair of the international scientific steering group of the World Climate Research Programme project (CLIVAR) on climate variability and predictability. For a large part of his career Tim has developed ensemble methods for predicting uncertainty in weather and climate forecasts. In 2020 Tim was elected to the US National Academy of Sciences. His work explores questions around where climatic processes on different space and time scales interact. He has also developed and worked on the application of weather and climate forecasts systems for malaria prediction, flood forecasting, crop yield estimation, and more. Most recently his research has focused on simulating climate at extremely high resolution

### **Adam Pease**

Adam Pease is CEO and principal consultant of [Articulate Software](#). His research is centered on the [Suggested Upper Merged Ontology](#), and [Sigma](#) ontology environment. [Video blog](#). For the past 20+ years he has been developing a specification of tens of thousands of relationships, processes and objects in an expressive mathematical logic. This allows them to perform data development in a similar way to the development of procedural software development - through massive reuse of existing code, instead of development from scratch. (*continuation on next page*)

Because of the use of an expressive logic, they can use automation to check for the consistency of the definitions of concepts, in the same way that we can check modern software languages for consistency of types, but with the full power of an expressive logic instead of a simple set of types. These explicit definitions mean that no longer do developers have to rely on their intuitions about the meaning of terms, or to seek out the colleagues who created them in order to understand intended semantics.

### **Claudia May Del Pozo**

Claudia Del Pozo is the Director of the Eon Resilience Lab at C Minds. Her work equips individuals with the knowledge and key skills they need to take advantage of the impact of new technologies, working with companies and governments to guarantee a fairer and more inclusive future for all people. She is working on a practical guide for the development and ethical adoption of artificial intelligence (AI) systems within Latin American companies, is co-designing an agenda for the future of work in León, Mexico, and is leading a prototype of public policies for more transparent and explainable AI systems in collaboration with Facebook and the Inter-American Development Bank (IDB) with the support of the National Institute of Transparency, Access to Information and Personal Data Protection (INAI). She has just published a paper in the digital magazine Agua de Limón on the impact of product standardization and automation on gender equality. Claudia is a Ted speaker, has previously worked at IBM Germany, and is a graduate at Warwick Business School in the UK.

### **Tony Curzon Price**

Tony Curzon-Price is the Senior Advisor at the UK Cabinet Office (which supports the Prime Minister and ensures the effective running of government). Before this, he was the Economic Advisor to the Rt Hon Greg Clark MP, Secretary of State for Business, Energy, and Industrial Strategy. He worked closely on the elaboration of the UK's Industrial Strategy White Paper, as well as on government responses to GAFA, climate change policy and competition and consumer policy. He has previously worked for the Financial Conduct Authority and the Competition and Markets Authority. He founded Arithmatica, a Silicon Valley design company, and spent five years building the company in the Bay Area. He was also editor-in-chief of the UK political website openDemocracy, where he transformed openDemocracy into a not-for-profit editors' cooperative for comment, analysis and investigation. He wrote his PhD on game theory and market design with Ken Binmore at UCL.

### **Odessa Primus**

Odessa Primus is the Executive Director of the Global Arena Research Institute, as well as the Coordinator of its flagship annual event the Next 100 Symposium. She is also the main host of GARI's podcast Last Week on Earth with the GARI. She is the holder of numerous awards and distinctions as a young leader including Young Leader for Europe at the European Commission's European Development Days 2017, European Forum Alpbach - as an Erste Foundation & National Endowment for Democracy fellow; Advisor on the UNSC Resolution 2250 on Youth, Peace & Security, and One Young World scholarship holder. Until January 2017, she worked as a humanitarian worker in response to the 2015/16 refugee and migration crisis in Europe. In 2017, Odessa founded Go Think Initiative, a think tank focused on the development of media and its impact on politics and society, analyzing trends in communication technology.

### **Paul Samson**

President of the Center for International Governance Innovation (CIGI). Proven senior thought leader in Canada and globally. Inclusive style through vision, action, and example. World-class skills in development and management of complex policy issues across the public, private and nonprofit sectors, and consensus building across diverse groups. Deep knowledge and experience in global economics and finance, environment, innovation and digitization, agriculture and international development. For example, as co-chair, led key G20 working group on the global economy during 4+ years, in different cities across the globe. Exceptional track record in developing effective strategies and tactics to deliver results. Bilingual (ENG-FR) and highly multi-culturally literate.

### **Jeffrey Saunders**

Jeffrey Saunders is the CEO of Nordic Foresight and is an expert in strategic futures studies and foresight with 18 years of experience. He formerly served as Director, Copenhagen Institute for Futures Studies, and led their Strategy and Innovation. He also served as an onsite advisor at the Office of the Secretary of Defense, Stability Operations. *(continuation on next page)*

He further served as a policy analyst and advisor at the Strategic Assessment Center at SAIC, where he advised the Office of Net Assessments at the Department of Defense and other government agencies. He has conducted foresight exercises for Fortune 100 organizations and governments. He has authored over 30 articles, reports, book chapters, etc., on the future work and the future of the built environment. He also authored 17 ethnographic analyses of subnational and organizational cultures along the Andean Ridge, North Africa, and the Middle East.

### **Andrew Thompson**

Adjunct assistant professor of political science at the University of Waterloo, senior fellow at the Centre for International Governance Innovation, and the Global Governance Programs and Partnership Manager at the Balsillie School of International Affairs. Andrew is the author and co-editor of five books, focusing mainly on human rights issues. He has also appeared as an expert witness before the Canadian House of Commons Standing Committee on Foreign Affairs and International Development, and the Canadian Senate Standing Committee on Human Rights. In 2004, he was part of an Amnesty International human rights lobbying and fact-finding mission to Haiti. In 2016, he participated in a number of United Nations consultations on issues of reform of the global refugee protection system, and in 2017 was named Special Advisor to the World Refugee Council.

### **Josef Urban**

Distinguished researcher at the Czech Institute of Informatics, Robotics and Cybernetics (CIIRC) heading the ERC Consolidator project AI4REASON. Before that he was a postdoc researcher in the Foundations Group of ICIS at the Radboud University, Nijmegen, an assistant professor at the Department of Theoretical Computer Science and Mathematical Logic at Charles University in Prague (co-founded the Prague Automated Reasoning Group), and a Marie-Curie fellow at the Department of Computer Science at University of Miami. (Scientific CV). Interested in automated reasoning in large semantically specified knowledge bases (some people call this "strong artificial intelligence"). It involves automated deductive reasoning (automated theorem proving), inductive reasoning (machine learning and discovery) and their combining. Also involved in formalization and computer-verification of mathematics (see the QED Manifesto), especially in Mizar.

### **David Welch**

David A. Welch is University Research Chair and Professor of Political Science at the University of Waterloo and at the Balsillie School of International Affairs. At BSIA, he is part of the Conflict and Security and Global Institutions, Diplomacy and Justice research clusters. His 2005 book *Painful Choices: A Theory of Foreign Policy Change* (Princeton University Press) is the inaugural winner of the International Studies Association ISSS Book Award for the best book published in 2005 or 2006, and his 1993 book *Justice and the Genesis of War* (Cambridge University Press) is the winner of the 1994 Edgar S. Furniss Award for an Outstanding Contribution to National Security Studies. He has also authored several other books and publications.

### **Edward Wilson-Smythe**

Edward Wilson-Smythe is an entrepreneurial executive with proven success in establishing and leading high-growth technology and consulting businesses focused on digitally-accelerated business model, product, pricing, customer, channel, sales and marketing innovation. With diverse experience as a management consultant, innovation strategist and industry practitioner, Edward is a trusted strategic advisor to corporate, government and technology leaders.

Their work focuses on harnessing the power of innovation to drive sustained competitiveness, superior business results and improved social outcomes, through the definition and execution of digital innovation strategies, integrated solutions and innovation partnerships for strategic clients. Edward is a frequent speaker at leading innovation conferences, author published in major business and technology media, and a co-author of the Amazon best-seller – “Digital Singularity: A Case for Humanity”. Edward has a Master of technology law from the University of Southampton, and a Doctorate of Business Administration from California Coast University.