



UiO • **Centre for Technology, Innovation and Culture**
University of Oslo

ANNUAL REPORT 2022



TIK Centre for Technology – annual report 2022

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TIK – Facts and figures

The TIK Centre at the University of Oslo was established by the senate (now the University Board) as an independent unit organised under the Faculty of Social Sciences in 1999. This unit was a merge of the former Centre for Technology and Human Values (TMV), the interdisciplinary “European master program in Society, Science and Technology” (ESST) and the *Prosjektforum* (project forum, which is no longer a part of the Centre).

The TIK Centre carries out high quality research, education and research communication in the cross-disciplinary fields of innovation and science and technology studies.

Overview of TIK:

Scientific publications (2022)	37
Master programmes	2
Courses (Masters and Ph. D. courses)	11
PhD-students (per 31.12.2022)	28
Scientific man years (2022 - numbers from DBH, including Centre Director)	31,8
Administrative man years (2022 - numbers from DBH)	3,5
Total number of man years (2021 - numbers from DBH)	34,3
Budget (2022)	48 million NOK
Percent of the budget that is financed by external grants (2022)	78 %
Research projects with external financing (2022)	23

Staff changes at TIK

Mid October TIK welcomed Kristin Asdal as new Centre Director.

3 new ph.d students started in 2022: Tanja Knaus, at the RCN project “NorwAI” led by Susanne Bauer, Martin Refseth at the RCN project URBTRANS, led by Tone Huse, and Silje-Marie Svartefoss at the RCN project INTRANSIT, led by Taran Thune. In 2022 TIK announced 4 phd positions and 1 post doctor position, all financed by the University’s basic funding, 4 of these start in 2023.

New postdoctors at TIK were Kejia Yang (NTRANS), Amir Mirzadeh Phirouzabadi (Offlex), and Igne Stalmokaite (CaptureX og NTRANS).

As for the administrative staff Petter Drange Brønstad started as student adviser. Due to a challenging recruiting situation, the phd coordinator position was not permanently filled in 2022, Guro Røstad worked 50 % in this capacity in the autumn semester.

By the end of 2022 the TIK staff moved out of the temporary premises at Ullevål stadion as the renovation work at Eilert Sundt’s Building was done.

Organization

TIK’s current board period is 2020-2023 (with 1 year’s mandate for the temporary academic staff and students). In 2022 the members of the Board were the following:

- Professor Tore Nilssen, Vice Dean for Research and Chair of the board
- Professor Cathrine Holst, Deputy Chair of the board (on research leave autumn 2022)
- Professor Sverre Herstad, Deputy Chair of the board autumn 2022
- Senior researcher Hege Westskog, External member of the board
- Head of Department Thomas Hoholm, External member of the board
- Professor Magnus Gulbrandsen, Permanent academic staff at TIK
- Researcher Hilde Nykamp, Temporary academic staff at TIK
- Research adviser Ingrid Helene Johnsen, Administrative staff at TIK
- Student Jonas Olafsen, Student representative
- Student Ingunn Andresen, Student representative

Research

Research at the TIK Centre is organised in two research groups: the Science, Technology and Culture research group and the Innovation Studies research group.

TIK’s researchers in the Science, Technology and Culture research group are mainly situated within the multidisciplinary field of Science & Technology Studies (STS) and focuses on the ways in which science and technology are shaped, become institutionalized and become involved in politics. Science and technology are viewed as cultural and material practices that can be fruitfully studied from both historical and contemporary perspectives.

The innovation group focuses on understanding the complex and dynamic relationships between the technological, economic and social factors that contribute to innovation in various firms, sectors, regions and countries. The point of departure for this work is that technological change and learning are important driving forces for societal change.

Both groups are active in international networks and initiatives, including the Peder Saether Centre in Berkeley, EU-SPRI and Nordic STS.

In addition to the two groups, climate and the energy transition is a cross-cutting theme at TIK, encompassing researchers from both groups.

Several researchers at TIK have applied for funding from a magnitude of programs and funding agencies, and predominantly the Research Council of Norway. TIK's role is either as project coordinator or as partner in projects hosted by other institutions. Following national and university strategic decisions, TIK has also applied and participated in EU-funded research through the Horizon Europe Research Programs. In 2022, TIK was involved in one project funded by the EU.

4 new projects started in 2022. TIK is partner in 3 RCN-founded projects and one Horizon Europe project.

Research projects at TIK in 2022

PROJECT	PROJECT LEADER	STARTING DATE	FUNDING
OSIRIS	Magnus Gulbrandsen	01-mai-2016	RCN – FORINNPOL NAV
TEMPEST	Fulvio Castellacci	01-des-2016	RCN - via TØI
HappyICT - Responsible Innovation and Happiness: A New Approach to the Effects of ICTs	Fulvio Castellacci	01-des-2015	RCN - SAMANSVAR
GlobOil - The Norwegian oil and gas supply industry in hard times: innovation in global supply chains	Helge Ryggvik	01-jun-2018	RCN - PETROMAKS2
INTRANSIT	Taran Thune	01-jan-2019	NFR – FORINNPOL
Conflicting Transition Pathways for Deep Decarbonization	Allan Dahl Andersen	01-oct-2019	NFR – ENERGIX
BREAD - Building Responsibility and Developing Innovative Strategies for Tackling Food Waste	Julia Szulecka	01-sept-2019	NFR
NTRANS - Norwegian Centre for Energy Transition Strategies	Allan Dahl Andersen	01-aug-2019	RCN - FME - via NTNU
Bridging Boundaries	Susanne Bauer	01-may-2019	DIKU
ResBod - Resisting bodies: The politics and practices of the immune system	Tone Druglitrø	01-Feb-2020	RCN
ValueThreads: Tracing the economy as technology and culture in an emergent value-economy	Kristin Asdal	01-Dec 2020	RCN
Evaluation: Evaluation Optics of the Nation State: The Past, Present and Future of Public Documentation	Hilde Reinertsen	01-Dec-2020	RCN
Urbtrans: Urban Transformation in a Warming Arctic – The continued effects of Nordic colonialism in urban planning and development	Tone Huse	01-Oct-2020	RCN via Univ. of Tromsø
NorwAI - The Norwegian Research Center for AI Innovation	Susanne Bauer	01-Oct-2020	RCN-SFI via NTNU
Riggneringen. 50 år i grenselandet mellom menneskelig kapasitet, teknologi og natur	Helge Ryggvik	01-Dec-2020	Norsk Oljemuseum
STS Methods Lab	Susanne Bauer	01-Nov-2020	RCN - ISPSAM
Innovation, Welfare and Policy: Scientific development and renewal	Fulvio Castellacci	30-Dec-2020	RCN – ISPSAM

of TIK's research group in innovation studies			
OFFLEX	Taran Thune	01-Jan-2021	RCN - Knowledge-building Project for Industry via Sintef Energy
Historicizing Intelligence Tests, metrics and the shaping of contemporary society	Susanne Bauer	01-Aug-2021	RCN via KHM/UiO
Beyond responsibility: integrating the ideal of moral imagination into research & innovation	Fulvio Castellacci	01-Sep-2021	NESTA foundation UK
CaptureX: Socio-technical drivers, opportunities and challenges for large-scale CCUS	Allan Dahl Andersen	01-Jan-2022	RCN via Sintef AS
CoPol	Ana Delgado	01-Jan-2022	RCN via Univ. of Bergen
Anthropogenic soils: Recuperating Human-Soil Relationships on a troubled Planet	Susanne Bauer	01-Aug-2022	RCN – Fellesløftet via IKOS/HF/UiO
FUNGATERIA: Enlisting synthetic fungal-bacterial consortia to produce multi-cellular mycelium-based ELMs with computational capability	Ana Delgado	01-Nov-2022	Horizon Europe via KDAK, Copenhagen

In addition, in 2022 TIK had four PhD candidates through the RCN OFFPHD programme, and one NÆRINGSPHD, all organized as externally financed projects.

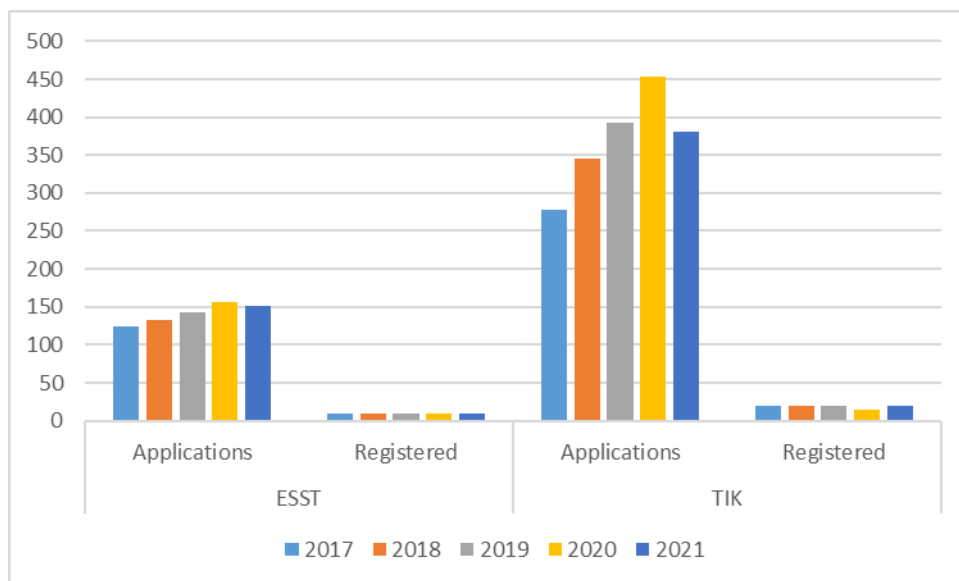
Education

Master programs

TIK offers two programmes at the master level:

- TIK - Technology, Innovation and Knowledge (2 years)
- ESST - Society, Science and Technology in Europe (1,5 years)

40 master students are admitted every year as of 2022. 25 are admitted to the TIK and 15 to the ESST-program. Both programs have experienced a steady rise in applicants during the last five years.



Source: DBH

High quality of applicants

National students can apply to a maximum of three UiO programmes any given year at the master's level. Applicants must then rank the chosen programmes in a prioritized manner.

In 2015, around 100 of the applicants had TIK/ESST as their number one priority. In 2018 this number had increased to 171, and in 2022, the TIK and ESST masters had 142 first priority applicants. The highest number of applicants was recorded in 2020, with 222 first priority applicants for our programmes. The number for the TIK programme is particularly good, with 4,48 first priority applicants for each available place. On average this indicates that a high proportion of the applicants that apply to either the TIK or the ESST programme, put our programmes as their preferred choice.

The grade point average (GPA) of applicants has gradually risen in the 2010s, and from 2020 onwards, the applicants needed a GPA of no less than B or B+ in order to be admitted.

These developments are positive and expected to increase the quality of students that will enroll in TIK's Master programmes in the coming years.

Student magazine: Teknovatøren

Teknovatøren is since 2006 the TIK and ESST students' semi-scientific student magazine. It is partly financed by the TIK Centre.

Editions in 2022:

- #21: Acceleration
- #22: A New Nature

2022 in short

- Degrees completed: 10 TIK, 5 ESST.

PhD – doctoral degree programme

TIK's doctoral track is one of the seven tracks of the doctoral programme that is offered by the Faculty of Social Sciences at UiO. TIK's track aims to provide both research training and a broad base of advanced knowledge in theoretical and methodological approaches within science, technology and innovation studies.

Professor Susanne Bauer has been coordinator of TIK's PhD programme track during 2022.

Disputations

There were three disputations in 2022.

On 29 April Elisabeth Svennevik defended her dissertation “From Automobility to (Auto)mobility: Studies of Car-Sharing Practices in Sustainability Transitions of Mobility Systems”.

On 11 November Bård Lahn defended his dissertation “Carbon connections: On the work of making climate change an issue for politics and government”.

On 11 November Lars Wenaas defended his dissertation “Open access: A Change in Academic Publishing with Limited Reach?”

Candidates

TIK welcomed four new candidates during 2022, and had the following candidates enlisted in the program as of December 31st 2022.

In total TIK had 29 candidates enrolled in the TIK PhD program:

Candidate	PhD project	Supervisor(s)
Stine Engen	Accounts and other valuation tools: How valuation is changing (and resisting change) in the valueeconomy	Kristin Asdal
Tércio Pinho Filho	Actors recomposition in the O&G industry: a case study for adaptation and innovation from subsea suppliers	Helge Ryggvik
Jørgen Finstad	The transition dynamics of complex technologies – lessons from carbon capture and storage	Allan Andersen and Taran Thune
Cyriac George	Transition pathways in context: a socio-technical analysis of hydrogen fuel in the Norwegian transportation sector.	Olav Wicken
Bård Hobæk	Salmon Sustainabilities	Kristin Asdal
Tanja Knaus	Algorithmic Emotion Regulation - the Fusion of Human and Nonhuman Agency in the Workplace	Susanne Bauer
Alina Kontareva	Salvaging and Rebuilding in the Wreckage: Building an Innovative Ecosystem in Post-Soviet Countries	Fulvio Castellacci and Martin Kenney, UC Davies
Joar Kvamsås	The impact of research collaboration on innovation in firms and industries	Magnus Gulbrandsen
Sylvia Lysgård	Hva dreier det seg om? Næringsliv, politikk og praksiser i to norske (miljø)saker.	Göran Sundqvist

Tommas Måløy	Valuation in genomic databases: a case study on the Aqua Genome Project	Kristin Asdal
Helena Nynäs	Valuation of major waterfalls in modern Norway	Sissel Myklebust and Mari Hvattum
Kristin Oxley	Ukonvensjonell, tverrfaglig forskning: Hvordan legge til rette for gode søknadsbehandlingsprosesser	Magnus Gulbrandsen
Martin Refseth	Urban Planning and Development in Nuuk, Greenland 1950-1980	Tone Huse and Inge Seiding (Grønlands University)
Frauke Rohden	Tracing the impact of scientific research in online spaces	Magnus Gulbrandsen and Susanne Bauer
Lisa Scordato	Innovation competence and skills in the public sector for handling unforeseen events	Magnus Gulbrandsen and Glenn-Egil Torgersen (Universitetet i Sørøst-Norge)
Erlend Osland Simensen	Mapping the supplier industry	Taran Thune
Kari-Elisabeth Vambeseth Skogen	The impact of research on policy: an empirical study of the use of scientific knowledge in policymaking in Norway	Taran Thune and Magnus Gulbrandsen, mentor Geir Arnulf
Benjamin Smith	Transformative Research and Innovation Policy for Net-Zero	Taran Thune
Gro Stueland Skorpen	Audit and edit. An ethnography of evaluation documents in offices and online	Hilde Reinertsen and Antonia Walford
Eili Skrivervik	Innovation and technology transfer in field-development projects on Norway, Brazil and U.S. GoM	Taran Thune
Marie Stilling	Nourishing Weeds: Valuating Macroalgae Growth in an Emerging Economy	Kristin Asdal
Silje Marie Svartefoss	Innovation policy and sustainable transition	Taran Thune
Kasper Rogde Søyland	An Innovative Century? The origins for advanced aluminium prefabrication	Olav Wicken and Finn Ørstavik
Tina Naomi Talleraas	Unlocking the Black Box of Nuclear Disarmament: A case study of the Norwegian initiative to re-politicize the bomb	Göran Sundqvist
Hanne Castberg Tresselt	Praksiser og politikk knyttet til forskning på immunsystemet	Tone Druglitrø and Gail Davies
Irene Øvstebø Tvedten	Science and Corporate Policy –DNV GL as an enabler for a sustainable future"	Kristin Asdal and Susanne Bauer

Kjersti Aalbu	Aligning shipping with the Paris Agreement: Expert knowledge, the IMO, and a decarbonised shipping industry in the making	Susanne Bauer and mentors DNV-GL
Jørgen Aarhaug	How can digitalisation and transport innovations contribute to more efficient and sustainable passenger transport in urban agglomerations?	Olav Wicken and Ove Langeland
Sissel Småland Aasheim	The infrastructure of responsibility	Ana Delgado

PhD courses and seminars

TIK9101 Obligatory PhD seminars:

Spring: 14 June 2022

Autumn: 29 November 2022

TIK9011 – Science and Technology Studies: Core PhD Course

19-23 September 2022

TIK9014 – STS Methodologies: Devising Ethnography

3-5 October 2022

TIK9025 – Innovation, Welfare and Policy

14.-17. November 2022

TIK9015 – PhD course: Practice-Oriented Document Analysis

21.-25. November 2022

The last 3 PhD courses were organized within the RCN projects “STS Methods Lab” and “Innovation, Welfare and Policy: Scientific development and renewal of TIK’s research group in innovation studies”, contributing to their aim of strengthen methods competencies by means of establishing and conducting a series of national PhD courses.

TIK is member of two research schools: The Nordic Research School in Innovation and Entrepreneurship (NORSI) and The Norwegian Research School on Digitalization, Culture and Society (DIGIT).

NORSI is a research school for PhD students in the Nordic countries within the field of innovation and entrepreneurship. NORSI works to enhance and strengthen the Nordic innovation and entrepreneurship research education and community.

DIGIT works to overcome the fragmentation of the scientific communities in Norway conducting social and cultural studies of digital technologies, by bringing together and facilitating dialogue between humanities and social sciences and non-academic partners.

Research communication

Web

During 2022, one research-based news article was written for TIK’s web page.

- “Når forskningsdata skal deles fritt”
Interview with Lars Wenaas and Magnus Gulbrandsen from the OSIRIS project about open sharing of research data (At TIK web, 46 page views after its publication in November. The article is still being read with 18 visits the last 60 days).

In addition to “Research News”, TIK webpages have three headlines that report on TIK researchers’ communication activity: “News”, “Publications”, and “TIK i media” (only in Norwegian).

36 shorter news articles/notices were posted online, 34 publications were announced and 5 TIK in media was reported in 202. The list does not cover all activity at TIK, and different research groups/projects/people seem to favour different types, or “lines” of communication and dissemination. This means that the numbers reflect a bias towards some researchers that get more publicity reported on the web page than others. There is no reason to believe that the visibility on the web page reflect degree of involvement in communication and dissemination.

Our web pages in English are viewed 397 times the last 30 days and our web pages in Norwegian are viewed 663 times the same period. This means that TIK produce content on the web that is read in both languages. Our employee's profile pages and our section on "Forskning" (in Norwegian) rank high regarding page views.

Blogs

TIK have two Blogs tied to different research projects that post with different frequency, and with different reach.

Social media

TIK has been on Twitter since 2012 and on Facebook since 2015, where we have published news, events, publications, available positions, TIK Talks, student information etc.

Our Facebook page mainly targeted potential applicants for the master and PhD programs, and alumni.

Seminars and workshops at TIK in 2022

Date	Speaker/Organizer	Title
8.12.2022	Susanne Bauer, Tina Talleraas, Tanja Penter, University of Heidelberg	Nuclear studies in STS
6.12. 2022	Allan Dahl Andersen	Towards transformative investment? On the role of the financial sector in Net-zero transitions TIK, FME NTRANS and INTRANSIT seminar
24.11.2022	Kregg Hetherington, Concordia University, Montreal	STS Methods Lab: On documents, soy beans and how to engage with them in understanding social and political struggles

17.11.2022	Baki Cakici, IT University of Copenhagen	STS Methods Lab: On the methods of the State
10.11.2022	Brice Laurent, Ecole des Mines, Paris	Lunch seminar STS group
2.11.2022	Kari-Elisabeth Vambeseth Skogen	PhD midway seminar: The impact of research on policy: an empirical study of the use of scientific knowledge in policymaking
31.10.2022	Visiting scholar Ask Greve Johansen, AAU	Open Value Threads meeting
11.10.2022	Cyriac George	PhD midway seminar: How does public perception influence the adoption of (low-carbon) technology?
4.10.2022	Hanne Tresselt	PhD midway seminar: How the immune system is made materially and metaphorically in contemporary immunological research, focusing on the concrete practices in the laboratory and in communication with lay publics.
3.10.2022	Gro Stueland Skorpen	PhD midway seminar: Audit and edit. An ethnography of state audit as document, practice and politics
3.10.2022	Brit Ross Winthereik, Technical University of Denmark	Citizen from Hell: An autoethnographic intervention
23.9.2022	Frauke Rohden	PhD final seminar: "Exploring Informal Science Communication Online."
21.9.2022	Jamie Lorimer, University of Oxford	STS Methods Lab: Methodologies for animals' geographies
15.9.2022	Oscar Hartman Davies, University of Oxford	STS meeting on seabirds as sentinels
5.9.2022	Vivi Noahsen, chair of the National Archives of Greenland	Chair: Tone Huse
8.6.2022	Theodor Cojoianu, University of Edinburgh, and August Jepsen,	From Public to Private: Does the Fossil Fuel Divestment Movement Impact Upstream Oil & Gas Divestitures? Intransit-seminar

	independent consultant	
2.6.2022	Jenny Maria Lundgaard, Politihøgskolen	STS Methods Lab: A material narrative of policing - Letting the patrol car tell the story
31.5.2022	Guest researcher Nassima Abdelghafour, Ecole des Mines, Paris	STS Lunch meeting
18.5.2022	Christina Bidmon, Utrecht University	Constructing temporal manoeuvring space: The transition of the car industry to electric cars Intransit-seminar
13.5.2022	Tércio Filho	PhD final seminar A lifecycle perspective on megaproject innovation: new forms of contract and interfirm collaboration in the offshore oil and gas industry.
12.5.2022	Sophia Efstathiou, NTNU	STS Methods Lab: SHAKE STS - Exploring STS through play and performance
11.5.2022	Stephan Bohn, Humboldt institute for Internet and Society and Freie Universität Berlin	Hostile frame takeover: Co-opting the security frame in the German nuclear energy debate Intransit-seminar
4.5.2022	Nadine Arnold, VU Amsterdam	Hostile frame takeover: Co-opting the security frame in the German nuclear energy debate Intransit-seminar
3.5.2022	Eili Skrivervik	PhD final seminar: Industry Transformation in the Norwegian Oil and Gas Industry: Electrification, Policies, and Johan Sverdrup
28.4.2022	Héctor Beltrán, MIT	STS Methods Lab: From Code Work to the Ethnographic Stack
21.4.2022	Marco Vivarelli, Università Cattolica del Sacro Cuore, Milan	May AI Revolution Be Labour-Friendly? Some Micro Evidence from the Supply Side
7.4.2022		Sustainable transition. The challenges of rapid transformative change Seminar in honour of Professor Olav Wicken.

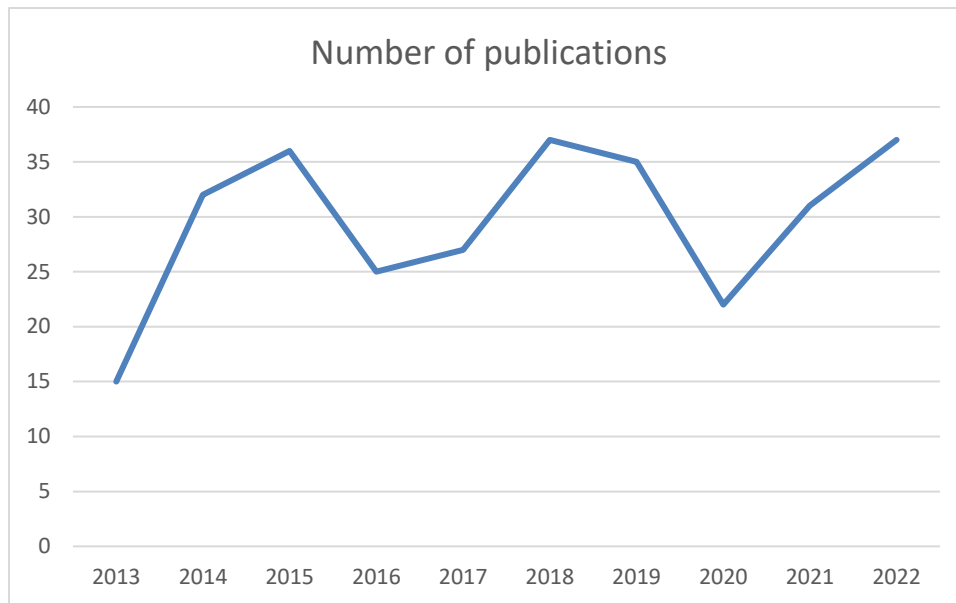
23.3.2022	Jørgen Aarhaug	PhD final seminar: Digitalisation and sustainability transitions in urban passenger mobility
17.2.2022	Antti Silvast, Technical University of Denmark (DTU) and Mikko J. Virtanen, University of Helsinki	STS Methods Lab: On Theory–Methods Packages in Science and Technology Studies
8.2.2022	Jørgen Finstad	PhD midway seminar: The effect of new user sectors on CCS innovation
20.1.2022	Adolfo Estalella, Complutense University of Madrid, and Tomás S. Criado, Humboldt-University of Berlin	STS Methods Lab: The ethnographic invention: Against the method's hegemony
11.1.2022	Alina Kontareva	PhD final seminar: Platform Economies of the Periphery: Competitive Strategies of Platform Firms and the Role of the State (the case of Russia's Platforms)

TIK researchers are also active in external seminars as key speakers, part of panel discussions and other the list above does not reflect this.

Publications

A total of 37 publications were registered in the Cristin database in 2022. This is a slight increase from the previous year (2021: 31), and the same amount as in 2018, which was the year with the highest amount of publications the past decade. Both junior and senior researchers continue to publish in prestigious journals in the fields of innovation studies and STS. 9 out of the 37 publications were published in level 2 publications.

The graph below shows TIKs number of scientific publications in the period 2013-2022:



Source: DBH/Cristin

The data regarding the publications points for 2022 is not yet available from the national registers. Publication points per academic man year will thus be reported on a later date.

Publications reported to the Norwegian Science Index (NVI) in 2022:

Asdal, Kristin; Cointe, Béatrice.

Writing good economics: How texts 'on the move' perform the lab and discipline of experimental economics. *Social Studies of Science* 2022

Bauer, Susanne; Penter, Tanja.

Introduction: Tracing the Atom. Nuclear Legacies in Russia and Central Asia. I: *Tracing the Atom: Nuclear Legacies in Russia and Central Asia*. Routledge 2022 ISBN 978-1-032-16050-4. s. 1-17

Bauer, Susanne.

Fallout Memory Trajectories at Semipalatinsk: Reassembling the Post-Soviet Past. I: *Tracing the Atom: Nuclear Legacies in Russia and Central Asia*. Routledge 2022 ISBN 978-1-032-16050-4. s. 196-216

Boletsis, Costas; Chasanidou, Dimitra.

A Typology of Virtual Reality Locomotion Techniques. *Multimodal Technologies and Interaction* 2022 ;Volum 6.(9)

Borlaug, Siri Brorstad; Tellmann, Silje Maria; Vabø, Agnete.

Nested identities and identification in higher education institutions—the role of organizational and academic identities. *Higher Education*

Callegari, Beniamino; Yang, Yue Yu; Rai, Ranvir S..

A "Braive" New World: Exploring Adoption of Mental Healthcare Technology. I: *The XXXIII ISPIM Innovation Conference "Innovating in a Digital World"*. ISPIM Lappeenranta University of Technology Press 2022 ISBN 978-952-335-694-8.

Castellacci, Fulvio; Oguguo, Prince C.; Freitas, Isabel Maria Bodas.

Quality of pro-market national institutions and firms' decision to invest in R&D: evidence from developing and transition economies. *Eurasian Business Review (EABR)* 2022 ;Volum 12.(1) s. 35-57

Castellacci, Fulvio.

Innovation and social welfare: A new research agenda. *Journal of economic surveys* 2022

Coffay, Matthew Mark; Coenen, Lars Martel Antoine; Tveterås, Ragnar.

Effectuated sustainability: Responsible Innovation Labs for impact forecasting and assessment. *Journal of Cleaner Production* 2022 ;Volum 376:134324. s. 1-10

Druglitrø, Tone.

Procedural care: Licensing practices in animal research. *Science as Culture* 2022

Fagerberg, Jan; Srholec, Martin.

Capabilities, diversification & economic dynamics in European Regions. *Journal of Technology Transfer* 2022

Fagerberg, Jan.

Innovation policy. I: *Elgar encyclopedia on the economics of knowledge and innovation*. Edward Elgar Publishing 2022 ISBN 9781839106989. s. 230-236

Fagerberg, Jan.

Mobilizing Innovation for the Global Green Shift: The Case for Demand-oriented Innovation Policy. I: *Cross-border innovation in a changing world : Players places and policies*. Oxford University Press 2022 ISBN 9780198870067. s. 272-291

Gonera, Antje; Nykamp, Hilde Andrea; Carraresi, Laura.

Incumbents' Capabilities for Sustainability-Oriented Innovation in the Norwegian Food Sector—an Integrated Framework. *Circular Economy and Sustainability* 2022 s. 1-28

Grimsby, Gard Sveinung; Gulbrandsen, Magnus.

European novel food, patents and brokers of knowledge. *British Food Journal* 2022 ;Volum 124.(6) s. 1959-1974

Gundersen, Torbjørn; Alinejad, Donya; Branch-Smith, Teresa; Duffy, Bobby; Hewlett, Kirstie; Holst, Cathrine; Owens, Susan E.; Panizza, Folco; Tellmann, Silje Maria; van Dijck, José; Baghramian, Maria.

A New Dark Age? Truth, Trust, and Environmental Science. *Annual Review Environment and Resources* 2022 ;Volum 47. s. 5-29

Hadfield, Paris; Coenen, Lars Martel Antoine.

Contemporary financial capitalism and sustainability transitions in urban built environments. *Environmental Innovation and Societal Transitions* 2022 ;Volum 42. s. 285-300

Klitkou, Antje; Fevolden, Arne Martin; Andersen, Allan Dahl.

EU R&D Funding for Electricity Grid Technologies and the Energy Transition: Centralised versus Decentralised Transition Pathways. *Energies* 2022 ;Volum 15.(3)

Mäkitie, Tuukka Rainer Reinhold; Hanson, Jens; Steen, Markus; Hansen, Teis; Andersen, Allan Dahl.

Complementarity formation mechanisms in technology value chains. *Research Policy* 2022 ;Volum 51.(7)

Reymert, Ingvild S; Thune, Taran Mari.

Task complementarity in academic work: a study of the relationship between research, education and third mission tasks among university professors. *Journal of Technology Transfer* 2022

Rohracher, Harald; Coenen, Lars Martel Antoine; Kordas, Olga.

Mission incomplete: Layered practices of monitoring and evaluation in Swedish transformative innovation policy. *Science and Public Policy* 2022

Ruhan, A.; Yang, Kejia; Wu, Cong; Li, Xiaoxuan.

Origins of Strategic Basic Research and International Practices. *Bulletin of the Chinese Academy of Sciences* 2022 s. 326-335

Simensen, Erlend Osland; Abbasiharofteh, Milad.

Sectoral patterns of collaborative tie formation: investigating geographic, cognitive, and technological dimensions. *Industrial and Corporate Change* 2022 ;Volum 31.(5) s. 1223-1258

Strøm-Andersen, Nhat.

Digital technologies and food waste reduction and prevention: benefits and challenges. I: *Transforming food systems: ethics, innovation and responsibility*. Wageningen Academic Publishers 2022 ISBN 978-90-8686-387-7. s. 475-480

Svennevik, Elisabeth M.C..

Practices in transitions: Review, reflections, and research directions for a Practice Innovation System PIS approach. *Environmental Innovation and Societal Transitions* 2022 ;Volum 44. s. 163-184

Svennevik, Elisabeth M.C.; Saidi, Trust.

Social innovation-as-practice: establishing a social innovation program at a university. *Management & Marketing* 2022 ;Volum 17.(1) s. 402-425

Szulecka, Julia; Strøm-Andersen, Nhat; Capodistrias, Paula.

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