**Technological Forecasting and Social Change Special Conference**

**Conference theme:**

**Managing Technology and Society in an Era of New Geopolitics**

**Venue: National Tsing Hua University, Hsinchu, Taiwan**

**Date: 28-30 OCTOBER 2023**

For the past several decades, technology has played an important role to close the gap between developed and developing regions and to facilitate global interdependence. The dominant direction for the world in this period was globalization including global alignment of technology. However, the Covid-19 pandemic, the recent Russia-Ukraine war, and the continuing geopolitical tension between China and the West have significantly changed the trajectory of globalization. Vulnerabilities of the global supply chain have also increased amid concerns over national security as well as technological sovereignty. As a result, major powers today, such as China, EU, Russia, and the US, are actively engaging in strategic competition for technological dominance and influence.

Historically, technology has closely interrelated to geopolitics. On one hand, technological changes are an important factor in geopolitics. For instance, the replacement of coal with oil as the fuel of the battleships of the British Royal Navy before the WWI led to significant elevation of geopolitical importance of oil producing nations. More recently, demand for digital technology has considerably increased the strategic importance of Taiwan thanks to its role in the global semiconductor supply chain. On the other hand, geopolitics also shapes technological diffusion and development. For instance, many argue that geopolitical considerations have driven the recent introduction of the “Chips and Science Act” in the US, which will in turn impact research, development, and production in the global semiconductor industry. Similarly, the proposed “Chip 4” semiconductor alliance aims to promote cooperation among American, Japanese, South Korean and Taiwanese chipmakers as a way to encounter technological competition from China. On China’s part, its “Belt and Road Initiative”, a geopolitical strategy, involves technical cooperation as a key component. These initiatives foreshadow that future technological development is increasingly influenced by geopolitical divisions in the world. In particular while new technology development was once largely based on commercial and economic considerations it is now increasingly shaped by international politics.

Thus, there is an urgent need to improve our understanding of dynamic interactions between and among the study of technology, institutions, society, and geopolitics in this new era of geopolitics. Given the multidisciplinary nature of the topics addressed, we invite research contributions that will help various technology-related stakeholders in a society deal with geopolitical risks and tensions.

**Conference Theme Tracks**

The TFSC special conference aims to explore how, why, and what technologies impact and derive from the new era of new geopolitics in association with seven themes focused by the journal. The issues to explore include, but are not limited to, the following:

**Track A: Emerging Technology**

Track Chairs: Profs Nazrul Islam (TBD)

* How do we explain the effects of changing geopolitics on development of emerging technologies?
* How do inter-state political issues shape or influence emerging technology development?
* Why and how do the impacts of the new geopolitical environment differ between emerging and developed economies?
* Are the emerging earth sensing, satellite, and rocket industries resulting in a second space race?

**Track B: Climate Change**

Track Chairs: Profs Giray Gozgor (confirmed) & Hao Tan (TBD)

* How do decarbonization processes interact with geopolitics?
* To what extent do geopolitical tensions influence the development of clean energy technologies?
* How does the war between Russia and Ukraine impact energy technological, and social development, especially in Europe?
* Do geopolitical risks affect the diversification pattern of energy sources from fossil fuels to renewables?

**Track C: Foresight**

Track Chairs: Profs Heiko Gracht (TBD)

* How can foresight methods be used to help manage geopolitical risks?
* How do geopolitical tensions influence technological forecasting and assessment?

**Track D: Firms and Innovation**

Track Chairs: Profs Stefano Bresciani (confirmed) & Domingo Ribeiro-Soriano (TBD)

* How are technological innovation of firms in different regions impacted by the new geopolitics and vice versa?
* How and to what extent do firm-government relationships affect business models and technological innovation activities?
* How do firms in different regions utilise geopolitical risk indices for their innovation activities?

**Track E: National Policies**

Track Chairs: Profs Simplice Asongu (TBD)

* How do geopolitical risks influence national technology policy?
* How is transnational innovative activity hindered or helped given the geopolitical reality?
* What role do political regimes play in affecting technology policy and governance given a new geopolitical environment?
* How can a nation state best promote its own technological sovereignty amid geopolitical challenges?
* What are the respective roles of the state and the private sector in the sourcing of new technology?
* How does supply chain resilience affect local and international sourcing of components and key materials?

**Track F: Diffusion Modeling**

Track Chairs: Profs Yuya Kajikawa (TBD)

* How do geopolitical tensions influence technology adoption or diffusion?
* How is technology influencing global decoupling?
* How do technological rules, regulations and standards diffuse across nation states?

**Track G: New Products and Markets**

Track Chairs: Profs Alexander Brem (TBD)

* How do geopolitical tensions influence new product development and what are the implications for market analysis?
* How are new platform market places challenging or changing the role of state, regional and local authorities?
* What new products are created, adapted, and diffused in response to this new era of geopolitical concern?
* What new markets are created, adapted, or extended in response to this new era of geopolitical activity?
* How do digital innovation and transformation impact new products and markets in the context of the new geopolitics?

**Submission Guidelines**

**Only extended abstract or full paper submission is accepted. You are encouraged to submit a full paper if you wish to participate in a paper development workshop for a TFSC special issue (SI) on a similar theme held by the special issue editors in the conference. The SI editors will invite authors of a selection of papers to the workshop to discuss their papers, although all submissions to the SI need to go through the journal’s review process later.**

* For paper submission, please follow TFSC submission guideline, available at <https://www.elsevier.com/journals/technological-forecasting-and-social-change/0040-1625/guide-for-authors>.
* Extended abstract should not exceed a total of **5 pages and at least 2000 words**, inclusive of up to two pages of references and any charts, graphs, diagrams, etc.
* Please use single spacing and 10-point font or larger.
* Paper may be formatted in one column or two columns.
* Please submit your paper in PDF format. MS Word will also be accepted.
* The title entered in the submission system form should match the title listed in the header of each page in the proposal document. This title should not exceed 15 words.
* **References are required and must be included in the document.**
* Submissions must be accompanied by a 125-word abstract for inclusion in the Conference Program. This will be entered directly into the submission form, so it does not need to be included in the abstract/full paper document.
* **Only submissions through the online submission system will be accepted**.
* To preserve anonymity, author names should NOT be identified in header/footer or in the body of the proposal document. Instead, authors will be entered into the online submission form.
* If you are not the sole author of a proposal, **you must list all co-authors in the online submission form in the order of contribution.**
* **Maximum of two (2) papers, either as an author or a co-author, may be submitted.**
* **Originality:**

We seek original, unpublished work to move the scholarly conversation forward. Contributions may be rooted in or derived from prior work, but the submitted proposal must reflect significant development. Any proposal submitted that is judged to be identical or substantially similar to work already published, presented, or under review for another conference or publication might not be considered or be subject to exclusion at any time before the conference.

**Official Statement about the Origin and the Purpose of the Conference**

Technological Forecasting and Social Change (formerly Technological Forecasting) is a peer-reviewed academic journal published by Elsevier which discusses futures studies, technology assessment, and technological forecasting. Articles focus on methodology and actual practice, and have been published since 1969.

The editors-in-chief are Scott Cunningham (University of Strathclyde) and Mei-Chih Hu (National Tsing Hua University). According to the Journal Citation Reports, the journal has a 2021 impact factor of 10.884 (<https://www.sciencedirect.com/journal/technological-forecasting-and-social-change>). Technological Forecasting and Social Change is a major forum for those wishing to deal directly with the methodology and practice of technological forecasting and future studies as planning tools as they interrelate social, environmental and technological factors. It provides a platform for Interaction of technological change with social/organizational change and problems of forecasting, adoption, diffusion, and implementation of new technologies.

Within those frames, Technological Forecasting and Social Change holds a strong interest in:

* Emerging Technology
* Climate Change
* Foresight
* Firms and Innovation
* National Policy
* Diffusion Modelling
* New Products and Markets

In such dynamic and uncertain time, there is an urgent need to improve our understanding of dynamic interactions between and among the study of technology, institutions, society, and geopolitics in this new era of geopolitics. Given the multidisciplinary nature of the topics addressed, we invite research contributions that will help various technology-related stakeholders in a society deal with geopolitical risks and tensions.

**Invited Speakers**

The following three international well-known academics in the studies of Technological Forecasting and Social Change will be invited as keynote speakers to share their view and insights about the current industrial change in the era of new geopolitics.

* **Fred Y. Phillips, Professor and Emeritus Editor of Technological Forecasting and Social Change, SUNY Stony Brook University, USA.**

Dr. Fred Philips is a Professor and currently the affiliate faculty at Alan Alda Center for Communicating Science, SUNY Stony Brook University, [www.aldacenter.org](http://www.aldacenter.org), He is the 2017 winner of the Kondratieff Medal, awarded by the Russian Academy of Sciences. He is a Fellow of PICMET, the Portland International Conferences on Management of Engineering & Technology. He has published four books, El Gerente Consciente: Zen para los que toman decisions, LuLu, 2018; What About the Future? New perspectives on planning, forecasting and complexity Springer, 2019; Learning and Teaching Aikido. World Scientific, 2021; Smart City 2.0: Strategies for City Development and Innovation, World Scientific, Singapore, 2022.

* **Scott Cunningham, Professor and Co-Editor-in Chief of Technological Forecasting and Social Change, School of Government and Public Policy,** **University of Strathclyde, UK**

Scott Cunningham is the chair of Urban Policy Analysis at the School of Government and Public Policy at the University of Strathclyde. He is the author of several books on technological forecasting, including forecasting and management of technology and tech mining. He is the co-editor-in-chief of the journal of Technological Forecasting and Social Change since 2021.

* **Keun Lee, Professor and Asian Editor of Research Policy, National Seoul University, Korea. (TBD)**
1. **Organizing Committee**
* Scott Cunningham, University of Strathclyde, UK
* Mei-Chih Hu, National Tsing Hua University, Taiwan
* Asongu, PhD, University of Johannesburg, Auckland Park, South Africa
* Brem, Dipl.-Kfm., IEEESM, University of Stuttgart, Stuttgart, Germany
* S. Bresciani, University of Turin, Torino, Italy
* K. R. Cowan, PhD, Portland State University, Portland, Oregon, United States of America
* M. Dabić, University of Zagreb, Croatia Faculty of Economics and Business & Nottingham Trent University, UK, Zagreb Croatia
* Dhir, DSc (Tech), PhD, University of Agder School of Business and Law, Kristiansand, Norway
* D. Domingo Ribeiro-Soriano, PhD, University of Alcala, Alcala De Henares, Madrid, Spain
* M. Fink, Dr., Johannes Kepler University Linz, Linz, Austria
* A. Gok, University of Strathclyde, Glasgow, Scotland, United Kingdom
* G. Gozgor, PhD, University of Bradford, School of Management, Bradford, United Kingdom
* H. von der Gracht, Steinbeis University Berlin, Berlin, Germany
* Y. Huang, Wuhan University School of Information Management, Wuhan, China
* N. Islam, University of Exeter, Exeter, United Kingdom
* H. Jiao, Beijing Normal University, Beijing, China
* Y Kajikawa, Tokyo Institute of Technology School of Environment and Society Department of Innovation Science, Tokyo, Japan
* J.-S. Kang, PhD, National Yang Ming Chiao Tung University, Hsinchu, Taiwan
* R. V. Mahto, University of New Mexico Anderson School of Management, Albuquerque, New Mexico, United States of America
* S. J. Mäkinen, Tamepere University of Technology Department of Industrial Management, Tampere, Finland
* V. Mangematin, Kedge Business School, Marseille, France
* D. Meissner, National Research University Higher School of Economics, Moscow, Russian Federation
* S. Papagiannidis, Newcastle University Business School, Newcastle Upon Tyne, United Kingdom
* F. Schiavone, PhD, University of Naples Parthenope Department of Management Studies and Quantitative Methods, Napoli, Italy
* Y-S Su, National Taiwan Normal University, Taipei, Taiwan
* Suominen, VTT Technical Research Centre of Finland Ltd, VTT, Finland
* H. Tan, The University of Newcastle, Callaghan, New South Wales, Australia
* S.T. Walsh, University of New Mexico Department of Finance International Technology and Entrepreneurship, Albuquerque, New Mexico, United States of America
* Y. Zhang, University of Technology Sydney Australian Artificial Intelligence Institute, Broadway, Australia
1. **Detailed agenda**

A conference website in association with the submission system will be launched by 30 November 2022. Please direct questions about the submission process, or any administrative matter, to the Conference administrator (Email: tfsc2023@gmail.com).

* Call for Submission of Extended Abstract\*: October 2022 (An extended abstract of at least 2000 words and no more than 5 pages)
* Deadline for Submission of Extended Abstract or Full Paper: 30 April 2023
* Notification of Accepted Abstract or Full Paper: 1 June 2023
* Conference Date: 28 -30 October 2023

**Tentative planning for the conference schedule**

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|  **27 Oct, 2023 (Saturday)** |  |
| **18:00 – 21:00** | **Dinner for TFSC committee and board members (By invitation only)** |
| **28 Oct, 2023** |  |
| 9.00am-10.30am | Opening Keynote Speech |
| 10.45am-12.30am | Forum or Speech |
| Lunch Break |
| 2.00pm-3.30pm | 2-3 Parallel Sessions (Track A&B)* Four (4) meeting rooms
* Each room will have 4 to 5 presenters
 |
| 3.45pm-5.00pm | 2-31 Parallel Session (Track C)* Four (4) meeting rooms

Each room will have 4 to 5 presenters  |
| 5.30pm-8:00pm | Banquet (all participants) |
| **29 Oct, 2023 (Sunday)** | **Agenda** |
| 9.00am-10.30am | Keynote speech |
| 10.45am-12.30am | 2-3 Parallel Session (Track D)* Four (4) meeting rooms
* Each room will have 4 to 5 presenters
 |
| Lunch Break |
| 2.00pm-3.30pm | 2-3 Parallel Sessions (Track E&F)* Four (4) meeting rooms
* Each room will have 4 to 5 presenters

**TFSC SI workshop** |
| 3.45pm-5.00pm | 2-3 Parallel Session (Track G)* Four (4) meeting rooms
* Each room will have 4 to 5 presenters
 |
| 5.00pm-7.00pm | Dinner buffet (all participants) |
| **30 Oct, 2023 (Monday)** |  |
| **9:00-10:30am** | Industry Forum |
| **11:00-15:00 (Lunch included)** | Industrial or cultural field trip (for those coming to Taiwan physically) to visit Hsinchu Science or Hakka cultural village* Hsinchu Science-based Park
* ITRI
* TSMC
* Others (TBD)
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| **16:00** | Closing Ceremony |