

## **Faculty of Science and Engineering**

### **Profile report: Science, Technology and Society (Wetenschap, Technologie en Samenleving)**

- Discipline: Science, Technology and Society (STS); Sociology; Economics
- Level: associate professor
- Fte: Full time (1,0)

#### **1. Scientific discipline**

The field of Science, Technology and Society (STS) couples the disciplines natural sciences, sociology and philosophy.

#### **2. Vacancy**

This position is opened by the Board of the Faculty (PT/gl/21/00239) and will be embedded in the Energy and Sustainability Research Institute Groningen (ESRIG), basic unit Integrated Research on Energy, Environment and Society (IREES). The position falls within the framework of 'Career Paths in Science 4' ('Bèta's in Banen 4'). Please see link for [criteria and conditions](#).

#### **3. Selection committee (BAC)**

Prof. dr. H.A.J. Meijer, director of ESRIG (chair)

Prof. dr. K. Hubacek, IREES, chairman ESRIG, chairman IREES

Prof. dr. J.E.W. Broerse, Faculty of Science, Athena Institute, Vrije Universiteit Amsterdam

Prof. dr. E.J. Stamhuis, Associate Professor of Marine Zoology & Biomimetics, Director of Education of ESRIG

Prof. dr. C. (Christian) Zuidema, Associate Professor Spatial Planning

Dr. M.van Rijssel (Educational Manager/ Lecturer Science and Society)

Student tbc

Advisory members:

Dr. H.J. van der Windt, IREES (former chairman SSG)

L.A. Boomsma, Senior HR advisor

#### **4. Research area**

The mission of the part of IREES dealing with science and technology studies (STS) is defined as 'bridging science and society', i.e. to contribute to the embedment of natural sciences and technology in society by:

1. Conducting research on the interface of science, technology and society;
2. Providing education on this interface, to make students aware of their responsibility during their career, and to train them in interdisciplinary and society oriented aspects of scientific research; and
3. Facilitating and mediating connections and interactions between research and education at FSE and societal institutions.

In this vein, the STS research program combines various theoretical perspectives from the field of Science, Technology, and Society research, including themes like Energy Transition and Sustainable Land Use. Researchers in STS develop and apply theoretical models and perform empirical studies.

They aim to contribute to assessment and evaluation of scientific, technical innovations and related social changes. Inspiring concepts and theories include the 'multi-level approach' of innovations, theories on 'sustainability' and 'responsible science and innovation', focusing on relationships between credibility, legitimacy and salience of science and technology. For that reason STS research has a long and persistent tradition in collaboration with research from various disciplines (law, sociology, history, spatial sciences, ecology, economics, science communication, micro-biology, and chemical engineering), research institutions (universities, other higher education institutes such as Hanzehogeschool, and TNO), governmental institutions (ministries, provinces, and municipalities), industry, and civil society organizations (energy cooperatives and environmental organizations).

## **5. Embedding: institute (and base unit)**

Energy and climate change, sustainable society, artificial intelligence and healthy aging are the key focuses of the University of Groningen. Within the Faculty of Science and Engineering the ESRIG research institute covers the Energy and Climate Change and wider Sustainability themes. Within ESRIG, IREES focuses on the key challenge to address the energy transition that requires a substantial transformation of economy and society and thus shifts towards a (more) sustainable society and the role of science in this transition. This implies scientific research and educational efforts on:

- The evaluation of the present unsustainable character of society and the role of science in this respect;
- Assessment of the potential to effect changes towards (a more) sustainable society;
- Strategies to implement the sustainability potential by improving the environment-economy and knowledge-society interactions.
- The development and inclusion of concepts like sustainability and resilience in relation to natural sciences and technology and their applications, e.g. developing sustainable energy systems and sustainable land and sea (use) systems;
- The linkages of normative issues such as responsibility, integrity, and sovereignty in innovation processes in science and technology;
- Governance of science at different societal levels, such as the involvement of societal actors during development and application of nature conservation and environmental sciences; and
- Mitigation and adaptation to climate change (via energy transition, technology innovation, land-use, carbon removal, and environment-economy interactions).

The new associate professor is essential for the continuation and expansion of the current STS research and education portfolio within the faculty and beyond.

## **6. Local and (inter)national position**

Sustainability and Energy are two of the main themes at the UG. In addition, Innovation, Responsibility, and Interdisciplinarity are recognized as key themes for UG. The former SSG group has a long and fruitful tradition in cooperation with groups from other faculties, such as Spatial Sciences, Law, Economics and Business, Philosophy, Arts, and Behavioural and Social Sciences, and has a unique position because of its focus on science-society interactions. Since Energy and Sustainability have been selected as focus areas, cooperation in research and teaching with other research groups at FSE and the UG has been intensified. The candidate will further ensure the scientific leadership of IREES in these areas as far as interactions concerning science, technology, and innovation are involved.

On the national level, IREES is a member of the national research school WTMC (The Netherlands Graduate Research School of Science, Technology and Modern Culture) along with related groups from other universities as well as a member of Research School for Socio-Economic and Natural Sciences of the Environment (SENSE). Connections exist between the Athena institute (VU), Copernicus-Institute (Utrecht University) and similar groups in Nijmegen and Wageningen universities. However, compared to most other Dutch groups working on the field of Science, Technology, and Society research, IREES has a stronger embedment in the natural sciences. In Europe, IREES works together with similar groups (for instance Copenhagen, Vienna, Ghent, and Barcelona). Outside Europe there are connections with universities in China, the USA and Africa. In this context, IREES strives to attain and maintain a substantial role in developing interdisciplinary approaches for sustainable and responsible science and specifically in informing the energy transition.

### **7. Expected contributions to research**

The candidate is expected to have a broad overview over concepts and methodologies within the fields of 'Science, Technology and Society'-research and Sustainability Science, and will focus on the dynamics of natural sciences and society interactions, with a focus on sustainability, energy systems and natural resources. Such an approach requires thorough and constructive analyses of existing and proposed knowledge systems, including developing frameworks for understanding and improving science-society interactions. The candidate initiates and develops an internationally competitive research program, based to a large extent on extramural funding, addressing new roles of natural sciences concerning understanding and improving science mediated human-nature relationships. The candidate's research program should include a strategy to build up and strengthen multidisciplinary contacts within and outside the university. Alignment of the program with the other research groups in ESRIG, other faculties of the UG, and the new schools within UG will be key to growth and international reputation.

### **8. Expected contributions to teaching**

The candidate will teach in the educational programs within the faculty (Bachelor-, Master and PhD levels). The candidate will contribute to the EES Master degree program and to the faculty-wide Science and Society Education, such as the intra-university Minor program Future, Planet, Innovation and Bachelor courses with substantial energy, natural resources and sustainability-related elements (e.g. the SEPA courses). The candidate will contribute to the development of educational programs, in particular with respect to sustainability and ethical, policy and business aspects of science. The successful candidate will also supervise PhD students.

### **9. Expected contributions to the organization**

The candidate is expected to have an active interest and to provide a positive contribution to the management and organizational tasks of the institute and faculty, for example by participating in working groups and committees, in teaching, research and management. The candidate will participate in relevant national and international organizations. Furthermore, a prominent role is expected in university-wide themes 'Energy' and 'Sustainable Society'.

As outreach is increasingly important, the candidate will also be involved in activities such as support of existing and new science shops and capacity building programs worldwide, developing innovation labs and preparing joint education and research programs with societal partners. The candidate will be involved in outreach and engagement activities of FSE, such as supporting societal aspects in grant proposals and stimulating cooperation between partners from science, industry and society..