



ANNUAL REPORT 2018

TIK Centre for Technology – annual report 2018

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# Letter from the Director

The TIK Centre for Technology, Innovation and Culture will have its 20th anniversary celebration in 2019. Waiting for the centre’s jubilee, the year 2018 has been a time for planning the forthcoming event, and thereby reflecting upon our centre’s mission, achievements and challenges ahead. 2018, though, has also been a highly productive and successful year for TIK. The centre has throughout the year continued its phase of remarkable positive development.

On the research side, the most significant achievement was the funding of a new Research Council’s centre called INTRANSIT: “Centre for the study of innovation policy for industrial transformation, sustainability and digitalization”. The new centre is funded by the FORINNPOL-program of the Research Council, and it aims “to develop new theoretical and empirical knowledge on the role of industries and industrial change in sustainability transitions”, as well as “policy relevant knowledge and to collaborate with users and stakeholders interested in industrial transformation and sustainability transitions in Norway and abroad”. The new centre will receive funding for a 8-year period (like the OSIRIS centre on the impacts of research that was established at TIK a couple of years earlier).

The new INTRANSIT centre adds to an already large pool of recently funded projects. These substantially increase the Centre’s external funding, thus financing several new senior and junior researchers that were recruited during the year. Some of the newly hired colleagues are young researchers such as postdoc and PhD students. TIK’s Doctoral program track is on a positive path. The number of PhD students enrolled at TIK during the year is at its peak (34 candidates), and the level of annual activities (PhD defences, seminars and courses) has been high throughout the year.

TIK’s Master level education has also a high level of activities and several positive developments. The Centre’s Master programs have in the last few years experienced a steady growth in the number of applicants they attract (480 total applicants in the last recruitment round), as well as an increase in the quality of these. TIK has repeatedly expressed interest to enrol a greater number of Master-level applicants, and improve the pedagogical offer we provide them with (e.g. creating new courses). The Centre has also expressed its interest to develop a new interdisciplinary Bachelor program, which would represent a natural extension and important complement of our Master-level education.

As often discussed with our staff, Board and the Faculty leadership, a major structural challenge for the Centre relates to the limited available capacity and human resources at the senior researcher level. A crucial challenge ahead for TIK is therefore to develop a strategy for a long-term consolidation and capacity expansion for this group of scientific staff. To achieve this long-term goal, external funding acquisition alone is not sufficient. This will have to be complemented by an expansion and further development of the Centre’s educational activities.

Fulvio Castellacci, Director

# 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 per year (2008-2018) | 26 |
| Master programmes | 2 |
| Courses (Masters and Ph. D. courses) | 12 |
| PhD-students (per 31.12.2018) | 34 |
| Scientific man years (2018 - numbers from DBH, including Centre Director) | 36,70 |
| Administrative man years (2018 - numbers from DBH) | 4,55 |
| Total number of man years (2018 - numbers from DBH) | 41,25 |
| Budget (2019) | 44,5 Million NOK |
| Percent of the budget that is financed by external grants (2019) | 72 % |
| Research projects with external financing (2018) | 18 |

# Staff – new faces at TIK

Fulvio Castellacci started his second assignment as TIKs Director in 2018. He also accepted a permanent position as Associate Professor at TIK, a position he will start in at the end of his current leadership role.

Jan Fagerberg retired from his position as professor in innovation studies from August 2018. A special seminar and book-launch was held in his honour on September 20th.

Gry Cecilie Høiland joined TIK as an externally funded researcher for two years from September 2018.

TIK welcomed five new PhD candidates in 2018; all employed at TIK: Alina Kontareva, Silje Morsman, Sissel S. Aasheim, Tercio Pinho Filho og Eili Skrivervik. In addition a number of external PhD-candidates were accepted for the PhD-programme. The complete list of candidates in the programme is listed under “PhD – Doctoral degree” below.

TIK also welcomed the following new postdocs: Maria Tsouri, Silje Maria Tellmann and Trust Saidi.

In TIK’s administration we had a high turnover during the year. Lene Angelskår substituted Stine Bruland as research adviser during Bruland’s parental leave. During the same period Sibel Thorsen and Mina Aasterud substituted Angelskår as student adviser. Mina Aasterud also substituted Jørgen Bollingsmo for some months during the fall semester. Hege Rudi Standal joined the administration in December for a temporary assignment preparing for TIK’s 20th anniversary in 2019.

# 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 agecies, 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 2020 Research Program. In 2018, TIK was involved in three projects funded by the EU.

Two new projects were added to the list of TIK projects in 2018. GlobOil, a project funded by the RCN and led by Helge Ryggvik. BioRoBoost a project funded by H2020 and led at TIK by Ana Delgado.

In addition, RCN granted support for one project and one 8-year centre starting in 2019. PATHWAYS is a project funded by the ENERGIX programme and led by Allan Dahl Andersen. INTRANSIT is an 8-year centre funded by FORINNPOL (RCN) and led by Taran Mari Thune. In addition, TIK is continuing its cooperation with Telenor through the project “Measurement and Management of Innovation”.

## Research projects at TIK in 2018

|  |  |  |  |
| --- | --- | --- | --- |
| **PROJECT** | **PROJECT LEADER** | **STARTING DATE** | **FUNDING** |
| ReDig - Responsibility as an Integral Component of Digital Research Practices in Bio- and Nanotechnology | Ana Delgado Aleman | 01-mai-2017 | RCN – BIOTEK2021 |
| ReNewGrowth – Conditions for growth in renewable energy industries | Jens Hanson | 01-aug-2017 | RCN - ENERGIX |
| InfraData - Infrastructuring Internet of Things for public governance | Susanne Bauer | 01-apr-2017 | RCN - IKTPLUSS via UIO IFI |
| ResPublica - Responsibility, practices and the public goods across Digital Life | Ana Delgado Aleman | 01-okt-2017 | RCN – BIOTEK2021 via NTNU |
| Greenfleet – Greening the Fleet – Sustainability Transitions in the Maritime Shipping Sector | Jens Hanson | 01-mar-2017 | RCN – ENERGIX via SINTEF |
| SuSolTech - Research Centre for Sustainable Solar Cell Technology | Olav Wicken | 01-jun-2017 | RCN – FME via Institutt for Energiteknikk/ UiO:Energi |
| OSIRIS | Magnus Gulbrandsen | 01-mai-2016 | RCN - FORINNPOL |
| 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 |
| Measurement and Management of Innovation (Telenor) | Fulvio Castellacci | 01-nov-2018 | Telenor |
| ERC StG Little Tools Enacting the Good Economy: Biocapitalization and the little tools of valuation | Kristin Asdal | 01-aug-2015 | EU Horizon 2020 - European Research Council Starting Grant |
| InGrid - Integration of Power Transmission Grids - Prospects and Challenges at National and European Levels in advancing the energy transition | Allan Dahl Andersen | 01-aug-2015 | RCN - ENERGIX |
| SusValueWaste - Sustainable path creation for innovative value chains for organic waste products | Fulvio Castellacci | 01-jun-2015 | RCN - BIONÆR - via NIFU |
| I3U Investigating the Impact of the Innovation Union | Fulvio Castellacci | 01-feb-2015 | EU Horizon 2020 - via Uni. Maastricht |
| SIVAC - Supplier Industry and Value Creation | Taran Thune | 01-sep-2014 | RCN - PETROSAM 2 |
| CenSES - Centre for Sustaniable Energy Studies | Olav Wicken | 01-feb-2012 | RCN - FME - via NTNU |
| GlobOil | Helge Ryggvik | 01-jun-2018 | RCN - PETROMAKS2 |
| BioRoBoost |  |  | EU H2020 |

In addition, in 2018 TIK had three PhD candidates through the RCN OFFPHD programme, and two NÆRINGSPHD.

# Education

## Master programmes

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)

30 master students are admitted every year, 20 to the TIK and 10 to the ESST-program. Both programs have experienced a steady rise in applicants during the last five years.

### High quality of applicants

Students can apply to a maximum of three UiO programmes any given year, and they must make a priority list. In 2015, around 100 of the applicants had TIK/ESST as their number one priority. In 2017 this number had increased to 141, and in 2018, the TIK and ESST masters had 171 first priority applicants. The number for the TIK programme is particularly good, with more than 5 first priority applicants for each available place.

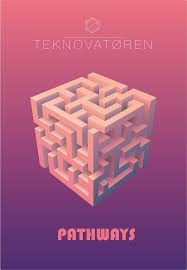
The grade point average (GPA) of applicants has gradually risen since 2013, and in 2018, the applicants needed a GPA of no less than B in order to be admitted.

Both of these developments are positive and expected to increase the quality of students that will enrol in TIK’s Master programmes in the coming years.

### Student satisfaction

Studiebarometeret.no is a web portal made by NOKUT, which measures students’ satisfaction with their study programme.

TIK students are generally happy with their programme. Students’ reviews are most favourable on the indexes for inspiration and expectations. These indexes deal with how interesting and engaging the programme is, as well as how much effort is expected from the students themselves. The ESST programme received similar reviews, but slightly less favourable.



### Student magazine: Teknovatøren

Teknovatøren is the TIK and ESST students’ semi-scientific student magazine. It is partly financed by the TIK Centre. Teknovatøren celebrated its 10th issue in 2016.

Editions in 2018:

* #15: Pathways
* #16: Digital Citizen

### New in 2018

* Oral examinations were introduced as part of the final evaluation of the master’s theses in TIK4090 and TIK4093
* Written examination guidelines were introduced as a requirement on all courses
* Guidelines for and structure of the TIK4040 seminar groups were tightened and improved
* Degrees completed: 20 TIK, 10 ESST.
* In 2018 additional supervision groups for the students were introduced in the 3rd and 4th semester, in an attempt to improve students’ completion rates.
* A new student exchange program was established between TIK and Tomsk State University in Russia. It will begin in 2019, and will be funded by DIKU.

## 

## PhD – doctoral degree

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 2018.

### Disputations

Four candidates successfully defended their thesis for the degree of PhD in 2018:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Candidate | Date | Thesis title | Supervisors | Committee |
| Christine Mee Lie | 26.04.2018 | *Pursuing green growth and innovation: The role of policy. Empirical evidence from South Korea.* | Prof. Jan Fagerberg (TIK), Prof. Suh Joonghae, Korea Development Institute (KDI) | Dr. Tilman Altenburg, Deutsche Institut Für Entwicklungspolitikk, Prof, Reinhilde Veugelers, Faculty of Economics and Business, KU Leuven, Belgia, Prof. Olav Wicken (TIK). |
| Hilde Nykamp | 29.05.2018 | *Green innovation in the Norwegian construction sector: policies, projects and industrial dynamics.* | Prof. Magnus Gulbrandsen (TIK), Prof. Jonas Söderlund (BI) | Prof. Tim Brady, CENTRIM, Brighton University, Prof. Anna Bergek (Chalmers), Erling Holden (Høyskolen på Vestlandet/TIK) |
| Jacoba Sraml Gonzalez | 16.10. 2018 | *Innovation in situations of crisis: oil and gas suppliers as innovators during the 2014–2017 industry downturn* | Prof. Magnus Gulbrandsen (TIK) | Prof. Mary Tripas, Carroll School of Management, Boston College, Prof. Thomas Hoholm (BI), Birthe Soppe (IFI, UiO) |
| Hanne Kristine Hallingby | 09.11.2018 | Understanding Platform Emergence and Openness in the Mobile Telecommunications Industry Using Platform Ecosystem and Technological Innovation Systems Perspectives | Prof. Magnus Gulbrandsen (TIK), Patrick Waldemar, Telenor Research | Prof. Robin Mansell (London School of Economics and Political Sicence, Prof. Björn Sandén, Chalmers, Prof. Olav Wicken (TIK) |

### Candidates

TIK welcomed 9 new candidates during 2018, and had the following candidates enlisted in the program as of December 31st 2018.

In total TIK had 34 candidates enrolled in the TIK PhD program:

|  |  |  |  |
| --- | --- | --- | --- |
| Candidate | PhD project | Supervisor(s) | Funding |
| Bianca Cavicchi | Governance of bioenergy innovation systems in the rural areas of Emilia Romagna and Oppland-Hedmark. | Olav Wicken, John Bryden | NILF |
| Simen Gangnæs Enger | Factors affecting organizations’ ability to participate and achieve EU-funding: Evidence from the Norwegian R&D sector. | Fulvio Castellacci, Magnus Gulbrandsen, and mentor Geir Arnulf | NFR/KD – *offentligPhD.* |
| Morten Fosaas | Innovation Systems and Innovation Policy: Perspectives and Challenges | Jan Fagerberg og Anna Bergek | TIK - basis |
| Sveinung Grimsby | How does the Norwegian food industry act during innovation processes? A study on new  product failure rate and systematic differences between successful and unsuccessful innovation projects in the food industry. | Magnus Gulbrandsen and Cathrine Finne Kure | Nofima AS |
| Bård Hobæk | Salmon Sustainabilities | Kristin Asdal | TIK – strategic |
| Ásdis Jónsdottir | Climate change, ecology and knowledge in Iceland: An anthropological study. | Tian Sørhaug and Gisli Palsson | TIK - basis |
| Bård Lappegård Lahn | Climate governance between global knowledge and national politics. | Kristin Asdal | Cicero |
| Marie Byskov Lindberg | The politics of power transmission | Allan Dah Andersen | TIK – project: InGrid |
| Sylvia Lysgård | Hva dreier det seg om? Næringsliv, politikk og praksiser i to norske (miljø)saker. | Göran Sundqvist og Kristin Asdal | TIK - basis |
| Turid Markussen | Antropologi i nord | John Law | Centre for Gender Research |
| Tuukka Mäkitie | Function-interactions in innovation processes:  the technological innovation system of petroleum industry | Taran Thune | TIK - basis |
| Tommas Måløy | Valuation in genomic databases: a case study on the Aqua Genome Project | Kristin Asdal | TIK - basis |
| Helena Nynäs | Valuation of major waterfalls in modern Norway | Sissel Myklebust and Mari Hvattum | NVE |
| Artur Santoalha | Smart Specialization: Where do European regions stand? | Fulvio Castellacci | TIK - strategic |
| Henrik Schwabe | ICTs and Subjective Well-Being: Perceived fairness, social mobility and capabilities | Fulvio Castellacci | TIK – project: Happy ICT |
| Erlend Osland Simensen | Mapping the supplier industry | Taran Thune | TIK – project: SIVAC |
| Guro Ådnegard Skarstad | New Fish in a New Environment: Challenges to a Comprehensive Management of Fish,  Environments and Human Beings. | Kristin Asdal | NILF |
| 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, Magnus Gulbrandsen, and mentor Geir Arnulf | NFR/KD - *offentligPhD* |
| Hege Rudi Standal | Universities as Strategic Actors- University management and the new era of Governance. | Magnus Gulbrandsen og Merle Jacob | TIK - basis |
| Elisabeth M C Svennevik | Changes towards sustainable mobility: Experiences from car sharing in urban areas. | Olav Wicken, Tom Erik Julsrud (TØI) | TIK – project:  TEMPEST (TØI) |
| Nhat Strøm-Andersen | Towards a sustainable bioeconomy: The role of dynamic interplay between technology, industry and  policy - a study of omanic waste streams from the Norwegian food industry | Fulvio Castellacci | TIK – project: SusValueWaste |
| Kasper Rogde Søyland | An Innovative Century? The origins for advanced aluminium prefabrication | Olav Wicken og Finn Ørstavik | HBV |
| Tina Naomi Talleraas | Unlocking the Black Box of Nuclear Disarmament:  A case study of the Norwegian initiative to re-politicize the bomb | Göran Sundqvist | TIK - basis |
| Irene Øvstebø Tvedten | Science and Corporate Policy —DNV GL as an enabler for a sustainable future" | Kristin Asdal /Susanne Bauer | TIK - basis |
| Lars Wenaas | Open Access: En endring av forskningspubliseringen med begrenset rekkevidde? | Magnus Gulbrandsen | CERES/NDR - OffentligPhD |
| Cyriac George | Transition pathways in context: a socio- technical analysis of hydrogen fuel in the Norwegian transportation sector. | Olav Wicken | TØI, via Næringsph.d.- programmet |
| Gard Neverlien | Public Procurement and Innovation in Helthcare: An analysis of pharmaceutical procurement in Norway, reviewing current rules, regulations and practices, and developing principles and methodology for next generation frameworks. | Fulvio Castellacci/ to biveiledere NOFAS | Nofas AS, via Næringsph.d.- programmet |
| Kjersti Aalbu | Aligning shipping with the Paris Agreement: Expert knowledge, the IMO, and a decarbonised shipping industry in the making | Susanne Bauer/ to biveildere DNV-GL | DNV GL AS/NFR |
| Sissel Småland | The infrastructure of responsibility | Ana Delgado | ResPublica |
| Silje Morsman | Responsible Research and Innovation (RRI) perspectives in the COMPARE project | Kristin Asdal | COMPARE- project |
| Tércio Pinho Filho | Actors recomposition in the O&G industry: a case study for adaptation and innovation from subsea suppliers | Helge Ryggvik | GlobOil- Project |
| Eili Skrivervik | Innovation and technology transfer in field-development projects on Norway, Brazil and U.S. GoM | Taran Thune | GlobOil- Project |
| Alina Kontareva | Salvaging and Rebuilding in the Wreckage: Building an Innovatiove Ecosystem in Post-Soviet Countries |  |  |
| Jørgen Aarhaug | How can digitalisation and transport innovations contribute to more efficient and sustainable passerger transport in urban aggliomerations? | Olav Wicken og  Ove Langeland | TØI/NFR |

### 

### PhD courses and seminars

TIK9101 Obligatory PhD seminars:   
Spring: 24-25.5.2018 at Tøyen Hovedgård  
Autumn: 28.11. 2018 at Tøyen Hovedgård

TIK 9022- Economics of Innovation, 16-20 Apil 2018.

EU-SPRI Summer School in Oslo: The Science System in the 21st Century, 17-21 Sep. 2018

TIKs candidates continue to benefit from TIK being involved in national and international research networks like EU-SPRI, EASST – European Association for the Study of Science and Technology, and the Norwegian Research School on Innovation (NORSI), giving access to a large number of research courses and relevant conferences.

# Research communication

## Web

During 2018, the following research-based news articles were written for TIK’s web page.

* «Bruk an internett kan øke livskvaliteten din»  
  Written in connection to Fulvio Castellaccis research on ICT and happiness, the article was also published at Forskning.no (At TIK-web, 649 visits, 745 page views. The article is still being read with 44 visits the last 60 days).
* «Teknologiutvikling i oljesektoren-Hvordan beholde Norges posisjon fremover?» Written in connection to Helge Ryggviks project GLOBOIL. (At TIK-web,292 visits, 365 page views. The article is still being read with 3 visits the last 60 days).
* “Det grønne skiftet krever at politikserne tar grep”   
  Written in connection to Christine Mee Lie dissertation. (At TIK-web, 338 visits, 388 page views. The article is still being read with 5 visits the last 60 days).
* “Grønnere byggenæring skyldes ikke ny teknologi”  
  Written in connection to Hilde Nykamp dissertation. At TIK-web, 185 visits, 217 page views. The article is still being read with 5 visits the last 60 days).
* “Forsterket innovasjonsarbeidet i Telenor”  
  Written in connection to TIKs cooperation with Telenor and OSIRIS. (At TIK-web, 649 visits, 745 page views. The article is still being read with 44 visits the last 60 days).
* “Studenter ved TIK har startet bedrift ved siden av studiene”  
  Written in connection to the establishment of Insj UiO (At TIK-web, 436 visits, 464 page views. The article is still being read with 27 visits the last 60 days)[[1]](#footnote-1).

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

34 shorter news articles/notices were posted online, 13 publications were announced and 8 TIK in media was reported in 2018. 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 63 830 and our web pages in Norwegian are viewed 46 131. This means that TIK produce content on the web that is read in both languages. Our employee's profile pages rank 2nd (in Norwegian), and our section on "Forskning” (in Norwegian) 3rd in terms of most page views.

## Blogs

TIK have two Blogs tied to different research projects that post with different frequency, and with different reach. This form of dissemination is becoming more popular and TIK are aware the need to develop a communication plan for new initiatives.

## 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. In 2018 the page increased its number of followers; from 442 at the start of the year up to around 512 by the end of it.

## Internal seminars and workshops at TIK in 2018

|  |  |  |
| --- | --- | --- |
| **Date** | **Speaker** | **Title** |
| 6.12.2018 | Bianca Cavicchi | Final seminar: Bioenergy Governance and Sustainability: a System Thinking Approach |
| 3.12.2018 | Erlend Osland Simensen | Final seminar: Innovation and networks in resource- based sectors: How sectors differ in organisation of innovation, with evidence from the Norwegian upstream petroleum sector. |
| 29.11.2018 | Osiris-team | Seminar om FOU-nettverk og effekter |
| 27.11.2018 | Lea Fuenfschilling | Transformative Innovation Policy: Transformation towards a bio-based economy and the development of smart cities |
| 26.11.2018 | Elisabeth M. C. Svennevik | Midway seminar: Changes towards a austainable mobility: Experiences from cas sharing in urban areas |
| 9.11.2018 | Hanne Kristine Hallingby | Disputas: Understanding Platform Emergence and Openness in the Mobile Telecommunications Industry Using Platform Ecosystem and Technological Innovation Systems Perspectives |
| 7.11.2018 | Tuukka Mäkitie | Final seminar: Resource redeployment from established industries to cleantech industries: the case of oil and gas industry and offshore wind in Norway |
| 30.10.2018 | Hannah Landecker | The Food of our Food: Medicated Feed and the Industrialization of Metabolism |
| 25.10.2018 | Bård Hobæk | Midway seminar: "Fish feed and efficient food" |
| 16.10.2018 | Jakoba Sraml Gonzalez | Disputation: Innovation in situations of crisis: oil and gas suppliers as innovators during the 2014-2017 industry downturn |
| 2.10.2018 | Benjamin Sovacool | Ordering Theories: Typologies and Conceptual Frameworks for Socio- Technical Change and Energy Transitions |
| 27.9.2018 | Allan Dahl Andersen | Trial lecture: Research and innovation policy: Describe your research interests in relation these themes, and new projects that you would like to develop in this area in the future |
| 14.9.2018 | Siw Anita Fosstenløkken | Trial lecture: Research and innovation policy: Describe your research interests in relation these themes, and new projects that you would like to develop in this area in the future |
| 13.9.2018 | Fulvio Castellacci | Trial lecture: Research and innovation policy: Describe your research interests in relation these themes, and new projects that you would like to develop in this area in the future |
| 13.9.2018 | Marcus Bugge | Trial lecture: Research and innovation policy: Describe your research interests in relation these themes, and new projects that you would like to develop in this area in the future |
| 7.9.2018 | Nhat Strøm- Andersen | Midway seminar: Exploring the sustainability transition towards the bioeconomy: Empirical studies from the Norwegian food industry |
| 4.6.2018 | Jochen Markard | The next decade of transition studies- Emerging themes around energy |
| 31.5.2018 | Henrik Scwabe | Midway seminar: Individual well-being and technology use |
| 29.5.2018 | Hilde Nykamp | Disputation: Green innovation in the Norwegian construction sector: policies, projects and industrial dynamics |
| 15.5.2018 | Marie Byskov Lindberg | Midway seminar: Actors, policies and coalitions in the European energy transition |
| 26.4.2018 | Christine Mee Lie | Disputation: Prusution green growth and innovation: The role of policy. Empirical evidence from South Korea |
| 13.4.2018 | Staffan Laestadius | Is green growth possible? Om the coming transformation to a post- fossil society |
| 10.4.2018 | Tom Erik Julsrud | Digitalisering og mulighetene for omstilling til bærekraftig mobilitet i storbyregioner |
| 19.3.2018 | Yan Zhang | Energy Informatics and the evolving energy sector |
| 20.2.2018 | David Cameron | Digitalization in the oil and gas industry |
| 1.2.2018 | Trine Syvertsen | Media Resistance: Protest, Dislike, Abstention |

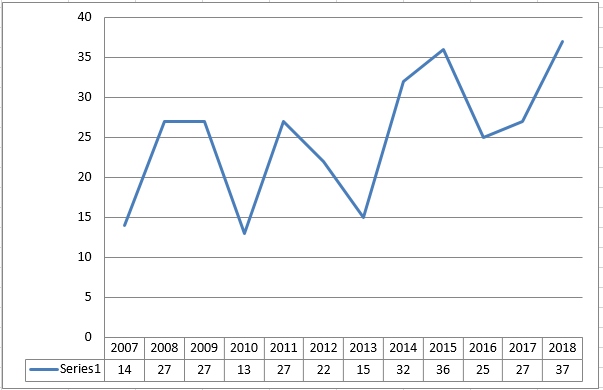
TIK researchers are also active in external seminars as key speakers, part of panel discussions and other the list above does not reflect this.

## Publications

2018 has been a very good year for TIK in regard to scientific publications. A total of 37 scientific publications were published and registered in the Cristin database. These were published by both junior and senior researchers in prestigious journals, such as Research Policy and Science, Technology and Human Values.

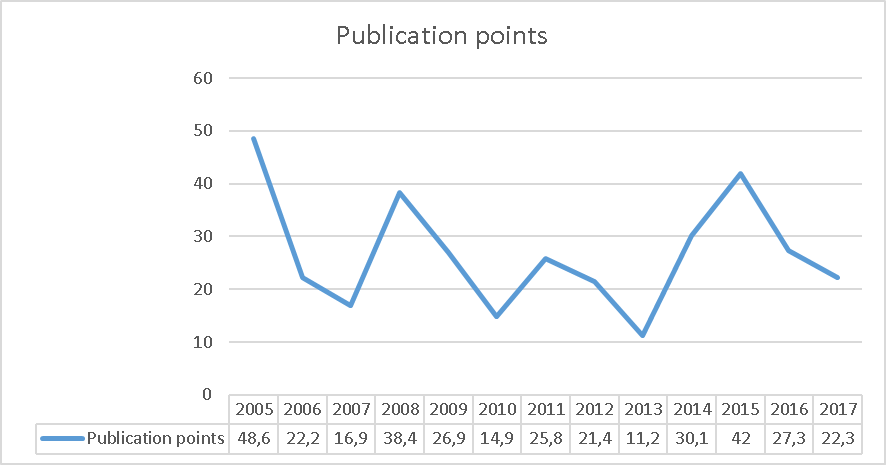
The SIVAC project, which ended in 2018, led to the publishing of the book *Petroleum industry transformations : lessons from Norway and beyond,* on Routledge. The book was edited by Thune, Engen & Wicken.

The graph below shows TIKs number of scientific publications in the period 2005-2018:



The continued high number of publications is partly related to the increase in TIK’s staff. TIK is also granting an extra allowance to researchers with a certain level of publications.

Converting the publications to publications points, 2017 gave 22,3 points. The graph below shows TIKs publication points in the period 2005-2016:



In 2015 a new formula for the national publication indicator was introduced in with the aim of closing the gap between the scientific domains. With the old indicator, the Social Sciences and Humanities gained more publication points relative to the Natural Sciences, based in a more traditional publication strategy, where one or just a few authors write monographs. The new indicator is set to even the field, emphasizing, among other things, international cooperation. The lower result in publications points in 2017 from 2016 despite the same number of publications for these two years is due to more co-authored publications in 2017 than in 2016.

### Publications reported to the Norwegian Science Index (NVI) in 2018:

# Castellacci, Fulvio; Tveito, Vegard.

Internet Use and Well-being: A Survey and a Theoretical Framework. *Research Policy* 2018 ;Volum 47.(1) s.308-325 UiO

# Castellacci, Fulvio.

Co-evolutionary growth: A system dynamics model. *Economic Modelling* 2018 ;Volum 70. s.272-287 UiO

# Mäkitie, Tuukka; Andersen, Allan Dahl; Hanson, Jens; Normann, Håkon Endresen; Thune, Taran Mari.

Established sectors expediting clean technology industries? The Norwegian oil and gas sector's influence on offshore wind power. *Journal of Cleaner Production* 2018 ;Volum 177. s.813-823

# Enger, Simen G..

Closed clubs: Network centrality and participation in Horizon 2020. *Science and Public Policy* 2018 ;Volum 45.(6) s.884-896 UiO

# Scordato, Lisa; Klitkou, Antje; Tartiu, Valentina Elena; Coenen, Lars.

Policy mixes for the sustainability transition of the pulp and paper industry in Sweden. *Journal of Cleaner Production* 2018 ;Volum 183. s.1216- 1227

# Joseph, KJ; Thapa, Namrata; Wicken, Olav.

Innovation and natural resource-based development: case of natural rubber sector in Kerala, India. *Innovation and Development* 2018 ;Volum 8.(1) s.125-146

# Nesse, Per Jonny; Risnes, Oddvar; Hallingby, Hanne Kristine.

Management of Mobile Financial Services - Review and Way Forward. I: *Finance & Economics Readings : Selected Papers from Asia-Pacific Conference on Economics & Finance, 2017*. Springer Nature 2018 ISBN 978-981-10-8146-0. s.49-67

# Guillen-Royo, Monica.

Television, Sustainability and Subjective Wellbeing in Peru. *Social Indicators Research* 2018 ;Volum 141.(2) s.895-917 UiO

# Viñas Bardolet, Clara; Torrent Sallent, Joan; Guillen-Royo, Monica.

Knowledge Workers and Job Satisfaction: Evidence from Europe. *Journal of the Knowledge Economy* 2018 s.1-25 UiO

# MacKinnon, Danny; Dawley, Stuart; Steen, Markus; Menzel, Max-Peter; Karlsen, Asbjørn; Sommer, Pascal; Hansen, Gard Hopsdal; Normann, Håkon Endresen.

Path creation, global production networks and regional development: A comparative international analysis of the offshore wind sector. *Progress in Planning* 2018

# Delgado, Ana; Åm, Heidrun.

Experiments in interdisciplinarity: Responsible research and innovation and the public good. *PLoS biology* 2018 ;Volum 16:e2003921.(3) s.1-8 NTNU UiO

# Reinertsen, Hilde.

Aldri nok rapporter? Om evalueringens optikk og bistandens resultater.. I: *Rapporten: Sjanger og styringsverktøy*. Pax Forlag 2018 ISBN 978-82- 530-4052-3. s.60-87

# Cointe, Béatrice; Nadaï, Alain.

Feed-in Tariffs in the European Union. Renewable energy policy, the internal electricity market and economic expertise. Palgrave Pivot 2018 (ISBN 978-3-319-76321-7) 138 s. Progressive Energy Policy(1)

# Cointe, Béatrice.

Mutualising sunshine: economic and territorial entanglements in a local photovoltaic project. *Local Environment : the International Journal of Justice and Sustainability* 2018

# Asdal, Kristin; Jordheim, Helge.

Texts on the Move: Textuality and Historicity Revisited. *History and Theory* 2018 ;Volum 57.(1) s.56-74 UiO

# Cavicchi, Bianca.

The burden of sustainability: Limits to sustainable bioenergy development in Norway. *Energy Policy* 2018 ;Volum 119. s.585-599 NIBIO UiO

# Castellacci, Fulvio; Gulbrandsen, Magnus; Hildrum, Jarle; Martinkenaite, Ieva; Simensen, Erlend Osland.

Functional centrality and innovation intensity: Employee-level analysis of the Telenor group. *Research Policy* 2018 UiO

# Thune, Taran Mari; Engen, Ole Andreas Hegland; Wicken, Olav.

Transformations in petroleum : innovation, globalisation and diversification. I: *Petroleum industry transformations : lessons from Norway and beyond*. Routledge 2018 ISBN 9781315142456.

# Engen, Ole Andreas Hegland; Simensen, Erlend Osland; Thune, Taran Mari.

The evolving sectoral innovation system for upstream oil and gas in Norway. I: *Petroleum industry transformations : lessons from Norway and beyond*. Routledge 2018 ISBN 9781315142456.

# Ryggvik, Helge; Engen, Ole Andreas Hegland.

Born national – going global. I: *Petroleum industry transformations : lessons from Norway and beyond*. Routledge 2018 ISBN 9781315142456. UiO UIS

# Ryggvik, Helge; Engen, Ole Andreas Hegland; Botelho, Antonio Jose Junqueira.

Norwegian suppliers in Brazil. I: *Petroleum industry transformations : lessons from Norway and beyond*. Routledge 2018 ISBN 9781315142456. UiO UIS

# Asdal, Kristin.

"Interested Methods" and "Versions of Pragmatism". *Science, Technology and Human Values* 2018 ;Volum 43.(4) s.748-755 Ui

# Fagerberg, Jan; Srholec, Martin; Lundvall, Bengt-Åke.

Global value chains, national innovation systems and economic development. *European Journal of Development Research* 2018 ;Volum 30.(3) s.533-556

# Fagerberg, Jan.

Mobilizing innovation for sustainability transitions: a comment on transformative innovation policy. *Research Policy* 2018 ;Volum 47.(9) s.1568- 1576

# Mangset, Marte; Asdal, Kristin.

Bureaucratic power in note-writing: authoritative expertise within the state. *British Journal of Sociology* 2018 OSLOMET UiO

# Lindberg, Marie Byskov; Markard, Jochen; Andersen, Allan Dahl.

Policies, actors and sustainability transition pathways: A study of the EU's energy policy mix. *Research Policy* 2018 s.1-15 UiO

# Mäkitie, Tuukka; Thune, Taran Mari; Gonzalez, Jakoba Sraml.

From oil to wind, and back again: Resource redeployment and diversification. I: *Petroleum industry transformations : lessons from Norway and beyond*. Routledge 2018 ISBN 9781315142456.

# Thune, Taran Mari; Mäkitie, Tuukka.

Versatile competences and product market diversification among oil and gas supply firms. I: *Petroleum industry transformations : lessons from Norway and beyond*. Routledge 2018 ISBN 9781315142456.

# Andersen, Allan Dahl; Marin, Anabel; Simensen, Erlend Osland.

Innovation in natural resource-based industries: A pathway to development? Introduction to special issue. *Innovation and Development* 2018;Volum 8.(1) s.1-27

# Ville, Simon; Wicken, Olav; Dean, John.

Dynamic paths of innovation in natural resource industries in Australia and Norway since World War Two. *Scandinavian Economic History Review* 2018 s.1-20

# Borlaug, Siri Brorstad; Gulbrandsen, Magnus.

Researcher identities and practices inside centres of excellence. *Triple Helix: A Journal of University-Industry-Government Innovation and Entrepreneurship* 2018 ;Volum 5.(14)

# Reinertsen, Hilde; Asdal, Kristin.

Ikke lenger uberegnelig og uregjerlig? Visjoner om et kalkulerbart, produktivt og bærekraftig hav i politiske tekster. *Arr. Idéhistorisk tidsskrift* 2018 (3-4)

# Markabayeva, Akbayan; Bauer, Susanne; Pivina, Lyudmila; Bjørklund, Geir; Chirumbolo, Salvatore; Kerimkulova, Aiman Saylaubekovna; Semeneva, Yulia; Belikhina, Tatyana.

Increased prevalence of essential hypertension in areas previously exposed to fallout due to nuclear weapons testing at the Semipalatinsk Test Site, Kazakhstan. *Environmental Research* 2018 ;Volum 167. s.129-135

# Castellacci, Fulvio; Viñas Bardolet, Clara.

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# Helena, Nynäs.

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# Simensen, Erlend Osland; Thune, Taran Mari.

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# Santoalha, Artur.

Technological Diversification and Smart Specialization: the role of cooperation. *Regional studies* 2018 UiO

1. Date of report 15.05.2019 [↑](#footnote-ref-1)