Open panels at the 4S/EASST conference 2012

The accepted open panels are grouped in 10 thematic clusters (A-J). Papers can be submitted to one (and a second priority) of these by selecting the number and title of the panel(s) in the submission prompt. Open panels can maximum hold 15 papers, which will be selected by the panel conveners in collaboration with the Scientific Program Committee. If a panel is filled, remaining papers will be transferred to a panel with a related theme.

A) Biomedicine, medical technologies, diseases, healthcare, ageing, death (14 panels)

B) Genomics, bioscience, bio-objects, life sciences (7 panels)

C) Climate change, sustainability, environment, energy (16 panels)

D) ICT, social computing, hacking, user studies (14 panels)

E) Disasters, emergency, war, risk, safety, sci-fi (7 panels)

F) Surveillance, immigration, democratization, state, governmentality (7 panels)

G) Research policy, research governance, public engagement with science, interdisciplinarity (8 panels)

H) Design studies, innovation, creativity, aesthetics (11 panels)

I) Epistemic practices, scientific disciplines, theory-practice, knowledge, classification (15 panels)

J) Work practices, corporations, governance, regulation (6 panels)

No	Title	Conveners	Description
A	**BIOMEDICINE, MEDICAL TECHNOLOGIES, DISEASES, HEALTHCARE, AGEING, DEATH (14)**		
1	Clinical research in post-genomic medicine	Alberto Cambrosio, alberto.cambrosio@mcgill.ca + Peter Keating, McGill University	Clinical research has undergone a sea-change in the last decade. New platforms (e.g., microarrays, next-generation sequencing) and novel trial designs (e.g., biomarker-driven trials, adaptive designs) and a slew of new targets including the so-called 'druggable genome' have generated a flurry of innovation in both the kinds of clinical research undertaken and the institutional forms - public, private and public/private - erected for their conduct. New actors (bioinformaticians, patient activists) and old (oncologists, pathologists) are scrambling to come to grips with the deluge of laboratory and clinical information that now informs clinical trials and clinical practice. The resulting assemblages of non-human and human actants transgress existing clinical and regulatory boundaries such as those between diagnosis, prognosis, and therapy, and question established classifications of diseases. This session will take stock of these trends and attempt to tease out the emerging themes that structure clinical research in the post genomic era.
2	Establishing expert knowledge: local work in clinical trials	Sarah Wadmann, sala@sund.ku.dk, University of Copenhagen	Pharmaceutical trials are becoming bigger, more complex and resource demanding. Gradually a whole new industry has evolved around the conduct of clinical trials. This development not only makes drug research a very costly business, it also demands that a lot of trial participants are willing to engage in experimental practices. The challenges of recruiting research subjects are canalized from pharmaceutical companies through contract research organizations (CROs) to clinical sites who typically are remunerated per patient enrolled. Recent studies of the enrollment of experimental subjects in clinical trials have contributed important insights to the changing

	session		organizational landscapes of medical experiments. Attention has e.g. been paid to the dynamics leading to a certain geographical distribution of clinical trials and the dilemmas arising as experiments travel. For example, it has been shown how trial participation comes to stand in for access to healthcare services in various healthcare systems. Building on these insights, this panel explores how healthcare infrastructures and clinical trials interact, what motivates people to engage in clinical studies and which differences and similarities may exist across settings. Attention has also been given to the entanglement of care and research practices in RCTs, and health professionals' handling of dual roles stemming from this. Taking this as a starting point, this panel also addresses the work it takes for these practices to co-exist, and explores questions about the mutual constitution and contribution of research and care practices and the dilemmas that may arise from this intermingling.
3	Dis/placing medical technologies in theory and practice	Jenna Grant, jenna-grant@uiowa.edu + Lara Braff & Nayantara Sheoran, University of Iowa	This panel tinkers with the conference themes of 'design' and 'displacement' in order to stimulate our ways of thinking and writing about medical technologies. For this panel, we seek to problematize typical globalization narratives that posit medical technologies as "designed in the North" and "displaced to the South." To do so, we begin by approaching medical technologies as heterogeneous sociocultural assemblages that involve humans and machines, capital and discourses, sounds and images, tissues and fluids, as well as local ethics and moralities. Based on this approach, how might we, as researchers, conceptualize the 'design' of these assemblages as "creative enactments" (inspired by Mol 2002): ongoing social processes of use, rather than a single, original, intentional orchestration? Whereas 'displacement' suggests departure, forced or not, from a normal position, what are the effects of refusing a normative slant and instead thinking about the complexities that inhere in the 'emplacement' of all technologies? In addressing these questions, we look to these enactments and emplacements as potentially generative of new theoretical frameworks. We seek empirically driven and theoretically engaged papers on medical technologies and their enactments in diverse sites and among diverse social actors, in both the global North and South. We ask that the authors imagine how their particular ethnographic, cultural, or historical analyses may point to novel conceptions of medicine and technology. By tinkering with notions of design and displacement, we aim to better understand both what medical technologies are in particular times and places, as well as the time and place of our theories.
4	Disease and health in humans and nonhumans	Angela Cassidy, angela.cassidy@imperial.ac.uk, Imperial College	The past twenty years have seen a series of disease crises, both acute and chronic, which have highlighted the entangled nature of relations between humans and nonhumans (with both other animals and wider environments). Such incidents have included the SARS, avian and swine influenza outbreaks, and the related possibilities of global pandemics; but also more familiar, chronic and re-emerging disease problems such as tuberculosis. In response to these events, as well as the potential implications of ongoing environmental change for disease risks, the "One World, One Medicine, One Health" approach has rapidly gained visibility in the worlds of public health, medical, biological and veterinary sciences, promoting communication and research collaboration across these specialisms. However, at present it is unclear how such a ovement will engage with the variety of research, clinical, communicative and knowledge building practices involved in these disciplines, nor indeed varying understandings of the categories 'health' and 'disease'. This panel invites papers addressing the broad theme of disease and/or health across humans and nonhumans, asking, for example, how research and practice across these domains has come together (or been split apart) at what times and places, and under what circumstances? Case study, media, practice or theoretically based work will all be welcomed. Further to this, how can STS approaches be best applied in this domain, and to what end?
5	Designing global health technologies in the Global South	Norman Schräpel, norman.schraepel@ethnologie.uni-halle.de + Richard Rottenburg, University of Halle	In many respects the Global South is often seen as an implicit recipient of science and technology from the West. This perspective is reductive and easily challenged when undertaking careful empirical analyses of technologies and ideas that circulate globally. Global Health is one instance of such a socio-technical assemblage resulting out of the circulation of medical standards, blueprints of know-how, therapeutic techniques, drugs, infrastructures, medical data, etc. However, it is less easy to establish how this global assemblage is put together and what role actors from the Global South play in this context. What exactly does it mean to say that socio-technical agencements of global dimensions are produced in interstitial spaces? This panel calls for papers that follow the diverse involvements of individual and collective actors from the Global South in the processes of design and shaping technologies of global health. We invite papers that follow the ways of how these technologies are established, how they operate and how they mediate the production of scientific, social and economic orders and material infrastructures in and by the Global South. The translation processes of existing technologies (e.g. by unfolding inscriptions and revealing the practices that emerge out of these), the role of experiments (historically and recently) such as clinical trials, or the need to act in settings where resources are limited are a few topics we would like to address.

6	Evidence-based activism: patients' organizations and the governance of health	Vololona Rabeharisoa, vololona.rabeharisoa@mines-paristech.fr, Mines-ParisTech + Tiago Moreira & Madeleine Akrich	Over the last two decades, Science and Technology Studies have renewed research interest in patients' organisations (POs), users' and activists' groups in the domain of health and medicine. This has revealed three key aspects of POs' contemporary modes of activism. Firstly, research has identified how POs actively intervene in 'war on disease', collaborating and critically engaging with biomedical researchers in what has been labelled 'scientific' or 'therapeutic activism'. Secondly, studies have documented how competencies and prerogatives have been re-distributed between credential experts and lay members as POs collect, formalize and circulate patients' experience, becoming 'experts of experience' . This body of knowledge has supported POs' increased intervention in the shaping of health care services and role in negotiation about health research policies. Thirdly, knowledge, and the collective negotiation about what counts as such, is seen to play a significant role in managing accountability and regulatory processes in health care. POs have become increasingly involved in such processes, actively contributing to and evaluating the 'evidence-base' of collective decision-making. This expanding set of knowledge-related activities deployed by POs can be encapsulated by the concept of 'evidence-based activism' (EBA). EBA identifies a shift in POs' mode of activism. Knowledge is not simply an available resource amongst others in order to achieve the organisation's aim but something which has to be produced, interpreted, reframed, circulated for POs to be able to act. Knowledge and knowledge governance are at the very core of the mobilization and constitutive of activism itself. Rather than focusing solely on their engagement with the biomedical world or the struggles to legitimise 'experiential knowledge', in this session we invite papers that reflect on and engage with this wider perspective to understand the full range of POs' epistemic practices.
7	The politics of techno-embodiment in the age of pharma commerce	Anna Bredström, anna.bredstrom@liu.se + Cecilia Åsberg and Ericka Johnson, Linköping University	As humans are entangled in intricate relationships with technology and science, supremacist theories of the human, along with various humanisms and anthropocentric approaches, have become increasingly difficult to sustain. The ubiquitous usage of, and increased spending on, pharmaceutical drugs in order to sustain everything from restricted life styles to levels of cognitive or emotional health - for instance in relation to cultural images and ideals of "successful ageing" or "individual happiness and fulfillment" - marks in fact the failure of the Western notion of the autonomous, singular and unique human Self. Next to a wide and diverse range of materialist feminist scholars, this has also been argued by environmentalists, microbiologists, biochemists, disability scholars, science-as-culture students, science fiction authors and animal studies scholars. The pervasiveness of these effervescent entanglements also fundamentally threatens the human logics of gender and race, sexuality and species, and their related dichotomous understandings of selfhood and otherness, internal and external, familiar and alien, subject and object. Such challenging abundances call for epistemological inventiveness and novel conceptualizations that are able to map out the emerging entanglements and reconfigurations of both human and non-human agency, as well as the proliferation of hybrids. Therefore, the proposed panel solicits paper presentations that address the power-imbued relationships that transgress the binaries of nature and culture, the human and the non-human, the material and the meaningful, substance and subjectivity. In that vein, we ask for papers that develop critical perspectives where queer and posthumanist, feminist and anti-racist cultural studies meet the objects and subjects of the natural, medical and social sciences. We particularly welcome papers that investigates the conference theme 'design and displacement' in relation to the politics of technoembodiment in the age of pharmaceutical commerce, as well as papers contributing with materialist and feminist perspectives on the cultural imaginaries of drug development and pharmaceutical marketing.
8	New forms of expertise and the new understandings of human difference in autism research and care	Gil Eyal, Columbia University, ge2027@columbia.edu	Autism is situated at the heart of fundamental concerns within contemporary social studies of science. It is a developmental disorder of interaction, behavior, and communication – the very stuff of social life – resulting from complex interactions between genomes, brains, bodies and environments. The panel will explore how attempts to understand and treat autism re-articulate such key relationships as those between lay person and expert; classification and identity; phenotype and genotype; gene and environment. Moreover, it will explore how research programs in autism genetics and neuroscience - as well as the more humble behavioral therapies used to treat autism - are focusing on autism not merely as an object of scientific and therapeutic practice, but also as a singular way of identifying, claiming, and understanding human social, sensory and psychological difference, in short, what Ian Hacking calls "a dynamic kind of person" (1995; 2007). The panel will explore how autism as a biomedical category has shifted considerably in response to social action on the part of various experts, stakeholders and autism patients themselves, yet by the same token it has also proven to be enormously fecund terrain for the development of new understandings of human difference, innovative biomedical research paradigms, novel repertoires of health-related activism and expert-stakeholder collaboration, and even entirely new kinds of people. The panel welcomes the contributions of scholars from a range of disciplines across the social and human sciences, from anthropology to disability studies, literary criticism to psychology, epidemiology to science studies and beyond.

9	Care in a self-managed world	Ger Wackers, ger.wackers@hin.no, Narvik University College + Hilde Thygesen & Ingunn Moser; Diakonhjemmet University College + Irene Olaussen, University of Oslo	Self-management by patients in home care settings is becoming an indispensable resource in societies meeting the health care challenges implied in demographic and epidemiological trends. Prognostic studies indicate a steep incline in the number of required professional health care personnel and a decline in availability of the same. Family structures and social networks around the elderly erode. Meeting these challenges will require innovative health care service solutions facilitated by telecare and welfare technologies. Instead of building more institutions, the facilitation of people living longer at home and self-manage seems be the preferred way to go. As the generation that grows up in a digital world gets older and is used to self-manage in services like on-line banking and booking, seat reservation and check-in in air-travel, they will be prepared to adopt new roles in home care settings as well. New relationships between health care providers and users are emergent today, as new design solutions for care-at-a-distance services are developed and implemented. From patients who are able to self-manage their own life, body and disease, we see competent users who take the opportunity and become managers of the set of relationships with professional health care service providers, displacing and challenging traditional thinking in health care professions. To this open panel we invite empirical and theoretical contributions that address opportunities and limitations of changing distributions of knowledge, technology, competence, responsibility and self-directing ability among professionals and users in home care settings.
10	Care and its dis/placing moves	Peter Lutz, palutz1@gmail.com, IT University of Copenhagen + Sarah Pinto, Tuffs University	The term 'displacement' may be defined as moving from one place or position to another. Here movement emerges as a key dimension. In care practices, moves which displace may assume violent forms, or they may flow with grace. Certainly the design of technologies, policies and services for care attend to and (re)configure its moves but displace or neglect others. Movement, as both affect and effect, is powerfully pervasive. At once it compresses time and space, entangles emotions and motions, aesthetics and politics. Movement may be simultaneously literal and metaphorical, producing situational intensities that entice knowing but also render it illegible - beyond words. Movement can help articulate the specificities of presence and place, but in its shadows often reside an entire series of neglected concerns. Hence movement offers several challenging avenues for the analysis of care its dis/placements. This panel invites contributors to focus how care is 'placed' and 'displaced' through its socio-technical moves. Onto-epistemological concerns about the nature of care as frictions between 'placement' and 'displacement' are also of interest. The organizers particularly welcome ethnographic studies of clinical, medical, mental and/or aging care practices. Additional themes could include/combine for instance: socio-technical care moves which collapse/bend time and space; care moves that produce complicated agencies and/or mixtures of in/dependence, health and harm, or otherwise paradoxical care; dis/placing care moves that entangle socio-technical mobilities and design practices.
11	Smart Homes – designing care, work, care technologies, and living at home	Sisse Finken, finken@ifi.uio.no + Christina Mörtberg, University of Oslo	Smart homes are currently designed and implemented in homes of older and disabled people as a means to meet socioeconomic challenges that follow from the so-called 'tide-wave of elderly'. In meeting these challenges such technologies are designed and put on a particular meaning-bearing path concerned with reconfiguring existing designs of and between care, work, home and public. That is, in brief, in the smart home specific public care services are distributed to technology that are put to work twenty four a day in private residencies (Genty 2009). What we see as challenges, here, are how difficult it becomes to separate care and technology in the smart home for elderly, and how much care (work) it takes to uphold and make such care technology work (Finken & Mörtberg 2011; Finken forthcoming). STS scholars have fruitfully been engaged with issues on practices, design and displacements within the care sector (e.g. Roberts & Mort 2009; Mort et al. 2009; Moser 2011). In following such lines we invite papers that problematize issues of care designs and everyday practices of living and working with care technologies. We ask the following questions: What/who is involved in designing and upholding care technologies? Who/what are in- and excluded in such design practices? How do displacements come about? What implications do they have on everyday living and care practices?
12	Redesigning age and ageing: anti-ageing science and medicine in the 21st century	Joanna Latimer, latimerje@cardiff.ac.uk, Cardiff University /Cesagen	This panel addresses how ageing is becoming a key site of techno-scientific enhancement. Many societies are ageing at a time of great economic turbulence, with widening gaps in socioeconomic status and increasing variation across class, age and ethnicities. Ageing well, for both individuals and communities, is one of the greatest challenges facing the 21st century. Greater longevity is associated with decline and deterioration in health, loss of productivity and is increasingly represented as incurring costs not just to society but also to communities and the generations that follow. Recent publicity over failures of care of older people as well as unrest related to public-sector pensions, and at the other extreme, the costs of higher education, are vivid and timely reminders of the societal tensions that inter-generational contracts can present and the challenges that a shift in the age structure of a society can bring. Valuing ageing and the aged is increasingly problematic, intensifying fears of old age. Biomedical science is one of the ways that governments and societies are meeting this challenge,

			often headlined as 'putting life into years' or 'life-long wellbeing'. The aim is to extend the period of health and productivity, the 'third age', and reduce the length of the fourth age, as the time of increasing ill health and dependency. Biomedical innovation is both in terms of the traditional medical model of the prevention or alleviation of specific age related disease, as well as, more controversially, in terms of addressing biological ageing itself as the greatest risk factor for chronic disease, with claims that growing old is, from an evolutionary perspective, 'unnatural' and even that we should reconsider ageing as itself a disease. Possibilities for biomedical intervention to 'cure ageing' are imminent. This panel examines how ageing is being legitimated as a biological site 'to be managed' by science and medicine, and explores the ethical, cultural and social consequences of anti-ageing science and technology, for example in terms of different hopes, dreams and expectations created by anti-ageing science and technology, particularly in relation to death, immortality, and dys/utopian visions.
13	STS and the socio-material constitution of later life	Alexander Peine, a.peine@uu.nl, Innovation Studies, Utrecht + Alex Faulkner, Birgit Jaeger, Ellen Moors	Demographic ageing is widely framed as a major challenge faced by Western economies, and policy makers, industry, researchers, and lobby groups position new scientific and technological knowledge as a promising response to this challenge. Against this background, this open panel brings together contributions that address the entanglement of later life with the creation and use of science and technology. More specifically, it strives to extend insights from social gerontology – that has focused on ageing as a social construct in order to counter biomedical clichés of old age – into the realm of STS and thus advance theoretical and empirical understanding of later life as a socio-material construct. This will shed light on the mediating role of science and technology as an important, yet under-researched part of the social and cultural constitution of ageing. We welcome contributions that explore the creation and use of science and technology as powerful arenas in which social definitions of ageing, technologists, scientists, and older persons interact. Papers may include, but are not limited to the following subjects: - Studies of the use of science and technology by older persons to explore how ideas of ageing embedded in technoscientific objects shape and are re-shaped in the socio-material practices of older persons. - Studies of the practices of scientists or designers to investigate how representations of later life are constructed along with new scientific of technological knowledge. - Studies on practices of user-producer interactions in various contexts of older persons, to explore mechanisms and conditions for effective user producer interaction in later life. The contributions may address these issues in different domains including, for instance, pharmaceutical innovation, medical or care technology, consumer electronics, Smart Homes, or social media. Together, the panel will provide for an STS contribution to the study of later life and ageing.
14	Beyond finality: design and displacement of death in biomedical practices	Klaus Hoeyer, klho@sund.ku.dk + Linda Hogle, University of Copenhagen	Through which practices do conceptions of death as a point of absolute finality emerge? Who participates in them, how do they acquire authority, for whom and with which consequences? Answering such questions inevitably invites studies of how any settled end can become subject to renewed negotiation. This panel focuses on people seeking to move beyond finality and thereby design new points of finality while displacing others. If death is popularly imagined as the inevitable end, we seek to gather researchers who work with the ways in which death becomes re-designed, extended, negotiated, pressed, transfigured and questioned in biomedical practices. We wish to explore what it does to conceptions of the good life and the proper death, and we wish to explore the political, economical, cultural and organizational contexts for the questioning of death as finality. We are interested in the material practices through which the finality of death is probed; the material artifacts to which people attach their aspirations; and the ways in which technologies act as agents for change in our encounters with what might otherwise have seemed as existential premises. We wonder how hope operates in these practices; what are the political, economic, and cultural counters giving hope organizational impact? How do hope, aspiration and moral reasoning interact with material artifacts and biomedical technologies in re-writing death temporally, hermeneutically and perhaps even ontologically?
B	**GENOMICS, BIOSCIENCE, BIO-OBJECTS, LIFE SCIENCES (7)**		
15	Designing cells, tissues and bodies:	Manuela Perrotta, manuela.perrotta@ntnu.no	Intracytoplasmic sperm injection, embryos, gene chips, stem cells have nowadays become part of the iconic imagery of the potential of life sciences. These have been used as evidence of the rapid advance in life sciences research, but at the same time as problematic instances of their perceived dangerousness. Concepts as biocapitalism and biomedicine have become buzzwords in the so-called bioage, in which these

	ontological shifting in life sciences	+ Kristin Spilker, Nowegian University of Science and Technology	developments have come to feature prominently in discussions and debates about humanity's future. Moreover, these recent changes are challenging our wider social imagery, producing a re-imagination of the "facts of life". Specialized fields such as assisted reproductive technology and re-generative medicine, and life sciences as a whole, are the loci where we can see how the biomedical knowledge fosters both design and displacement of material bodily tissues. The differences between the substance and the signifier point out and help us identify the connections between bodily tissues, medical conceptualizations and biopolitical issues of regulation and governmentality. The track, therefore, focuses on the close study of the ontological shifting in life sciences, in which the same biological material can acquire a different ontological status depending on the sense making process it is embedded in and can even be subject to different legal regimes (typically, ownership and family law). We especially welcome contributions (empirically, theoretically, and/or methodologically oriented) that aim at analyzing the mutual shaping of state, market, institutions and local values on the one hand and life sciences situated research practices on the other, and how these everyday practices affect our sense of self, body and humanness.
16	The end(s) of the Human Genome Project	Adrian Mackenzie, a.mackenzie@lancaster.ac.uk + Ruth McNally, Maureen McNeil, Richard Tutton, Lancaster University	The Human Genome Project was a major marker in the development of and ambitions for the biomedical sciences. The HGP has been frequently and repeatedly re-evaluated and re-configured in various ways. Eleven years on from the publication of the draft sequence in 2001, this panel will assess the designs constituted or embedded in this intervention. Almost immediately, it was cast as a foundation and blueprint for the future, as well as being an end in itself. At the same time, the blueprint has been constantly revised, amended and diversified. The excesses of the genome have deleted and displaced other fields as well generated new promises, enterprises and expectations biology and medicine. The proliferation of 'omics' is one notable sign of these dynamics. In this open panel, we invite contributions that address: • historical perspectives on the initial designs, conception, practice and problems of HGP and related trajectories; • the promissory and speculative temporalities of genomics then and now; • modes of organization and practice in scientific infrastructures and work with reference to bioeconomy, biocapital, biopolitics or bio-digital technosciences; • the propagation of images, concepts, narrative and data about HGP across popular, scientific, commercial, literary and governmental media; • how STS has encountered, intervened, participated, supported or critiqued the development and design of HGP and its legacies (e.g. ELSI); • considerations of how HGP constitutes new or altered versions of subjectivity, embodiment, and materiality; • the web of connections between HGP and diversified sites of knowing living and non-living things.
17	Genetics and human difference: from the 'gene-for' approach to…?	Daniel Navon, dn2181@columbia.edu + Uri Shwed, Columbia University	In the decade since the publication of a draft of the human genome it has become clear that the 'book of life' will yield relatively few straightforward answers to salient questions about human health, illness and difference. The hope that the new genomics would quickly enable biomedical practitioners to explain, diagnose, predict and ultimately treat hundreds of prevalent medical conditions has, for the most part, revealed itself to be chimerical. Nevertheless, human genetics research continues apace, buoyed by continued public fascination, health-related advocacy and substantial financial investments on the part of state and commercial actors. Increasingly, an array of interpretive strategies is being deployed to turn prima facie opaque observations of chromosomal and genomic variation into meaningful answers to important questions. What's more, in some cases the questions themselves are being reformulated in order to overcome the impasse created by the failure of the 'gene-for' model of human genetics. This panel will bring together papers that examine these new strategies for interpreting and mobilizing contemporary genomics technologies and observations, as well as papers that analyze the way the lack of a hegemonic model for human genetics has allowed for diverse stakeholders like advocacy organizations to shape research strategies and goals. Potential topics include (but are by no means limited to) applications of genetic testing in clinical settings, models of inference involving genetic information, consumer testing for disease risk, racial/ethnic ancestry or other commercial uses of genomics, explications of the term 'post-genomics', gene-environment interaction studies, innovative subfields like epigenetics and neurogenetics, and the role of genetics in medical classification.
18	Bio-objects and bio-objectification	Tora Holmberg, tora.holmberg@ibf.uu.se, Uppsala University + Conor Douglas,	Bio-objects -a term that refers to the categories, materialities and processes that are central to the configuring of 'life'- play a crucial role in the 21st century. New developments in the biosciences are shaping healthcare and other aspects of our society, and bio-objects such as stem cells, synthetic organisms, hybrids and chimeras require integrated and sustained examination (Vermeulen, et al 2012).'Bio-objects' thus refer to new living materials that disrupt formerly established boundaries and modes of ordering, as well as to more familiar matters of life that are 'revitalized' when brought into new spaces and arenas. However, rather than a ready-made concept, 'bio-object' is a new heuristic

		Vrije University Medical Center	device, waiting to be filled with meaning (www.univie.ac.at/bio-objects). We also suggest that bio-objects come into being through a process of 'bio-objectification'. Although this process takes various routes depending on the object in question, as well as the context, some common features may be discerned: Circulation, reification and (re)vitalization. Filling bio-objects with meaning involves empirical research on these matters; it means following their making and stabilization, their movements and circulations, their trajectories and life lines, and their governance and regulation. In short it means examining their bio-objectification. This panel aims at exploring bio-objects and bio-objectification in different spaces and at different scales and we invite papers dealing with their various forms, regarding for example: - Changing boundaries e.g. human/animal, living/non-living, natural/artificial. When, where, how and with what results boundaries are negotiated, are interesting and politically charged questions to ask. - Changing regulations and new forms of governance: how do bio-objects and bio-objectification processes force us to reconsider our understanding of governance in the life-sciences? - Generative relations: new social, cultural, economic and political relations that are central in the generation of bio-objects and processes by which they came to be.
19	Re-ordering and re-making the BIO in contemporary technoscience and design: reflections from STS and beyond	Rebecca Ellis, r.ellis@lancaster.ac.uk + Claire Waterton & Brian Wynne, Lancaster University	This open panel invites reflection on STS work on the contemporary (re)ordering and (re) making of the bio-. Innovations in synthetic biology, cybergenomic taxonomy, DIY-BIO, proteomics etc. have attracted a range of studies documenting and analysing the proliferation and reclassification of life forms (parts and wholes) as an assortment of bodied manifestations (Helmreich 2009). STS research assumes that no normative position on socio-natural ordering can be justified by reference to 'nature', life or the biological: nature's unstable forms are also socially, culturally and historically contingent. As biological forms are refracted and re-designed through new techno-scientific possibilities, however, the question of life's possible independence from human interventions is being revisited (Clark, Hird). The panel organisers note a striving, amongst STS and cognate disciplines, for a collective ethics around nature, the natural and the biological, that accepts the social, cultural and historical contingency of life forms, whilst also trying to imagine new forms of responsibility and relation (including non-relation).Thus a creative tension is in the air, reflected in studies witnessing the (re-)making, understanding, collecting, counting, saving, owning and commodifying of life forms and the increasing complexity and multiplicity of our relations with them. The panel invites papers about extending our ideas of life, designing new life, finding new registers and orders of life and new ways of making life matter, whilst keeping alive questions such as: Why the category of life has recently been attributed such fresh importance? What role has technoscientific innovation, design and experiment had in creating this focus? How are existing forms of life and companion species understood, suppressed, ignored, deleted, or honoured by technoscientific ambitions and concerns? Can studies address the relationship between acknowledging contingency yet accepting modest responsibility for the natural, the bio, or life itself?
20	Rearranging research relations: the making of new forms of collaboration between STS and science and engineering	Susan Molyneux-Hodgson,s.hodgson@shef.ac.uk + Paul Martin, University of Sheffield	New forms of collaboration between social scientists and natural scientists/ engineers are being encouraged by research funders. These developments are part of broader attempts to fundamentally restructure research systems as a means of fostering innovation and securing public legitimacy. Whilst they offer new opportunities they also pose major questions about the role and independence of STS research. This panel emerges from a series of workshops and debates on the place of STS within the emerging bioscience of synthetic biology, where the STS community has attempted to define new roles and practices. Many researchers find themselves entangled in scientific communities, and with scientific research objects, in ways that feel novel, but also are challenging and destabilising. In attempting to address these issues different (imagined) roles such as collaborators, co-operators and critics have been differentiated as a means to refine relations beyond bland notions such as being 'inter-disciplinary' and to give meaning to the kinds of engagement that STS researchers assemble in their research practice. The panel seeks to address the overarching question of whether, and in what ways, relations between STS researchers and science/engineering researchers are taking new forms and how we might respond to these opportunities and challenges. Papers are invited that address some of the following questions: - How might we conceptualise the restructuring of research systems that promote new forms of collaboration? - Where larger and more cross-disciplinary projects are becoming the norm, how are social relations being rearranged? - As new forms of scientific research activity emerge, what types of STS research become possible and what gets displaced?

			- What forms of commitment – ethical, social, political etc – do new relations imply or even require? Papers centred on emerging biosciences are particularly welcome; work on historical and other contemporary fields also welcome.
21	(Trans)formations of kinship: travelling in search of relatedness	Charlotte Kroløkke, University of Southern Denmark + Stine Willum Adrian, swa@learning.aau.dk, Aalborg University, Copenhagen	How do we come to understand kinship in a time when bodies, biogenetic substances, and clinical expertise cross borders and create new contexts for imagining and making relatedness? How are understandings of nationality, ethnicity, race, gender and class transformed? This panel inquires into the staging that goes into the making of kinship including the importance of new media and social networking sites, which not only speed up communication between different stakeholders but also create new sites for expressing and negotiating relatedness. We invite contributions from participants that look at the making of kinship in different contexts (clinical experts crossing borders, egg and sperm donation, as well as surrogacy). We highlight different national contexts and different forms of travelling: International exchanges of clinical expertise and the translations that all of these undergo when staged in art, new media, and on social networking sites.
C	**CLIMATE CHANGE, SUSTAINABILITY, ENVIRONMENT, ENERGY (17)**		
22	Climate engineering as a societal design problem?	Paula Kivimaa, paula.kivimaa@ymparisto.fi, Finnish Environment Institute + Nick Pidgeon, Cardiff University	Greenhouse gas emissions continue increasing and, due to slow progress in global mitigation efforts, there is no quick reversal in sight. This has generated several suggestions for alternative methods - generally titled as climate engineering or geoengineering. Many of the suggested methods, however, are potentially extremely risky and may lead to unknown effects across time, space and societal structures. They also pose challenges to existing governance and legal structures aimed at dealing with climate change and other global issues such as the loss of biodiversity or the control of transboundary pollution. The search for new methods to mitigate climate change is, therefore, essentially a political and a societal question. People's reactions to adverse weather events as well as developments in politics shape the search for methods to slow down climate change. Similarly, developments in technology influence political discussions. Thus, important interactions take place between the pace and direction of the scientific and technical development of alternative mitigation methods and the political and societal framing of climate change mitigation. This panel seeks presentations analysing, from the social studies of science perspective, (1) how the emergence of this new technological field can be engaged critically by STS researchers as an ethical, political or legal issue; (2) how the field has affected the discussion on climate change in different forums (e.g. science, media, politics); and (3) what implications the developments may have on the design of governance structures for climate change policies.
23	Humanities and climate research	Lea Schick, leaschick@itu.dk, IT-University of Copenhagen	Rather than being an area mainly for the natural sciences, climate change is slowly becoming a matter of concern for the humanities and social sciences. Anthropocentric climate change is inviting the humanities to use its main instrument: to investigate and explain people's understandings of, and relation to a given phenomenon, in this case climate change and sustainability. The panel focuses on how the humanities and social sciences can help transitions towards more sustainable futures. An STS approach reminds us that climate and sustainable transitions cannot be studied separated from existing technological, political, social, and economic values and concerns. We ask: - How can researchers participate in identifying and establishing dominating climate discourses, which on the one side address how climate changes are affecting us, and on the other side affects transitions towards more sustainable futures? - How is climate change portrayed, negotiated and performed in the media, literature, film and arts and how do this affect politics and the public opinion? - How discourses about climate change geographically, historically and culturally situated? - How are imaginaries about sustainable futures circulating and how do they effect how futures are being performed and made? - How does climate change reconceptualize terms such as trust and responsibility? - Which scales are produced in the climate changes debate when it comes to questions about local-global, individual-collective, and nature-culture? - How is climate change transgressing borders between different disciplines and research areas? The panel builds on a Copenhagen-based network for climate related humanities research. The network includes researchers from a number of different universities and fields such as, archeology, philosophy, literature, IT studies, art, ethnography, urban studies, anthropology,

			arctic studies, China studies, pedagogy, media studies, and history. With an open panel at 4S/EASST we wish to extend the network to international researchers working with climate and humans.
24	Design and Transitions to Sustainability	Idil Gaziulusoy, idil.gaziulusoy@aut.ac.nz	It is now commonly accepted that, in order to achieve sustainability, the socio-technical systems which fulfil particular social functions need to be transformed. The needed transformations at socio-technical level cover institutional, social/cultural, organizational as well as technological change. This transformation is known as transitions to or system innovation for sustainability. Sustainability is a dynamic property of complex adaptive systems which span across social and ecological systems. Therefore, sustainability issues are systemic, complex, contextual, multi-stakeholder and initially generally ill-defined problems. Design, as opposed to its traditional output-focused conceptualisation, is increasingly understood as a particular type of thinking and a reflexive, process-based approach to addressing real-life problems. Design thinking processes and associated tools are being used in reframing ill-defined problems, generating several solution ideas, testing these ideas to identify those which fit the problem and its context best and finally developing and implementing a full solution. Stakeholders are engaged in all phases of this process covering research, ideation, testing and implementing through participatory approaches. In this regard, design is increasingly accepted as a promising approach to address contested, systemic, multi-stakeholder and multi-scale problems including sustainability issues. Emerging literature covers policy making as designing, enterprise design for sustainability, design for social innovation and sustainability and community empowerment through participatory design. This increasing emphasis warrants a critical approach to the potential role of design, which is an intentional human activity guided by targets and visions yet with unforeseen circumstances, in transitions to sustainability, which are emergent and dynamic processes requiring coordination and steering at all levels of society. This proposed session will be suitable for contributions critically inquiring into this potential role of design with specific focus on policy making and managing innovations towards sustainability at technological, organisational and institutional levels.
25	To cross a widening gulf: new patterns and practices of science for sustainability	Ed Hackett, ehackett@asu.edu + Myanna Lahsen, Steve Zehr & Wes Shrum, Arizona State University	While scientists are warning that Earth's vital processes are imperiled, threatening humans and their environments, societies have been reluctant to heed and change course. The widening gulf between knowledge and action impedes efforts to find and follow a sustainable pathway. This poses a grand challenge for interdisciplinary scholarship concerned with the creation, diffusion, and uses of knowledge and technology. The organizers of this session have been engaged in a year-long dialog with representatives of the International Council for Science (ICSU), exploring ways that STS theories and approaches can contribute to the global effort to achieve environmental sustainability with increased social (distributive) justice. Recognizing that there are many excellent efforts in this direction underway across the globe, we propose this session as a forum for further integrative and focused analysis of the topic. To this end we invite papers that characterize and explain the forces responsible for the disconnect between knowledge and action on sustainability. These may be situated at global, regional, or local scales. We also invite papers that explore modes of creating, directing, and distributing knowledge and technology to achieve sustainability. We understand that doing so will require integrating insights and approaches from the social sciences and humanities with those from the natural sciences and engineering, and that culture, values, justice, and equity will figure prominently in the analysis and remedies.
26	Future energy infrastructures: aspects of design and resilience	Gerhard Fuchs, gerhard.fuchs@sowi.uni-stuttgart.de, University of Stuttgart	The possible transformation of the energy infrastructure poses a considerable challenge to industrializing as well as industrialized societies. Discussions about climate change, sustainable development and a possible nuclear phase out in some countries, make it necessary for a system used to high and secure standards of energy supply to conceive a re-design. Energy in the form of electricity, gas, or fuel is reliable and has been more or less available to industrial and private consumers without restriction for decades. Changes in framework conditions can easily lead to societal controversies. Transformation processes must take into account the willingness of customers and users to support changes and implement behavioral adaptations where required. Energy infrastructures are socio-technical systems. They can only fulfill their function if supply and demand are balanced, and if the required changes can be integrated into the existing routines of functioning social processes, or if new routines can be easily established. Therefore, not only is technical competence necessary for the analysis and design of future (sustainable) energy infrastructures, but so are insights into organizational and societal conditions such as political-legal framework conditions, economic boundary conditions, individual and social behavior patterns, ethical assessment criteria, and acceptance patterns. In addition, other infrastructures must also be considered in connection to the energy system: in particular the transport infrastructure (via the development towards e-mobility) and the information infrastructures. The possibly more decentralized nature of future energy supply will lead to the need for much more data and information (social as well as technical) to be gathered, transmitted in

			"real-time," saved, and evaluated for governance and control purposes. Papers for the open panel should address the dynamics and interrelationships between science, technology and society as exemplified in this case of "energy infrastructures". Special emphasis will be on the issue of design: The possible transformation of energy infrastructures needs conscious design in order to secure a smooth running of established economic and private energy based practices, which might, however, feature, a range of unintended consequences.
27	Accounting (for) Nature: REDD+, carbon credits and the design of sustainable futures	Raoni Rajao, raoniguerra@gmail.com, Universidade Federal de Minas Gerais + Yola Georgiadou, University of Twente	In this panel we intend to discuss the complexities involved in the establishment of REDD+, a new mechanism that aims to attribute carbon credits (and related financial value) to the reduction of deforestation, forest degradation and reforestation in developing countries. The starting point of the panel is the analytical proposition put forward by Stone (1988) whereby policies and related mechanisms can be analyzed as the interrelation between Goals, Problems, and Solutions. However, for Stone (1988) these elements should not be taken at face value. Rather, in line with debates in science and technology studies, their definition and enactment is embedded in a complex set of social relations (e.g. Harding, 2011; Jasanoff & Martello, 2004; Latour, 1993). These goals are the enduring but ambiguous values of political life—equity, efficiency, security, liberty, justice, privacy, social obligation, democracy, etc—that give rise to controversies over their precise meaning. Problems are not out there, waiting to be discovered by diligent analysts and scientists, but the diverse ways actors have at their disposal for strategically portraying disparities between (ambiguous) goals and (contested) current states of affairs. Solutions are not permanent fixes for troubling states of affairs but the outcome of complex negotiations involving multiple actors often with contrasting views. From this initial conception, we invite contributors to think about REDD+ as a policy solution in Stone's sense, in other words as a series of endless games of moves and countermoves of actors trying to coordinate collective human behavior in reducing degradation and carbon emissions. We welcome contributions that highlight the performative and controversial character of REDD+. We also welcome contributions that analyze the relation between North/South divide and REDD+, and within that how differences in status, expertise and access to technology affect the ability of different actors to account (for) nature and obtain carbon credits.
28	Responsible and sustainable innovation: differences, similarities and relevance for STS	Jaco Quist, j.n.quist@tudelft.nl, TU Delft + Harrol van Lente Utrecht University/UM) + Ellen Moors (UU), Ibo van de Poel (TUD)	Over the last decade the concepts of responsible innovation and sustainable innovation have made impressive careers within and outside the STS community. Both are broad, encompassing concepts that embody unspecified, yet normative and desirable goals. Both mobilize, legitimize and urge researchers and stakeholders, but they do so in distinct ways. In this panel we try to benefit from the comparison between the forcefulness of responsible and sustainable innovation. Responsible innovation, on the one hand, focuses on how new emerging technologies like in nanotechnology or life sciences can be said to be desirable and acceptable to society. It is studied how to respond to societal concerns and a broader range of social and ethical aspects in order to profit from benefits and to prevent unwanted side-effects. Sustainable innovation, in its turn, is about developing and introducing innovations that create environmental and social value in addition to economic value. It is studied how these innovations and underlying technologies are constrained by different kinds of 'barriers' that prevent them from broader use into society, or how sustainable innovations may have side-effects too, for instance due to displacement and unintended changes in socio-technical arrangements and practices in society. Methods and conceptualisations in studies of responsible and sustainable innovation both build on methods, theories and concepts from STS and (constructive) technology assessment, but do this in different ways. In this panel we are seeking for differences and similarities between studies of 'responsible' innovation and 'sustainable' innovation. What are these differences and similarities? How do these two groups of literature relate to each other? Can they be brought together in a joint framework? How do they jointly contribute to the field of STS in general? By comparing and contrasting the two approaches, we hope to increase our understanding and to enhance the relevance for the field of STS and for society at large. We invite papers that contribute to these questions through theoretical explorations, case studies, observations, or experiments. We invite papers on the following topics: • conceptual comparison of responsible innovation and sustainable innovation; • comparison of responsible innovation cases and sustainable innovation cases; • conceptual / empirical papers on responsible innovation or sustainable innovation stipulating how this research tradition could benefit STS; • responsible and sustainable innovation methods, such as ELSA, value sensitive design, constructive/participatory technology assessment or stakeholder dialogues.
30	Eco-efficiency agendas: what role for techno-fixes?	Les Levidow, L.Levidow@open.ac.uk, Open University +	Eco-efficiency has recently become a more prominent concept in government policy. The concept originated in 1990s industry strategies to appropriate 'sustainable development'. Since then it has been elaborated more prominently (along with eco-innovation) by the OECD, European Union and US Environmental Protection Agency, among other bodies. Eco-efficiency means 'doing more with less' through technoscientific innovation, such as closed-loop recycling. Such innovations are meant to reconcile environmental and economic sustainability, even to decouple economic growth from resource usage and environmental degradation. Key policy instruments are R&D

		Luigi Pellizzoni, University of Trieste	subsidy, along with 'green procurement', though generally without clear regulatory standards to push innovation beyond current infrastructures. Eco-efficiency agendas have been questioned along several lines. As originally understood, sustainable development depends on fundamental systemic changes in dominant infrastructures, towards reducing resource demand and use. Yet eco-efficiency improvements can appear to avoid such a necessity. A related obstacle is the lock-in of past infrastructural investment or likewise of the most near-market, economically viable technologies, thus pre-empting later options which may be more environmentally sustainable. Moreover, environmental improvements are often undermined through cost reductions stimulating greater demand on natural resources – also known as rebound effects. Therefore technological innovation may not increase overall eco-efficiency, much less environmental sustainability, unless this aim is pursued via changes in policies, infrastructures and/or consumer behaviour. - How do eco-efficiency agendas frame problems of environmental and economic sustainability? - How do such agendas redesign (or else reinforce) dominant institutions and infrastructures? - How do they assign, blur or displace responsibility? - How do they mediate new market relations for resource extraction and use? - How do they relate to power relationships and governmental instruments? - What technoscientific developments have been promoted in the name eco-efficiency? - How do specific techno-fixes play the above roles?
31	Performing scales through environmental markets	Arno Simons, arno.simons@tu-berlin.de, Berlin University of Technology + Aleksandra Lis, Central European University + Ingmar Lippert Augsburg University	Over the last forty years we have witnessed a worldwide proliferation of environmental markets as "tools" for governance. From an STS perspective, the design and implementation of such markets have been analyzed as instances of economic performativity (Callon, MacKenzie, Holm) and as innovation processes in governance (Voß). While such studies have yielded many great insights, it was argued that they do not well explain problems of new structurations, dependencies and power relations emerging as a result of the performation or innovation of markets (e.g. Miller). We propose to contribute to thinking about such issues with the concept of scale while investigating the performative effects of environmental markets. We see several potential contributions of the study of scale-making processes for a better understanding of broader implications of environmental markets: (1) The (re)enactment of environmental markets involves multiple and interacting scales such as jurisdictional scales (e.g. EU<->Member states), geo-political scales (e.g. global North<-> global South), measurement scales (e.g. emission of point sources <-> emission of countries) or conceptual scales (e.g. policy design as abstract planning <-> as situated practice); (2) scales create dependencies and hierarchies and can therefore serve as devices for the stabilization or destabilization of power structures (e.g. between the global North and the global South, or between or between economists and policy makers); (3) scales are among the most contested issues in the design and implementation of environmental markets (e.g. asking on what scales markets are supposedly achieving effects, which scales they bring into existence, such as the extension of capitalist scales of measuring utility); (4) scales, while they can be the objective of deliberate design, are also both the result and the cause of displacement (e.g. biodiversity measurement scales as having tremendous effects on communities' right to organise themselves). With a specific focus on scale-making processes this panel thus seeks to contribute to the task of analyzing environmental markets from an STS perspective. We invite papers that critically examine aspects of scale-making processes in the innovation and performation of environmental markets. The panel is open to both theoretical and methodological approaches as well as to various empirical cases on scale-making related to environmental markets.
32	Environmental infrastructures: STS's anthropology of nature-cultures	Atsuro Morita, atsmrt@gmail.com, Osaka University + Anders Blok, Casper Bruun Jensen, Brit Ross Winthereik	Environmental anthropology and STS have made clear that natural processes can never be known unless mediated though human activities. For example, anthropological studies of science have shown that some natural objects – such as elementary particles and global warming – are rendered visible only through complex material practices, involving observation, data classification and analysis (e.g. Latour, 1999; Miller & Edwards, 2001). Scientists, however, are not alone in knowing nature. Local communities and indigenous people all over the world also depend on material practices in knowing their environments (e.g. Agrawal, 1995; Conklin, 1975; Watson-Verran & Turnbull, 1995). This track invites contributions from conference participants working with approaches to the study of nature(s) that reside on the boundary of STS and anthropology. The track seeks to closely investigate the interlinked set of material practices, technical artifacts and forms of organization, through which people and institutions come to know the environment. The concept of 'environmental infrastructures'

			is proposed as a way of inviting comparison between otherwise different practices of knowing and acting upon nature, by focusing on the interlinked social and technological settings that people inhabit and use in organizing their environmental relations. While substantial dialogues across STS and anthropology have existed for some time already, we seek to bring together scholars with a particular interest in contributing to, and furthering, this conversation. Collectively, our aim is to deploy environmental infrastructures, and their corresponding nature-cultures, as a site to explore what STS's anthropology may look like, now and in the future.
33	Investigating environmental science and technology	Catharina Landstrom, c.landstrom@uea.ac.uk + Angela Cassid, University of East Anglia	STS scholars have by now been analysing the roles science and technology play in environmental risks and related controversies for over three decades. This research has addressed the scientific knowledge, technological systems and expertise involved in the management of resources and local environments. Phenomena brought to light include conflicts between scientific and local knowledge and repeated democratic failures of institutions, but also the possibilities of collaborative knowledge building, and successful local experiments with restoration and conservation. This work continues, with case studies critically addressing issues often taken for granted by both natural and social scientists focused on solving environmental problems. However, in many instances the specificity and advantage of the STS approach is lost within the generalities of 'environment and society' or 'environmental social science'. Ranging from conceptual and epistemological reflections, to classic case study work, through participatory projects, media studies and more, we invite presenters studying all aspects of environmental science and technology. The session aims to take inventory of 'environmental STS' in order to explore the potential for common ground. Are there crosscutting issues and recurring features across a range of environmental sciences and technologies? In their inter/multi/transdisciplinary nature and involvement with the human domain, are the environmental sciences qualitatively different from the 'modern' sciences? Are environmental scientists forging new relationships with policy-makers? Are new forms of public engagement and controversy inevitable in environmental research? How are technologies changing in relation to environmental changes? Are so called 'green' technologies significantly different from previous technologies? What makes new green technologies locally acceptable or unacceptable? These questions are raised merely to prompt and invite initial discussion and reflection on STS and the environment. We anticipate that this panel will initiate further questioning and debate about this important strand of STS research.
34	The epistemic and political authority of expertise in environmental governance	Silke Beck, silke.beck@ufz.de + Eva Lövbrand, UFZ Leipzig	The reliance on scientific expertise in environmental governance is today fraught with a paradox. Considering the complexity and uncertainty of most environmental problems, policy makers are on the one hand more dependent on expert knowledge than ever before. The complexity of actors, institutions and bodies of knowledge which constitute environmental expertise plays a crucial role in establishing the possibility and legitimacy of environmental governance. On the other hand the scientific experts who speak in the name of nature no longer command unquestioned authority or public trust. In an age of food scares such as the BSE crisis and the GMO debate in Europe, and environmental mega-risks such as biodiversity loss and anthropogenic climate change, scientific experts are increasingly exposed to public scrutiny and demands for accountability and transparency. In this panel we will explore what this paradox tells us about the epistemic and political authority of expertise in empirical fields such as climate change, biodiversity and food safety governance. Do we need to reconsider how expert knowledge is mobilised in the name of environmental protection? Do calls for more deliberative forms of expertise signify a changing rationality of environmental governance? What are the epistemic and political implications of enrolling new forms of expertise in environmental policy making? In this panel we invite theoretical and empirical contributions that address these questions. By bringing together scholars from analytical traditions such as STS, Foucauldian governmentality studies and deliberative theory, we hope to advance the understanding of how certain forms of expertise make nature governable.
35	Competing visions of energy system transitions: contributions to "Smart Grid"	Jennie Stephens, jstephens@clarku.edu, Clark University	With increasing risks of climate change and energy insecurity, individuals, organizations, and communities throughout the world are grappling with the potential for both incremental and radical changes in energy systems. Different actors communicate different visions of the potential and limitations of changes in energy systems, with many prioritizing technological change in energy production, but an increasing awareness of the socio-technical change associated with changes in energy consumption is also emerging. In the past few years, the term "Smart Grid" has become widely used to represent visions of an energy system transition that integrates socio-technical change in both energy production and energy consumption. This term includes a complex mélange of integrated technologies with potential to increase the efficiency of electricity production, storage, transmission, distribution and consumption. For some a "Smart Grid" system is considered to be a critical component of an energy transition toward sustainability, yet great variation is apparent in visions and articulations of what these systems are, and how they might develop. This session provides a forum for exploring competing visions of energy system

			transitions with a particular focus on the multiple meanings of and technologies associated with “Smart Grid”.
36	Practice theory and beyond: emerging approaches to studying energy consumption	Kirsten Gram-Hanssen, kgh@sbi.dk + Toke Haunstrup Christensen, Aalborg University + Ruth Rettie & Kevin Burchell, Kingston University	Analysis of energy consuming practices has long been a theme for STS researchers. In recent years practice theory has formed a new approach within consumer studies and has been used to study energy consuming practices in everyday life and work situations. In this work the focus is often on the habitual and routine aspects of energy consuming practices, including the ways in which technologies shape and become part of these practices. As researchers work with practice theory in new ways, novel conceptual and practical insights, challenges and limitations are emerging. In this session we intend to gather researchers from different research environments, and welcome papers on different aspects of practice theory and energy consumption including: - Understanding and analyzing historical developments within energy consuming practices related to technologies - Understanding and analyzing how energy consuming practices travel or develop between cultures - Understanding and analyzing variations within energy consuming everyday life practice - Using practice theory to propose policy towards more sustainable practices - Discussing changing consumer roles, e.g. from consumer to prosumer, from a practice theoretical approach - Understanding the challenges and limitations of practice theory in the context of energy consumption - Novel approaches to studying energy consumption and everyday life.
37	Design and displacement in energy system transitions: pasts, futures and presents	Catherine Butler, butlercc1@cardiff.ac.uk + Nick Pidgeon & Karen Parkhill, Cardiff University	In the context of contemporary policy concerns about decarbonisation and security of energy supplies/services transformations in energy systems are being envisioned. Energy underpins and is implicated in multiple social arrangements to the extent that such transitions imply new forms of social relation and practice at different scales. Visions of energy system change are enshrined in a wide range of international policy documents, in media and wider public discourse and in a burgeoning number of future energy system scenarios. These encompass a wide-range of scientific and technological design; from the increasing number of gadgets that require electricity, smart meters, and electric cars to complex technological configurations for supplying energy, including carbon capture and storage, novel renewable energy technologies, modifying grid infrastructure and even global climate engineering. We can also think about the ways that contemporary scenarios and policies in some senses represent (re)designs of whole socio-technical systems. STS analyses concerned with energy system change offer considerable potential for opening up understanding of the relationship between design intentions and their displacements, and for scrutinising the roles future imaginings play in catalysing change and conflict. This session welcomes submissions that address issues including but not limited to: The design and displacement of the multiple scientific and technological objects envisioned in energy system transformations; the role that energy system scenarios and policies play in the ‘design’ of energy futures; the ways that interpretations of past transitions in energy can(not), do(not) or should(not) shape future ‘designs’; analyses that address the ways in which materials and ideas are being re-arranged in processes of energy system innovation and their implications for and in transformations.
38	Energy, practice and personal lives: design and displacement in the everyday	Karen Henwood, henwoodk@cardiff.ac.uk + Catherine Butler, Karen Parkhill, Fiona Shirani & Nick Pidgeon, Cardiff University	Energy system transformations are increasingly seen as necessary in the context of policy concerns about climate change, energy security and affordability. Such transitional processes become manifest in the practice of everyday life wherein socio-technological changes are challenged, negotiated, developed, re(designed) and displaced. STS analyses have much to offer as a basis for exploring energy system transitions in the everyday as they illuminate the intimate connections between the technological and the social, and pay attention to the doings and sayings that make up the routine accomplishment of everyday life. Opportunities exist for building on such perspectives and overcoming tired dualisms between structural forces/institutional determinism and the more dynamic ways in which individuals make adaptations in the context of rapid social change. This includes investigating social processes of reproduction as they implicate different persons and social networks and involve protracted engagements (including moments of disconnection) with normative and desired changes in public and private time and space. A focus on the dynamics of personal lives is a means of ensuring that the centrality of human activity is brought to the fore in the composition of social phenomena. Drawing inspiration from STS conceptualisations and ideas from the biographical/temporal turn in the social sciences, this session aims to examine both the absence and presence of transitions in energy as they are experienced and enacted in everyday contexts. We invite papers that address issues such as: How socio-technical energy system transitions are being experienced, enacted and felt through daily practice; the politics and ethics of processes of non-transition in the everyday; the reconfiguration of technological objects through social practices and the reverse; energy consumption and questions of how to

			develop new forms of provisioning that rely less on increasing 'energy demand'; narrative, personal lives, disruption, continuity and energy system change.
D	***ICT, SOCIAL COMPUTING, HACKING, USERS STUDIES (14)***		
39	Temporal practices and socio-digital organizing	Ingrid Erickson, ierick@gmail.com + Steve Sawyer, Cornell University	New forms and uses of information and communication technologies (ICT), changes in the ways people organize work, the ever-broadening array of living and family arrangements, and increasing mobility are all displacing traditional temporal markers within our personal and professional lives. These blurring lines occasion new possibilities in how we design tools, systems and policies to uphold or diminish these boundaries. Punditry on the implications of these changes is rampant: it ranges from certain dystopias to breathless utopias. Much of this recent discourse weighs issues of professional identity and temporal accessibility against values of personal agency and familial fidelity. Evidence about the patterns and implications of these temporal changes is limited, hard to synthesize, and difficult to generalize. We aim to begin redressing the disparity between imagined (espoused) and enacted (empirical) realities regarding the emergence of new forms of digitally-enabled work and living by assembling papers and authors whose work focuses on questions such as: How do people legitimate daily temporal practices? How do people appropriate ICT for use in managing their temporal practices? And, how do people manage their work and non-work activities? These questions focus on insights into how people 'use' time, how they negotiate the interplay of internalized social identities and their performance measures and the roles of ICT. In parallel, we seek to advance current theoretical positions regarding how are communities, government, employers, and other large-scale social institutions responding to temporal practices and enacted practices of sanctioning and legitimization of what people choose to "do?" In doing this we seek insight into the ways in which ICT are being domesticated and consumed as part of daily temporal practices. To do this we will solicit panelists who seek a conversation that interrogates the situation of blurred boundaries and temporal appropriation from a critical, multi-cultural, and socio-technical perspective.
40	The construction of social computing: design and displacement of hybrid relationships	Maurizio Teli, maurizio@ahref.eu, Ahref Foundation, Trento + David Hakken, Indiana University + Vincenzo D'Andrea, University of Trento	In the last few years, the label "Social Computing" (SC) has been increasingly used to identify the ensemble of computing applications developed in order to foster and sustain social relationships .The use of the label seems to imply that SC is engaging with hybrid socio-technical relationships, underlining a change in computer science. Nevertheless, SC is in line with the origin of computer science, in particular with the computing development program promoted in the '50s by Norbert Wiener, aiming at promoting a society that increases the "human use of human beings". However, although many applications are labeled "social computing," they are mainly commoditized, to generate profit for corporations, and they focus on a restricted set of application domains. Such practical displacement of the societal view of Wiener calls for a deep reflection based on an empirical perspective able to frame SC through an STS lens, for two main reasons. Firstly, SC is an academic and social construction, and its design and foundational discourses can be understood and questioned through an STS lens. Secondly, the use of the term SC builds constraints on how innovation can take place in the social arena of SC. Along with these premises, an STS lens can increase the understanding of the hybrid relationships designed and displaced by SC academic practices, as well as overcoming the constraints of SC discourses providing conceptual and methodological tools to design new kind of SC technologies. Taking this perspective, we ask for contributions addressing: 1) the academic and industrial construction of SC within and across disciplines; 2) the design of social relationships in SC initiatives and their displacement in SC use; 3) the engagement of STS researchers, lexicon, and methods, as a practice-based intervention in the design of SC technologies; 4) the facilitation of social inclusion in SC projects.
41	The politics of algorithms	Tarleton Gillespie, tlg28@cornell.edu, Cornell University + Mary Gray, Mike Ananny & Daniel Kreiss	As information producers and seekers we are increasingly beholden to the algorithm. The scope and speed of computation has fundamentally exceeded the human capacity for coping with information. Shrunk into laptops, phones, and tablets, that computational power has moved beyond engineers into the hands of educators, artists, journalists, and children. With these devices and users linked through the Internet, we have forged a resource only algorithms can manage. We have put the algorithm at the center of our information ecosystem, the primary means by which we find the information we need. Yet with this embrace of the algorithm comes vulnerability. Algorithms expect the information they sort and deliver to abide by their formalized logics. Yet their logic is opaque, deeply submerged in computational tools we may use but cannot open. Algorithms meter out which information is highlighted and overlooked, which

			associations are made or unmade, which resources are ranked high or low. All these computational moments have social and political implications for the people, communities, and organizations that depend on them. Algorithms instantiate the micropolitics of power, structuring the information practices they purport to merely facilitate. What we require now is a sociology of the algorithm as a key feature of our information ecosystem. This panel will provide an opportunity to think critically about the contexts, workings, and implications of algorithms. We seek creative, intellectual explorations that address any of the following questions: - What role do algorithms play in our information ecosystem? where is their influence felt? - What social formations do algorithms aspire to emulate? - How do algorithm designers think about the ramifications of their design choices? - How do widely deployed algorithms shape the production and occlusion of information, knowledge, and culture? - How do algorithms configure their users? - What do counter-algorithmic practices look like, if they exist?
42	Technologically domesticated: identity & the Internet Online & IRL	Kristen Karlberg, kristen.karlberg@purchase.edu.SUNY Purchase	As Baym (2010) Personal Connections in the Digital Age and Turkle (2011) Alone Together: Why we expect more from technology and less from each other illustrate, we are increasingly reliant on everyday technologies like cell phones and computers for communication with professional and personal contacts in everyday life. This dependence on technologies influences how we understand and interact with each other online and IRL (in real life). It also is affected by and affects the dynamic nature of the technologies themselves. Both Turkle and Baym argue that many people are now more comfortable interacting with each other online or mediated through technologies than in person or on the phone. What is interesting to consider is how this cultural shift in communication could impact the ways technologies evolve and the ways we perceive communication in the future. The question is not whether the relationship between social media/communication technologies is influenced by and is influencing interpersonal communication, but rather how these shifts and changes and mutual influence could potentially change the ways we understand the relationships between technologies, communication and self. This is a question of both design and displacement, broadly interpreted.
43	Childhood, values, and digitisation	Irma Van der Ploeg, irma.vanderploeg@zuyd.nl + Isolde Sprenkels, Zuyd University	Within the context of a digitising society, numerous domains of children's lives are inundated with digital technologies, connecting children to systems in various ways. These include, amongst others, identity management systems developed by governments and used by (health) care professionals to predict children at 'risk', social media environments developed by corporations to facilitate 'profitable' relationships with children, and electronic learning environments developed for educational settings to enhance learning and communication processes. There are particular values in play within the context of digital technologies and childhood that can be distinguished. On one hand, there are concerns for and about the vulnerability and innocence of children, with particular attention paid to protecting and caring for children. On the other hand, childhood is also connected to increasing the participatory potential or agency of children, in which they are considered as autonomous social actors, as consumers, with digital skills, whose competencies are in formation. Increasingly, the tensions between these two sets of values focused on childhood, roughly protection/care on the one side and autonomy on the other, are not merely demarcated and illustrated by the use of different digital technologies omnipresent in children's lives. Instead, as social and constructivist studies of science and technology suggest, these values are being configured and reconfigured within and by these socio-technical systems. Values can be 'displaced' as the result of different conflicts, as can the initial intentions and interests of and for these values based on their translation into different systems. For this panel, we invite papers that explore issues connected to childhood, values, and digitisation based on empirical work in these areas.
44	Universal design and ambient assisted living. displacements created by	Maxine Saborowski, saborowski@ash-berlin.eu + Alice Salomon, University of Applied Sciences Berlin	The concept of universal design aims at creating public spaces, buildings, objects etc. in an inclusive way: Habitants and users coming from any country or with any impairment should be enabled to live freely in these environments and to use all features provided. For example, a public transportation system should be universal in its design, which means that people from other cultures as well as those with physical or visual impairment can use it on their own. Whereas universal design is very much aiming at inclusion, the adjoining concept of ambient assisted living (AAL) is mainly targeting at specific groups with specific needs, such as elderly people in their home environment. AAL has been influenced by ideas such as ubiquitous computing, ambient intelligence, or smart living, which focus on the networking of objects,

	information technologies aiming at supporting every-day life		surfaces, environments - with patterns of data to be collected and interpreted. This can be medical data, motion patterns, or data from traffic control and management systems. AAL seeks to learn from universal design how to create user interfaces that work intuitively, making user manuals unnecessary. The questions that occur at this point are: What kind of displacement is happening at this moment, when the entry and collection of data through designed interfaces becomes an inherent feature of every-day objects and environments; when these objects and environments give personalised suggestions after interpreting the data? Usually, we interact with objects - how does the displacement look like if the interaction focuses on data instead? The open panel on universal design and AAL invites talks that give an overview on the current discussion in the two fields, relate the concepts to each other, and especially address the problem of displacement in every-day life. Both presentations focusing on specific examples and conceptual considerations on an abstract level are welcome.
45	Feminist theory, (values) & ICT design	Corinna Bath, corinna.bath@tu-berlin.de, Technical University Berlin + Judith Simon, ITAS Karlsruhe	STS researchers have pointed out that ICT as much as other design products have politics, since they produce inclusions and exclusion. Different social and political values in ICT artifacts can result from the designer's assumption that it would be possible to copy or imitate "the world as it is". This view often goes hand in hand with the so called "I-methodology" (Akrich, Rommes) by which designers unconsciously assume themselves as representatives of users. The results frequently are products biased towards young white male well-educated users. Besides such implicit values entangled in ICT artifacts, designers can have explicit values that they aim to implement in technologies (e.g. the goal to counter capitalist logics in parts of the open source community). Hence, it seems that both hegemonic as well as critically intended emancipatory values can implicitly as well as explicitly get inscribed into ICT design. Yet, as feminist STS researchers such as Barad, Haraway or Suchman have shown, such simple inscription models cannot adequately model the complex relationships of reality and knowledge, artifact's design, use and impact. Rather, they introduce terms such as entanglement, intra-action, diffraction and accountable cuts to describe these complexities and to denote the requirements they pose for designers, researchers and users. That is, they stress the ethical challenges different agents are facing and demand political engagement in that "cat's cradle" (Haraway). For our panel, we ask for theoretical as well as empirical contributions addressing these complexities while still keeping the feminist goal of overcoming the reproduction of questionable social and epistemic orders in ICT design. Taking interdisciplinary seriously, we would like to ask not only what feminist STS theory can offer for the design of ICT, but also what ICT design can offer for feminist theory and science and technology studies.
46	Mediated practice: insights from STS, critical theory and media theory	Anne Beaulieu, annebeau@xs4all.n l + Annamaria Carusi, Aud Sissel Hoel & Sarah de Rijcke, University of Groningen	Researchers in STS, media theory and critical theory share an interest in mediated practices. Furthermore, science and technology studies and humanities based studies of media and culture (including film, art, literature, music) have common concerns with regards to representations, meaning systems, social and institutional aspects of science, media and culture, and the politics and ethics of interventions in these domains. Researchers often draw upon overlapping perspectives and theories—though these are often deployed in different ways by scholars of science, and scholars of media and culture. The aim of this panel is to build on precedents (Thacker's Biomedia, van Dijck's ImagEnation, etc.) and to further explore these overlaps and divergences, and the ways in which concepts, ideas approaches and perspectives might travel more effectively across science and technological studies, media studies and cultural studies. We invite papers that show how a concept developed in one field can be used in the other, either via analysis of examples, by adopting a hybrid approach, or by theoretical reflection. Papers for the panel could address: - Relations between ideas of medium and technologies in STS and media/critical theory. - Analyses of visual, textual, and audio objects that use a combined approach from STS and media/critical theory. - Different ideas of agency (for example, in the context of authors and artists as well as social actors). - Different understandings of interpretation as an act, practice and process. - The relation between local and situated meanings on the one hand and general and abstract terms on the other, and issues of circulation of meaning in mediated settings. - Approaches to contextualised ethics and socio-political responsibility or intervention that draw on STS and media/critical theory.
47	Screen realities, synthetic situations, and	Niklas Woermann, niklas.woermann@unisg.ch, University of Southern	Increasingly, many areas of social life are no longer characterized by face-to-face interactions, but instead by various forms of face-to-screen interaction: Video-conferences, augmented reality, telemedicine, military drones, and many other forms of 'screen work' are only examples. In such 'synthetic' situations, the enmeshment of social conduct and technology becomes particularly tight, as the logic of the

	scopic media	Denmark + Vanessa Dirksen, University of Constance & Stefan Beljean, Harvard	world-on-screen and situation intertwine (Knorr Cetina, 2009). However, for traditional, microsociological conceptions of interaction this represents a challenge. The Goffmanian notion of interaction order and other concepts seem no longer up-to-date in the face of contemporary screen realities. Instead, new descriptive vocabularies and theoretical perspectives are needed. To remedy this situation, we propose to take a 'micro' or situation-centered perspective on screen-mediated forms of action, interaction, and experience. Particularly, we are interested in: - Global forms of coordination, co-relevance, and evolution mediated by scopic systems or trans-local technological infrastructures, especially those which replace more traditional forms of centralized control or hierarchical decision making (Knorr Cetina, 2003, 2005). Examples include rapid market-based coordination, network-centric warfare in the military field or social media platforms such as MySpace or YouTube where stars are "made", instead of being selected and promoted by record companies. - Local situations of action and communication which become expanded or enhanced by the addition of screens, touch screens, augmented reality-applications, etc. Notably, such screens do not simply represent informational content or absent events, but afford interaction with and intervention into (spatially) distant situations or developments. They thus create hybrid or synthetic situations that demand heightened attention and gain increased relevance. Example cases are telemedicine or teleconferences, screen-mediated financial trading or commerce, control rooms and security or military applications, web-cam chats, and more. - Screen-mediated forms of content or product-personalization, especially in combination with forms of crowd-sourcing, preference aggregation, collective decision-making and so forth. Such formats simultaneously imply intensive personal engagement with the content offered and aggregate (data about) large impersonal collectives of users or consumers such as markets, crowds, or clusters (Kozinets, Hemetsberger, & Schau, 2008; Zwick & Dholakia, 2006). Examples include personalized streaming radio (e.g. last.fm or Pandora.com), online trading platforms (e.g. bitcoins), or forecast communities. - We invite both empirical and theoretical contributions which examine specific forms or aspects of screen-mediated social situations from a micro perspective; suggest or discuss theoretical frameworks suitable to grasp their nature and implications; or address open issues such as the relation of micro situation and (global) macro linkage and coordination, defining the boundaries of situations, or temporal structures of mediated interaction.
48	Design challenges of working and organizing in technologically dense environments	Attila Bruni, attila.bruni@soc.unitn.it, University of Trento + Cornelius Schubert, University of Technology Berlin,	Working and organizing seems to be embedded in increasingly complex and situated technologies and practices. This creates new challenges for the design of work, organisations and technologies. In this open panel we pick-up the idea of technologically dense environments (TDE) so to refer to settings in which human actors and technological artefacts work 'together' and where working and organizing are inextricably linked to the use of technologies (and viceversa) (Bruni, 2005). In TDE complex sociomaterial practices mobilize the joint action of heterogeneous elements in designing collective work, blurring the distinction between technological and organizational processes. In the last decades, STS have provided a range of interesting examples of TDE: laboratories (Latour and Woolgar, 1979; Lynch, 1985) financial markets (Knorr Cetina and Preda, 2004; MacKenzie, 2006), centres of coordination (Suchman, 1997) and medical settings (Berg and Mol, 1998). This has broadened the scenario of STS, inviting to focus in depth on the study of practices and processes that bind together working, organizing and the use of artefacts and technological systems. The track, therefore, welcomes papers (empirically, theoretically, and/or methodologically oriented) that deepen such reflection exploring in details the design (as well as the displacement and disarticulation) of work and technological practices. Possible (but not limited) topics are: - Theoretical explorations of the interweaving between technological and organizational and working practices; - Empirical studies exploring the dynamics of TDEs; - The doing and interfering of objects and technologies in everyday organizational life; - The design and displacement of organizational processes through technological practices and vice versa; - The ambiguities and disarticulations prompted by technological systems supporting working practices; - The articulation of bodies, gender and technologies in organizational settings and working practices; - -Methodological aspects of studying TDE.

49	Design practices: material-discursive entanglements and interventionist approaches	Doris Allhutter, doris.allhutter@oeaw.ac.at, Austrian Academy of Sciences + Yvonne Dittrich, IT University of Copenhagen + Ann Light, Northumbria University + Christina Mörtberg, Linneaus University	Scholars in critical technical practice suggest a variety of approaches to foster reflexivity or subversion in design processes, to open spaces for 'situated innovation', inventiveness or (un)learning. Design research has been inspired by discourse-theoretical approaches that challenge hegemonic meaning-constructions and value systems. Furthermore, research on the agentive capacities of material phenomena has taken into account the 'doings' of distributed agencies. In this spirit, taking account of material-discursive entanglements in design practices considers the co-emergence of material artefacts and societal hegemonies as well as the meaning-constructing and embodied character of everyday work practices. Recently, attempts have been made to link material-discursive approaches to applied fields of computing and design practice. But still concepts, methodologies and evaluation frameworks are vague or lacking at all. Open remains the question of how applied research and/or 'communities of practice' can make use of discursive or material-discursive approaches to cultivate inventiveness and meaningful work practices. The claims made, namely to integrate a perspective of emergence in design processes on the one hand, and to consider discursivity or material-discursive performativity on the other hand, entail a need for conceptual frameworks and methodologies enabling artful integrations of politically motivated approaches and implementation focused practices. This track is dedicated to bringing into conversation different concepts of performativity in design with interventionist ideas and applied research. We invite theoretical, conceptual or empirical contributions located at the boundaries of STS, software engineering, information systems, human-computer interaction, computer supported cooperative work, critical management studies, political theory or related fields. Topics to be addressed include: - Collective design practices and their socio-political implications - Analytical or interventionist approaches to make tangible material/discursive entanglements - Experimental approaches linking the concept of co-emergence with implementation practices - Concepts, frameworks and methodologies that build bridges between STS and applied research (e.g. how to deal with claims for unification and standardization of processes and their situatedness or how to bridge ideas of inventiveness and process improvement)
50	Times of design	Ana Delgado, ana.delgado@svt.uib.no, University of Bergen	In a number of emerging fields, the turn towards design and particularly digital design practices can be seen as influencing new ontologies and epistemologies: the human body, the Earth and the skies and life itself are becoming matters of design as technoscientific fields such as systems and synthetic biology, geoegineering and converging technologies for the enhancement of the human body develop digital methods and approaches. There is a need within STS to critically cope with those developments, and looking at the temporalities that organise design practices is one of them. This panel session will explore the temporalities implicit in design practices, particularly the orientation towards the future that informs computer based design practices. Aims to be ahead of oneself, to control and appropriate futures, have been central to the development of modern science and technology. The digital turn and the emphasis on design in science and technology displace and take such tendencies further. For instance, while biologists and geographers have aimed at producing accurate representations of the entities they study, practices of digital design focus on how systems change and evolve overtime aiming to fabricate systems in controlled and desired ways. Because of its changing properties, life itself and the atmosphere appear for synthetic biologists and geoengineers as versatile materials for design. Designs within emerging technosciences not only aim at predicting futures but also at shaping them. What are the temporalities encompassed in computer models and simulations and other practices of computer aid design? In this panel we invite participants to explore the temporalities intrinsic to practices of digital design. We especially invite a focus on how different temporalities are produced within different technoscientific practices and modes of representation, and how these temporalities in turn are (re-) reproduced through digital designs.
51	Hacking STS: bio-hacking, open hardware development, and hackerspaces	Johan Söderberg, johan.soderberg@sts.gu.se, IFRIS ParisTech + Alessandro Delfanti & Eric Deibel	During the past two decades, hacking has chiefly been associated with software and computers. This is now changing as the figure of the hacker, together with the ideas and practices associated with this figure, are spreading to new walks of life. Thus we are reminded of the origin of hacking in hardware development. Some notable examples of how hacking is spreading to new areas include open hardware projects, the flourishing of garage biology, and the creation of hacker/maker-spaces in many cities around the world. The wider importance of this development is suggested by the role played by Japanese hackerspaces in the aftermath of the Fukushima accident. The hackerspaces were instrumental in informing the public, campaigning the government for access to data about contaminated areas, and building easy-to-use equipment for measuring radiation. These activities bring to mind one of the classic case study in the STS canon - the Cumbrian farmers herding sheeps in the shadow of the Sellafield nuclear power plant. Some of the themes discussed in the Sellafield case and in the STS field

			as a whole, such as lay expertise and radical openness in information management, are actualised anew with the expansion of hacker practices. Still, until now, the figure of the hackers has rarely been made into an object of sustained interest in fields outside software and new media studies. In this panel we would like to gather papers with empirical studies of biohacking, hardware hacking and related practices. We also encourage theoretical pieces discussing what the social sciences might contribute to the study of hacking, and what theoretical challenges the figure of the hacker might pose to the study of scientific and technological innovation. Some questions which might be asked in the light of this development include, but are not restricted to, the politics of hacking, the creation of the collective identity of the hacker, how development projects are managed, how the line between the community and firms is negotiated, the diffusion of hacker practices in corporate innovation models, and the legal implications of these practices.
52	Past and future of STS studies on user-technology relations	Wouter Boon, w.boon@rathenau.nl, Rathenau Institute + Nelly Oudshoorn, Sampsa Hyysalo, Torben Elgaard Jensen & Morten Krogh Pedersen	STS literatures have continued for over two decades to contribute to the understanding of the ways in which users shape innovation and how users are configured and transformed by technologies. Once radical, the early insights of users' re-inventions of technology after market launch and their capacity to co-design during the early stages of design processes are now part of the mainstream understanding of innovation and co-design. Similarly, ideas of sociotechnical scenarios, scripts, user representations, non-users and configured users have been adopted in design, business and computing sciences, and cultural and media studies. At the same time, various STS researches have engaged in and built on perspectives developed in these areas. This rich interplay between research on "the user" in STS and related fields calls for critical evaluation: of what use are STS conceptions of user-technology relations and in which fields is this influence felt? Which insights would still merit more attention and what new themes are emerging? Examples of the themes we would be interested in include: - In which direction will the concepts of script and sociotechnical scenario develop? - "User" as a relational idea rather than "a person out there": What new insights can be gained about implicit and implicated knowledge of users in R&D? - Users as collectives rather than individuals. What conceptual and empirical approaches are needed to study bottom-up innovations by user-communities? - Heterogeneity and diversity of users in user communities: whose voice is heard? - Non-users, neglected users and anti-users. - Is the notion of user still valid to understand the current move towards technologies in bodies? - Incentives for interaction between users and producers. - Users as intermediary actors and their positioning in a larger field of actors and technologies. - Users and local embedding: transferability of innovative services and networked technologies.
E	**DISASTERS, EMERGENCY, WAR, RISK, SAFETY, SCI-FI (7)**		
53	The day after Fukushima	Fabienne Crettaz von Roten, fabienne.crettazvonroten@unil.ch, University of Lausanne + Niels Mejlgaard, University of Aarhus	Hiroshima, Three Mile Island, and Chernobyl have had strong consequences for nuclear technology and its relationship with politics and society. These disasters have led many STS scholars to study nuclear technology along with other issues as nuclear waste, reframing nuclear power in the concerns about climate change and the general energy problem, participatory decision-making of nuclear power, assessment of risks related with nuclear power, etc. This panel aims to sketch the first consequences of Fukushima for the relationships between science, technology and society. Papers, which address media coverage of the accident or population and stakeholder's reactions to Fukushima or effects of the accident on policy agenda in a country, are welcome in this panel. The issue may also be dealt more generally, for example comparisons with other nuclear disasters, analysis of cultural differences related to the accident, study of the links between nuclear power, disasters and environmental challenges, study of impacts of anti-nuclear movements after the accident, study of public engagement of scientists working on nuclear power, etc. This panel will be organized in collaboration with Niels Mejlgaard, project leader of MASIS project (Danish Centre for Studies in Research and research Policy, Aarhus University) that collected data on media coverage, public debate and involvement, and concrete political responses related to the accident at Fukushima on 38 European countries.
54	Disasters –	Zuzana Hrdlickova,	This panel is interested in exploring the link between disasters, politics, material realities and social change. As Lowell Julien Carr already

	redesigning collective orders	zuzahrd@gmail.com, Goldsmiths, University of London + Manuel Tironi Rodó, Pontificia Universidad Católica de Chile + Israel Rodríguez, Universitat Oberta de Catalunya	understood, writing in 1932, a crucial element of disasters is that they themselves are a form of social change. The world – as we experience and practice it – changes when disasters strike. As sites and moments that unfold 'unknown unknowns', catastrophes reshape routines, collectives, conventions and institutions. First, because disasters are not only sudden events caused by nature or man. They can also be of a protracted nature, such as armed conflicts. Second, disasters make existing 'vital' infrastructure (Collier and Lakoff, 2007) unmanageable or disappear. This creates new empty spaces, both political and technical. Third, catastrophes also create new political orders. The social change occurring through and with disasters is also a process in which the disentangling of constituent elements becomes problematic. The aftermath of disasters are frequently marked by an emergence of new sociomaterial realities in which the collective of things – including humans and nonhumans – has to be re-arranged. The new realities – such as life in camps, forced or voluntary migration – are often shaped by the way people conceptualize the disastrous event, but also by the political agentic properties of a myriad of heterogeneous entities and materials that become relevant in catastrophic situations. For example, the design of post-disaster planning brings together different (and often conflicting) technologies, political agents and definitions of what is desirable and how to manage and understand the temporality and spatiality of the event. Papers could thus cover the relationship between disasters and development, humanitarianism, politics, culture and any other relevant exploration of intersections between disasters and social change.
55	War and the human: innovations and interventions	Kenneth MacLeish, ktmacleish@gmail.com, Rutgers University	War is a medium through which humanity—as war's author, object and victim—imagines and acts upon itself. The destruction and inhumanity of modern military violence has, from its very beginnings, also served as a kind of laboratory for lofty, ambitious and constructive interventions on the human. In the aftermath of World War I, Walter Benjamin remarked that the visceral spectacle of mechanized warfare entailed an unprecedented "contradiction" of human experience. And yet the development of more efficient ways to harm, kill and destroy has always demanded new ways to protect and heal the human body, sustain and inure the psyche, and extend and enhance capacity. This panel invites consideration of these interventions as designs of perfectible humanity and displacements of the violence of war. The range of interventions encompasses diverse technologies and techniques, and perspectives from across disciplines and theoretical approaches are welcome. War's interventions on the human include armor and trauma medicine, night vision and other cybernetic enhancements, and the withdrawal of bodies from harm's way in favor of air power, robotics and unmanned drones. They extend to the recruitment and surveillance of "fit" bodies, psychiatric and pharmaceutical therapies, psychotechnical discourses on "morale" and "resilience," and the regulatory formalization of social norms and liberal ideals of tolerance and diversity within military institutions. And they even incorporate the human sciences to make "culture" an object of strategic interest, to make "hearts and minds" a soft target for conquest, and to mingle the military and the humanitarian. Under contemporary liberal governance, war inevitably entails the instrumentalization and destruction of life in the name of protecting life. By nurturing and valorizing the 'humanity' of persons at or in war, even in the most manifestly 'inhumane' circumstances, these innovations posit diverse resolutions to this intractable contradiction.
56	On fire engines and big red buttons: technique in emergency situations and disasters	Nils Ellebrecht, nils.ellebrecht@soziologie.uni-freiburg.de + Markus Jenki, University of Freiburg	In the past STS mainly focused on the integration and increasing use of different technologies in everyday life – at home and in the workplace. Emergencies and disasters were only of concern as the unwanted product of a technizised world. The session wants to broaden the common perspective and focus on the (historical) generation, (characteristic) design, (organizational / technical) implementation and use of techniques, which are deployed in emergency situations or disasters: from fire trucks to emergency power supplies to all kinds of "big red button" technologies. The session is open to a wide range of papers exploring and describing the relationship between emergency situations and emergency techniques. We suggest three different topics, each addressing emergencies in a specific way: 1) Public emergency techniques: An emergency is described as an unusual and unforeseen event, which involves threat of harm or actual harm. In an emergency immediate action is required (Latané/Barley). For that reason public emergency techniques are often designed in a characteristic way: red colored, easily accessible and simple to use. Case studies or papers dealing with the generation, design, implementation and use of emergency technologies such as automated external defibrillators, emergency brakes, calls, buttons, etc. are welcomed; 2). Professional deployed emergency techniques: The second field of technological development is defined by highly trained professionals, using a broad range of tools during their operations. There are technologies that are exclusively used by specific rescue organizations for example pumps by firefighters, and there are technologies in use, that are common to all rescue organizations. Some tools are especially designed for emergency operations, others are only slightly adapted whereas a third group consists of technologies, that have not been altered in any way. It can be shown, that the formation of rescue organizations themselves is closely connected to the development of rescue technologies. The development of ladder trolleys and fire engines required drilled staff and highly trained team players. A clear distinction between rescue

			experts and ordinary persons has been introduced and cultivated over the years. The organizations developed a culture of reliability and intrinsic technological standards; 3) Technical safety: emergency stop equipment Today not only every public service vehicle but also every machine is seen as an source of danger. Because of that some kind of emergency stop equipment is always seen as urgent need and often legally required. Most notably in the last hundred years technical standards and codes for technical safety are growing including detailed instructions and specifications, how workers, organizations and the technologies themselves have to be prepared for possible emergency situations. We like to invite scholars, who research the development of the standardization process of emergency procedures, the involved actors (state, insurers, producer etc.) and negotiating processes and the actual implementation of formal emergency standards.
57	New orientations in risk management practices: designing nature and society anew?	Joana Guerrin, joana.guerrin@irstea.fr + Anna Wesselink & Christelle Gramaglia, IRSTEA	One of the paradoxes of modernity is the enduring search for mastering and controlling nature through technology, and its counterpart, the endless production of unexpected consequences and risks (Giddens). Following major environmental and technological disasters that showed the limits of our capacities to avoid or counter risks in the last 50 years, new ways of coping with them have been investigated and experimented. Scholars such as U. Beck argued that a "risk society" had emerged which should transform our modernist ways of dealing with hazards and nature itself. Risk specialists seem to have rapidly appropriated this analysis, abandoning former protection policies for mitigating and adaptation techniques instead. Today, a large part of the European regulatory science and policy-making activities aim at implementing what is presented as a new paradigm for risk management, a more integrated, non-structural and environmentally-friendly approach to it. Those changes are not only discernable in discourses, but they have also a material impact on nature and society which they contribute to design anew. The aim of this session is to gather empirically-based contributions analysing diverse types of risks and management practices that illustrate or question the fact that there was a shift in the way hazards were and are now dealt with. When did changes occur and how are they explained? Which type of science, technology and political philosophies have facilitated or opposed this orientation? Which ruptures, continuities, translations or displacements can be identified in the design of recent mitigating devices/practices? How was the role of the State and various stakeholders consequently redefined? How are possible conflicts between environmental and risk management practices handled? How are now reallocated risks if they are not fought against anymore but dealt with in an adaptative way?
58	STS perspectives on patient safety and quality improvement in health care	Jessica Mesman, j.mesman@maastrichtuniversity.nl, Maastricht University + Roland Bal & Johan Sanne,	We would like to take this opportunity to organize a session that enables STS scholars who work on patient safety and quality improvement in health care to meet, discuss each other's work and explore possibilities for collaboration. To do so we would like to invite you to submit a paper related to this theme. A good example of the kind of work we are interested in is the book of Emma Rowley and Justing Waring (eds.) 2011. A Socio-cultural Perspective on Patient Safety. (Ashgate). The authors in this edited volume describe how we can learn more about the more fundamental issues that shape notions of safety, alternate strategies for enhancing safety, and the wider implications of the safety agenda on the future of health care delivery. Another example is the special issue of Social Science & Medicine: "New Approaches to Researching Patient Safety" (Iedema (ed.) 2009, volume 69, issue 12). The special issue pays particular attention to three patient safety research principles. First, to account for whether and how safe and improvement-oriented practice is achieved, research must engage with both the predictability and the complexity of the sites. Second, engaging with complexity implicates researchers in experiencing it. Thirdly, besides numerically-based descriptions, abstracted explanations and procedural prescriptions, patient safety research evidence must encompass experiential data, collaboratively-produced accounts and/or experience-based designs. We consider an STS approach as both theoretically and practically relevant as it surfaces the existence of different ontologies of safety; exposes safety as a socio-technical achievement; thematises the politics of safety. We are particular interested in papers that challenges the taken-for-granted assumptions around fundamental philosophical and political issues upon which mainstream orthodoxy relies.
59	"This planet is doomed": on the entanglements of science fiction and technoscientific artifacts	Michael Bennett, m.bennett@neu.edu + Langdon Winner, Northeastern University	This panel addresses the theme of "Design and Displacement" by attending to science fictional narratives and rhetorical devices, broadly construed, as instrumental elements of technoscientific projects. More precisely, the panel will explore the various ways in which artifacts and scientific knowledges are critically embraced, boosted, derailed and otherwise engaged by the science fictional. Whether in recognition of its regularly cited power to induce the systematic disruption of human senses, to estrange cognition, to underwrite chronopolitical maneuvers or to enable other disruptive effects, science fiction has often been described by many of its critics as a means of displacement. As well, and often critically, science fiction has traditionally deployed technoscientific artifacts to dramatize the ethical, legal, social and political significances of the designed elements of worlds, both actual and imagined. Sampling a diverse set of disciplinary frameworks, this panel aims to probe the ways that science fiction is used by technologists, technology researcher managers, social and

			natural scientists, humanities scholars, artists, lay audiences, lawyers and policy-makers to shape and re-shape research projects, to interrogate their implications and to convey their significances to diverse publics.
F	**SURVEILLANCE, IMMIGRATION, DEMOCRATIZATION, STATE, GOVERNMENTALITY (8)**		
60	Crime, technology, and policing	Irma van der Ploeg, irma.vanderploeg@zuyd.nl, Zuyd University + Peter Lauritsen, Aarhus University	Policing practice is increasingly reliant on the technologies of data gathering for strategic use in crime prevention, investigation and control. In the process, personally identifiable information is routinely gathered, classified, geo-coded, aggregated and analyzed within interconnected information systems. These practices range from resource deployment decisions enabled by geographic information systems, the use of DNA in detection work, to smart surveillance with facial or number plate recognition amongst others. Technologies such as these increasingly mediate how suspicion is defined, constructed and acted upon by the police. Though the use of new information technologies is becoming a defining characteristic of contemporary policing, most descriptions of the role of technology within policing tend to either take an instrumentalist or a determinist view. Instrumentalist perspectives analyze these technologies as useful tools, or as a means for realizing the ends for which they were designed. They often neglect the active role technologies play beyond designers' intentions, in redefining policing and transforming identification practices and the identities of suspects, citizens or the police themselves. Determinist perspectives on the other hand, tend to suggest totalizing views about the capacities of technologies and ignore the flexibility of designs and the interdependencies that enable them to work. This panel focuses on the complex interactions between the use of new information and communication technologies in policing practice and the various persons and systems with and in which they are connected or embedded. This panel welcomes papers that explore empirically and conceptually the ways new technologies are transforming policing practices, how they challenge and change professional identities, and how they contribute to the construction of 'suspicion' in contemporary policing.
61	New media, digital identities and transformations of surveillance	Jason Pridmore, jason.pridmore@zuyd.nl, Zuyd University + Anders Albrechtslund , Aarhus University	The increasing use and presence of forms of new media and social networks has created an unprecedented level of data about everyday interactions, relationships, and personal perspectives on products, politics, and people. These data produce personal profiles in the form of digital identities that are both available for corporate and governmental surveillance of consumers and citizens and enables mutual or lateral surveillance by family, friends, and colleagues. This has had and continues to have significant implications for 'privacy', something which itself is continually being reshaped in light of transitions in technology. A majority of research connecting surveillance with the use of new media and social networks takes as its starting point a critical assumption about the power inherent in corporate strategies and governmental intrusion. The papers in this panel instead focus on the differing 'configurations' that exist, describing the micro processes of power relations between 'users', their digital identities, and the networks in which they are a part as forms of everyday surveillance. In this context, the notion of 'users' is itself complicated by persons that may be players, participants, clients, members, etc. However, these examinations begin to illuminate how forms of collaboration and co-operation transform practices of surveillance through processes of mutual shaping. Voluntary use of technologies such as location check-in, social sign-on, the use of hashtags, begin to suggest new ways in which surveillance is enacted, performed, and transformed. This has significant implications for 'user identification', with agency and power distributed through the people, practices, systems and artefacts that comprise the use of new media and social networks. This panel welcomes papers that explore empirically and conceptually the relationships between the use of new media/social networks, digital or user identification and surveillance.
62	Monitoring, identifying, displacing: on everyday surveillance & security practices	Jutta Weber, jutta.weber@uni-paderborn.de, University of Paderborn + Michael Nagenborg, University of Tübingen	The spread of convergent 'security' and surveillance architectures is a global phenomenon with its practices deeply embedded in everyday life. Tight networks of interconnected databases with biometrical, DNA or communication data, CCTV, robots, and other technologies are used to monitor inter/national borders, regulate the access to welfare benefits or money machines, target 'terrorists', perform 'crowd control' or select employees. Biological identification, (risk) profiling and anticipatory tracking systems are rapidly 'flourishing' and are becoming crucial tools – not only in law enforcement and military but business, health care, tourism, urban planning, transport, and many other fields. While surveillance and security technologies are often designed for specific contexts and places, they tend to become part of different contexts and places. For example, body scanners are already being used in airports as well as in prisons and at military checkpoints. Thereby, security and surveillance technologies are functioning as mechanisms of standardization, social sorting and displacing along axes such as gender, dis/ability, class, 'race', and religion. We invite contributions dealing with one of the following issues:

			- Mechanisms of standardization, categorization, in-/exclusion, displacing through technologies of In/Security - Everyday practices of monitoring, tracking & risk profiling and the emergence of culture(s) of fear and risk governance - Surveillance technologies and human rights with regard to interdependent aspects of gender, dis/ability, class, 'race', and religion - Reconfiguration of bodies and identities through surveillance and security technologies - The entanglement of surveillance, security and military technologies (bi-directional dual use; proliferation of military technologies in civil life, etc.) - The interplay between surveillance and security technologies and spaces/places (e. g. the governance of space and human behaviour
63	Biotechnologies and Immigration	Torsten Heinemann, heinemann@soz.uni-frankfurt.de, Goethe University Frankfurt + Ilpo Helén, University of Helsinki & Thomas Lemke, Goethe University	For a long time immigrants have been subject to a diverse range of medical and biological examinations. These procedures have been aimed at the verification of the immigrants' identities and the protection of public health. Today biotechnological procedures are widely used in the context of immigration in many countries around the world, allowing for more and more sophisticated ways of identification and prevention. Examples include biometric passports and iris scans to identify individuals at border controls, DNA and isotopic analysis to prove claims about asylum seekers' countries of origin, and parental tests conducted to verify biological relatedness in family reunification procedures. Additionally, medical diagnostic rapid tests are used in international airports to prevent the spread of diseases and protect citizens of a given country against infectious pandemics. The use of biotechnologies might help immigration authorities to increase certainty about immigrants' identities and health status. It also allows immigrants to prove claims about their identity, origin, or family status. At the same time, the tests rely on the contested idea of a stable and unchanging body that can be addressed as the basis for identification and medical examination. Also, they produce new forms of uncertainty and may be seen as a tool of exclusion for unwanted immigrants. This panel invites papers that explore the use of biotechnologies in immigration contexts and analyse the complex social, political and ethical implications of these practices. Proposals should address the historical development as well as the social, political and ethical aspects of biotechnologies in immigration contexts.
64	Challenges in studying technologies of democratization Session	Christopher Gad, chga@itu.dk + Randi Markussen, IT-University of Copenhagen	If, science and technology studies have taught us that technologies build societies and make them durable, studying the development and use of both old and new technologies in democratic processes should be of a particular interest to the field. Currently, there is a growing political pressure in Europe to experiment with such technologies and one important trend across computer science, security studies, software engineering, and hacker communities is various kinds of engagement in the development (including disturbing the development) of e-voting technologies. This both happen in settings where digitalization is seen as a means for a further democratizing of already existing democracy and in places where democracy has just been or is just about to get introduced. For instance, if representative democracy is ideally characterized by transparency of the voting process (the voting process is principally, if only in reality partly, transparent to all voters), what does the introduction of new digital systems, constructed by, say, experts in cryptography, effect. What new public institutions are needed in order to handle the new crucial role of experts? The track invites participants to explore ways in which democracy/democratization is achieved, what challenges this entails, and how to study it empirically. For instance what role does various non-human actors play in processes of voting or in transfiguring them? Furthermore, how can insights from such studies be brought to bear on a truly global and thus truly complex and varied problem of what it means to digitalize democratic processes, or, even, what it entails using technology as the very means for democratization? If democracy is always changing and mutating, as much as it is a ritual in some places, how can we identify what are the specific challenges posed by technologies and digitalization, including what happens as 'technological democracy' becomes an export commodity?
65	Political devices	Endre Danyi, edanyi@gmail.com + Jan-Peter Voss, Technische Universitaet Berlin	From the outset, science and technology studies (STS) has been very good at detecting and discussing the politics of seemingly neutral and functional devices in the societal fabric (such as laboratories, hospitals, factories, museums, and innovation centres) by examining the work that goes into their construction and operation. Interestingly, however, it has paid rather little attention to devices within politics, that is, artefacts that constitute the infrastructure of democracy and governing itself. These devices, on the one hand, include parliaments, parties, electoral systems, courts, and regulatory agencies, all of which are expected to function as core components of a 'political system', performing a political community and its collective decisions. On the other hand, they include policy instruments, modes of governance, and regulatory mechanisms that are often treated as calculable generators of specified social outcomes, ready for use anywhere, at any time.

			If we look at how these artefacts are treated in policy processes and public discourse, we are faced with 'black boxes' at the very heart of politics. Mobilising an STS perspective and repertoire, this panel invites papers to open up these black boxes, interrogate their making and use, and discuss what makes them political.
66	On states, stateness and STS: government(ality) with a small "g"?	Jan-HendrikPassoth, jan.passoth@uni-bielefeld.de, Bielefeld University + Nicholas J. Rowland, Penn State, PA, USA	The relationship between science, technology, and governance shapes and is shaped by states. While it has been influential in STS research on how modes of governance influence scientific practice and technological innovations, the converse question of the influence of both on governance is underrepresented. This panel explores the inter-play between this relationship and its depiction in social/political theory. We engage and question well-trodden artifacts of social and political theory such as state entitivity, state materiality, and the much distributed Foucauldian model of stateness. What does STS have to offer broader social and political theory devoted to the depiction and performance of political action? Likewise, what can STS learn from these traditions that have shaped previous research on state formation, degradation, and revision? Hence, we explore empirically and conceptually the possibilities of research based on an STS approach to politics, states and stateness, governance and governmentality. Just like early lab-studies came back from the lab to inform us empirically about science with a small "s", an STS approach to states and stateness would be the attempt to study govern(mentality) with a small "g": It looks at the many interwoven processes of designing, planning, maintaining and displacing the infrastructural setting of modern political practice as well as the re-assembling of the respective actors and entities. We propose an open panel, and anticipate two to three related sessions: we anticipate that one session focuses on conceptualization and theoretical approaches, dealing with the mechanisms and techniques of creating, maintaining and shifting the multiple ontologies of stateness. We also imagine that the additional sessions be devoted to papers that deliver a diverse set of case studies with empirical support on topics related to state ontology, state infrastructure, and techniques or practices of self-regulation under political (perhaps neoliberal) conditions.
67	Technologies of the Self	Antonio Carvalho, antoniomanuelcarvalho@gmail.com + Andrew Pickering, University of Exeter	How do technologies mediate subjectivity? This panel provides an opportunity to bring together those who are exploring and questioning the linkages between science, technologies and subjectivity. Foucault's notion of technologies of the self illustrates the complex connections between practices, discourses, ethicalities and the enactment of subjectivity. Classical sociological and anthropological studies have strengthened the assumption that individualities, and the modern self, co-emerge within specific sets of practices that require a regulation of the performative order of the individual (e.g. Weber, Elias, Mauss); other studies have highlighted the importance of technological materialities regarding subjectification (Rose, Schivelbusch, Brenninkmeijer, Schull), sometimes having in account mind altering substances; however, we believe that the contribution of STS must comprehend the ontological aspects of these performative and technological regimes of subjectivity. Although central studies of ontological politics have explored how different medical applications deal with different realities of the body/self (Mol) it is fundamental to analyze how multiple versions of subjectivity are enacted through diverse material, technical and performative orders, not only contemporary technologies but also chemical and performative modulations of the individual and their corresponding ontologies. Consequently, we are looking for a range of contributions that may fall under some of these categories: - Empirical studies that explore processes of subjectification mediated by technological devices and post-humanist STS approaches to performative and chemical transformations of the self, through psychedelics, meditation or other forms of spiritual practice. - Contributions to a post-humanist STS theory of the self that pays attention to ontological concerns. - Studies that focus on transformative paradigms of ethics, the social and the world, supported by the performative/technological/chemical - Transformation of the self. - Research that presents new ontologies of the self based on emerging movements such as cybernetics, transhumanism and new forms of technological/spiritual practice.
G	***RESEARCH POLICY, RESEARCH GOVERNANCE, PUBLIC ENGAGEMENT WITH SCIENCE, INTERDISCIPLINARITY (7)***		
68	Civil society organisations in research	Bernd Stahl, bstahl@dmu.ac.uk +	There is wide agreement that broader stakeholder engagement in technical and scientific research is desirable. Civil Society Organisations (CSOs) are often described as the optimal actors who can realise the promise of participative research governance. CSO input into research may lead to a broader knowledge base and thus more robust knowledge. It can increase the legitimacy of findings and heighten public awareness and discourse. As a consequence there are numerous attempts to stimulate participation in research and embed participative

	governance	EU FP7 research project CONSIDER (www.consider-project.eu), De Montfort University	processes in research governance. Despite the many activities to stimulate and implement CSO participation and involvement in research, there is currently no agreement on how to evaluate the success of participation. This is partly caused by conceptual problems, as key terms are contested. There is disagreement on what counts as participation, on the role and definition of CSOs and on the way in which research governance can foster participation. The theoretical benefits and disadvantages of participation are disputed and there is a lack of empirical evidence of the effect of the integration of participation in research. Briefly, there is currently no mechanism or procedure that will allow for evidence-based planning, implementing and evaluating CSO participation. We are interested in examining and discussing theoretical perspectives as well empirical analysis. Contributions could react on the following questions: - Which definitions of CSOs are suitable to promote participative research governance? - How do CSOs theoretically fit in participation theories? - To what extend can theories of political participation be applied to scientific projects? - How do STS concepts explain the emergence of CSO participation in research? - Which types of CSOs' participation are observable?
69	Changing research landscapes	Seppo Poutanen, seppou@utu.fi + Anne Kovalainen, University of Turku	The recent changes introduced both in the European research landscapes concern not only universities' governance, funding and future possibilities in the global knowledge economy, but to a larger extent the reorganising of research and birth of new hybrid organizations that function in accordance to the triple helix –logic. The key elements of research landscape become manifested through new forms of collaboration but also through new research interests and motives for collaboration. In many countries the similar type of reorganising has introduced, aside the old structures, new institutions which work according to a more responsive-mode than universities traditionally have done. Does this change also change universities, and more importantly, research done in universities? There are indications that researchers are increasingly aware of the economic issues, and that is reflected in the choice of topics and fields of exploration. It has been argued of the general shifts and of the normative changes in science, as possible consequences of this. The universities change as well, being no longer autonomous agents but increasingly woven into the tapestry of research landscape, together with other actors and epistemic communities. There is relatively little knowledge of how the different knowledge interests and power positions become articulated, manifested and negotiated in the hybrid research organisations, how the different epistemic communities and researchers negotiate their intellectual space, and how does the knowledge production become articulated in the hybrid research organizations, representing differing interests. Does the knowledge creation change in universities and across the research landscape as a consequence of this development, is one key question the papers and presentations within this panel are invited to elaborate. This panel session calls for papers and presentations that address the pertinent issues of the research landscape change within Europe, across the countries and globally.
70	Science and the impact of organizational practices	Finn Hansson, fh.lpf@cbs.dk, Copenhagen Business School	In recent years all public funded research organisations has learned to live with the implementation of a growing number of new governance systems. These systems reach from the national or international level (research funding programs, policy initiative) to the level of more local institutional practices (controlling performance, strategies for distributing resources). The official aim of these initiatives are most of the time the same, to enhance research productivity and quality and to guide research to relevant areas. The means range from policy formulations on demands for 'relevant' research to performance control of institutions and individual researchers. The means are governing by funding, strategic research programs, or controlling the production in order to enhance effiencency, like implementing external evaluation systems (like the RAE) or formal research management systems. Most of these systems involve researchers in different roles, as gatekeepers doing peer reviews as program directors but also as active researchers. On the macro level some of these areas has been subject to a number of studies, like the many studies of the UK RAE experience or the national evaluations of strategic research programs, but on institutional level we still do not know much about the specific influence and effect of these changes: - How does the tendency to more and more strategic funding and specific policy demands for usability influence the long term work of researchers, and especially on the ability to be creative, innovative and risk taking? - How do combinations of assessment systems and local research management influence the local research organisation and individual researchers? - How does policy demands for cross disciplinarity function in disciplinary organised institutions and journal ratings?

			- Does the growth of short term and contract appointments erode research organisations by reducing organizational stability? - Is the solution to these problems more and better qualified research management in order to handle the often contradictionary demands?
71	The impact of 'impact': public-making and pseudo science-engagement	Richard Watermeyer, WatermeyerRP@cardiff.ac.uk, Cesagen, Cardiff University	The recent coupling in British Higher Education (HE) of public engagement with an impact agenda arises from various historical concerns over the government of knowledge economies: how do we promote public acceptance towards technoscience, increase expert accountability and foster active citizenship? This panel session will offer a critical discussion of how increasing pressure for university-based scientists to achieve measurable economic and social impact(s) is at risk of producing a kind of 'pseudo engagement'. The panel will consider testimonial and observational evidence of how an engagement agenda for the UK's scientific community is appropriated not to thicken public debate or dissolve public-expert boundaries, but to secure experts' 'licence to operate'. A programme for public engagement appears in this context to have more to do with 'public-making' and 'consensus-building' than the mobilization of a critical and interventionist public in scientific debate. Rather than participatory and open, many officially sponsored engagement events appear to be highly regulated, choreographed, pre-determined and closed. The project of public engagement and its purported impacts, certainly as a catalyst of participation and empowerment, seems in part to be colonised by competing interests whereby different stakeholders recruit 'the public' to rehearse expertise rather than engage in meaningful dialogue and debate. This is the practice of pseudo science-engagement. The panel will interrogate the hypothesis of pseudo-science engagement drawing together the critical perspectives of Public Engagement with Science and Technology (PEST) scholars (some with specialism in UK HE policy), science communicators and public dialogue facilitators and evaluators.
72	(Re)designing public engagement: innovation in practice and analysis	Sarah Davies, sarah.davies@asu.edu + Cynthia Selin & Gretchen Gano, Arizona State University	The deliberative, or democratic, turn in the study and practice of science and society is now well-established. Building on, variously, assessments of 'Mode 2' knowledge production, the development of 'post-normal' science, and calls for the democratisation of technoscience, there has been a pervasive shift towards the language – and to some extent the practice – of public involvement in science and technology throughout Europe, and, increasingly, the rest of the world. This is famously an area in which STS has got its feet wet, with scholars of science and society taking the lead in advising policy makers to engage publics, carrying out deliberative processes, and evaluating public participation. There has been much critical assessment of science policy's deliberative turn, and much soul-searching around the challenges of carrying out public engagement. Throughout this, it has proved difficult to move beyond what we might describe as the consensus conference as implicit model: a perspective in which public engagement is a one-off event which should ideally influence policy in some way, and within which diverse actors exchange reasoned arguments. This panel stream invites papers which challenge or subvert these assumptions. We are interested in work that has sought to redesign public engagement so as to incorporate not just rational debate but other forms of knowing and interacting; in analyses which look not only at information flows but at affective and material characteristics of engagement practices; and in theoretical reflections which radically re-imagine what 'public engagement' could be. We therefore invite discussions of engagement as chaotic, pervasive, emotional, or informal – as saturated by nonhuman actors, perhaps, or as a hobbyist leisure activity. Such accounts might include, but are not limited to, substantive foci on spontaneous forms of public engagement, such as activism or protest; hacking, making, and other sites of lay technoscience; policy-oriented engagement which incorporates attention to the visual, site-specific, or creative; or analyses of the material, affective or temporal configurations of public engagement activities.
73	Critical studies of interdisciplinarity	Mathieu Albert, mathieu.albert@utoronto.ca, University of Toront + Barbara Prainsack, Brunel University + Scott Frickel, Washington State University	In the last decade, a resounding call for interdisciplinary knowledge production has risen from virtually every corner of the academy and beyond. Echoing through university faculty and administrations, funding agencies, and policy domains, this call is grounded in the claim that interdisciplinary research generates a more nuanced and more robust understanding of the social and natural world than research derived from traditional disciplines. This embellished vision of interdisciplinary knowledge production also underlies the vast body of social scientific research that celebrates, rather than critically analyzes, interdisciplinarity's epistemic and social costs and benefits. This session welcomes papers investigating all aspects of interdisciplinary research, but we are especially interested in those offering empirically rich historical, sociological, or comparative analyses of interdisciplinary and disciplinary research. Possible topics include: • impacts of power relations among disciplines and interdisciplines; • the "silencing" of disciplinary perspectives within interdisciplinary research teams, research centers and departments; • the challenges faced by new generations of interdisciplinary scholars in academia (e.g. problems with institutional assessments and acknowledgements of interdisciplinary publications and career trajectories; problems with obtaining grants for interdisciplinary work, etc.); • conceptualisations and empirical case studies, of power relations in interdisciplinary research contexts; • the

			use of "interdisciplinarity" as a rhetorical device to gain economic and symbolic capital; • the political and economic processes motivating funding agencies' and policy-makers' framing and promotion of interdisciplinary research; • the struggle for legitimacy between differing epistemologies, evaluation criteria and academic career profiles in interdisciplinary settings; • comparative and longitudinal analyses of disciplinary and interdisciplinary institutions or departments.
74	Knowing and working in hybrid research spaces	Maximilian Fochler, maximilian.fochler@univie.ac.at, University of Vienna	In contemporary societies, scientific knowledge production is of key functional importance in many societal domains beyond science, be they the economy, politics or others. At the same time, academic knowledge production is increasingly contextualised by the rationales of these societal domains. Hence, there is both considerable cultural traffic and boundary work going on in the hybrid spaces where academia intersects with its others. Hybrid research spaces are 'tension zones' explicitly structured both by scientific practices and values as well as by those of other societal spheres. As such, startup companies, think tanks, contract research organisations, media labs and many others are important contexts of the co-production of knowledge and other forms of social ordering. Though the significance of these contexts of knowledge work and production in contemporary knowledge societies is high, and their analysis seems an indispensable part of understanding contemporary sciences' interactions with society, STS work on these contexts so far is limited and most of all often dispersed and debated under separate 'topical headings', such as 'life science business' or 'new media institutions', to name just two of many. This session consciously invites a cross-topical exchange between scholars studying hybrid research spaces. It aims to start a comparative theoretical discussion on the common features and specificities of different types of these spaces, but also of their embedding in different institutional and national/cultural contexts. It will discuss topics such as the ways of producing knowledge in these spaces, the values structuring them, the perspectives and roles of the people working there, as well as these spaces' intersections, traffic and relations with academia, as fringes, role models, alternative careers, etc.
H	**DESIGN, INNOVATION, CREATIVITY, AESTHETICS, QUEER (11)**		
75	Digital models in technology and construction: from design into use	Jennifer Whyte, j.whyte@reading.ac.uk, University of Reading + Reijo Miettinen, University of Helsinki + Satu Reijonen, Copenhagen Business School	Digital models are increasingly used in technological design and construction. This panel explores the creation and use of digital models in design, construction, operation and maintenance of material artefacts and object systems such as buildings, machines and furniture. It focuses on how digital modelling transforms technological practices and design and how related forms of multi-professional collaboration changes. The panel draws from the studies of standards and infrastructures, engineering design, visual representations and computer supported collaborative work done by such STS scholars as Star and Bowker, Suchman and Actor-network theorists. Digital modelling has become industrially and politically increasingly relevant in number of fields including pharmaceuticals, oil and gas, and aerospace industries. In the construction industry for instance, policy makers see the generation of digital information about physical assets as a critically important step towards reducing carbon use across the life-cycle of building and infrastructure, with Building Information Modelling (BIM) is increasingly introduced in public procurement in many countries. This open panel seeks to stimulate the formation of a new EASST/4S community network around digital modelling and takes inspiration from the conference theme "Design and Displacement". It welcomes theoretical contributions that draw on rich empirical research on digital modelling in complex industries. Examples of potential issues that could be explored include (but are not limited to): - Displacements that occur as physical objects are modelled digitally - The use of digital models together with the physical tools and drawings - The relationship between different digital models in design - Comparisons of the use of digital models in different complex industries - Relationships between a model and its object Digital modelling is a context in which to examine the collaborations and contestations, order and disorder, that emerge through planned and unplanned engagement of design with existing socio-technical arrangements.
76	Design values – the materialization of building	Kjell Tryggestad, kt.ioa@cbs.dk, Copenhagen Business School +	Within construction and architecture a building design is generally understood as an expression of design intentions and values originating from professional designers, clients and trends in the wider society. The aim of this panel is to contribute to a more specific and somewhat different understanding by inquiring into the process through which building designs materialize. Mock-ups, scale models, drawings, budgets and structural calculations circulate as material representations of building designs. What is it that makes it necessary to assemble and circulate material representations such as a scale model in the process of designing buildings? They function as a form of visualization

	design	Chris Harty, University of Reading	of life in the prospective built space. But what else can different material representations do for the building design and project? The scale model of a skyscraper or the full scale model of a hospital single bed room can be different in terms of scale, detail and medium, but in what specific sense are they also doing different and similar things? The multiple forms of representations and visualizations suggest that design materialization might have several important roles to play individually and together in negotiating the building design and project. We invite papers and contributions that conceptually and empirically explore the ways in which different technologies of representation and visualization such as drawings, 3D models, augmented and virtual reality, and full scale 'physical' simulation models participate in the materialization and valuation of building designs. 'Design values' (as a verb) is thus about the process of valuation, and eventually how design options and values are displaced, juxtaposed and valued in relation to each other. The panel seeks to contribute to our understanding by also considering the practical role and implications of different representations for research and management of building design and construction.
77	Urban assemblages and cosmopolitics: contributions for an ongoing debate	Ignacio Farias, farias@wzb.eu, Social Science Research Center Berlin + Anders Blok, Copenhagen University	Large technical urban systems have represented a major source of STS insight and innovation (e.g. Hommels 2005). However, the city, urban life, and urban politics have only recently been subjected to the relentless relationalism of ANT and post-ANT studies. In this context, the notion of 'urban assemblages' (Farías and Bender 2009, Blok 2011) has been mobilized to challenge a priori separations between users-producers of urban space (e.g. expert/lay), and to establish an explorative inquiry into the ways in which human and nonhuman entities come together in the city. Focusing on urban assemblages involves depicting the city as a multiple object, continuously crafted and performed at distributed sites. The assemblage approach to cities has not gone unnoticed in the larger field of (critical) urban studies, where passionate debate is taking place about the knowledge gains of STS and ANT (e.g. McFarlane 2011). Much of this debate concerns well-known STS issues of the proper meaning of 'politics'. From an assemblage perspective, urban controversy cannot be reduced to the clash of human interests; rather, city-making processes resemble a form of object-oriented 'cosmopolitics' (Latour 2004). To establish the value of ANT (and STS) approaches to the city, we need more careful attention to how a common urban cosmos comes to be constructed in and across multiple sites of human and non-human practice. We welcome all paper presentations which, on the basis of empirical research, aims to further develop an assemblage approach to city-making and/or the study of urban cosmopolitics.
78	Engineering design, displacement in practice	Sarah Bell, s.bell@gmail.com, UCL	Engineering design is at the heart of sociotechnical systems. Engineers are central actors in maintaining and stabilising existing sociotechnical regimes and in the emergence of disruptive and transformative technologies. Engineering design encompasses a diverse and dynamic set of practices, norms and knowledge. It is often caricatured as being blind to social and political implications, yet it is also emblematic of modern technological society and culture. Engineering design enforces and displaces particular interests and values. This is an outcome of the wider networks in which engineers operate, but also reflects the nature of the profession itself. Engineering work is mostly undertaken in large organisations, including industrial corporations, multinational consultancies and the military. This results in the displacement of smaller scale, locally particular technologies in favour of universally applicable and profitable systems and technologies. The engineering profession is persistently dominated by men, enforcing masculine constructions of technologies and displacing classically feminine attributes from the development and reform of sociotechnical systems. This panels welcomes critical reflections on the role of engineering design in constructing sociotechnical systems and invites contributions from different perspectives such as: - ethnography of engineering practice - engineering policy - engineering epistemology - engineering education - gender and diversity in engineering - theoretical contributions from science and technology studies to the understanding of engineering knowledge and practice.
79	On the road: journeys of innovations and prospects	Kornelia Konrad, k.e.konrad@utwente.nl, University of Twente	The long-term development of innovations has been described as a 'travel' through time and across different spaces using concepts such as innovation journey or innovation biography (Van de Ven et al. 1999, Rip and Schot 2002, Hyysalo 2010). This line of research aims at following and explaining the paths as well as the twists and turns which particular innovations or innovation fields take. As with any journey, prospects play a major role in guiding the travelers, but may be subject to dispute and change and adapt as the journey moves on.

		+ Lise Bitsch &, Sampsa Hyysalo	These prospects in the form of expectations and visions, be they specific for certain (groups of) actors or part of societal discourses have been investigated in science, technology & innovation studies in various strands, including analyses on actors' temporal orientations (Garud 2012), the sociology of expectations (Borup et al. 2006), innovation systems research (Hekkert et al. 2007) and strategic niche management (Geels & Raven 2006). Innovation related prospects can remain impressively stable and persistent over time, yet also evolve rapidly (Callon 1993, Konrad 2008). Sometimes in sync with reorientation of projects, sometimes creating disjunctions between the prospected and the realized. We invite contributions, which address the co-evolutionary interaction between innovations and prospects in a longitudinal perspective and/or investigate the dynamics that may lead to redirections and branching points in the journey. Dynamics may result from an innovation engaging with (diverse) existing socio-technical arrangements, as well as of broader developments, both in the material and discursive context of the innovation. We welcome equally retrospective analysis, analysis of ongoing processes and prospective analysis exploring potential future paths and journeys, and suggestions for using this knowledge in TA/CTA approaches.
80	Accelerated innovation as a challenge to constructivism	Mark Winskel, mark.winskel@ed.ac.uk, Edinburgh University	This open panel considers the role of innovation theory in sociotechnical system change, in the context accelerated change imperatives. It will consider the claim that prominent sustainable innovation theories (Transitions Theory and Technological Innovation Systems theory) because they articulate an essentially constructivist, niche-led account of sociotechnical system change, offer a limited and partial view of innovation dynamics for highly coupled sociotechnical systems, especially under accelerated innovation imperatives. This claim will be considered by reference to energy system change, though the panel welcomes contributions from other sociotechnical domains. Under urgent change imperatives, increasingly co-ordinated regime-led innovation systems have been instituted in the energy sector, yet constructivist innovation theories (and a large body of empirical research based on those theories) are not inclined to fully interrogate the dynamics of regime-led sociotechnical system change. In this context, prominent innovation researchers and practitioners who are not committed to constructivism have offered prescriptions for accelerated change which implicitly or explicitly challenge the constructivist account. A widening gulf between policy imperatives and constructivist innovation researchers' ontological commitments has left much of prevailing innovation theory marginal to policymaking for accelerated innovation. Issues for consideration at the open panel will the seriousness of the challenge to constructivism presented by accelerated change imperatives; the implications for innovation theory and its relationship to innovation policymaking; the manifestation of the accelerated innovation challenge in different sociotechnical systems, including but possibly going beyond the energy sector. Overall, the panel will ask how should innovation theory respond to accelerated change imperatives, and how should it engage with policymakers in addressing the accelerated change agenda?
81	Expectations and innovative technologies	Alan Petersen, Alan.petersen@monash.edu ,Monash University, Melbourne + Steven Wainwright & Clare Williams Brunel University	The role of expectations in 'driving' technological innovations has been increasingly recognized. The 'expectation effect' is clearly evident with biotechnologies, such as genetic technologies and stem cell treatments, which are seen to hold great promise in the field of health and medicine. However, expectations constitute a significant motivating factor in the development of virtually all technologies. Despite this, the role of expectations in the dynamics of technological innovation has been little explored to date. This session will include papers that examine the politico-economic and socio-cultural factors that shape science and the path of technological development and responses to particular innovations. In recent years, a number of scholars, including the proposers, have contributed to an emergent sociology of expectations (e.g. Brown, 2003; Hedgecoe, 2004, 2010; Petersen, 2009; Wainwright, et al., 2006). The session will build on this work and chart new directions in the analysis of the socio-politics of technological expectations. It is envisaged that the session will attract a number of established scholars and early career researchers, with contributions spanning various fields of science and technology.
82	Ethnography of socio-material collaborations	Katharina E. Kinder, k.kinder@lancaster.ac.uk, Lancaster University Management School + Petra Ilyes Frankfurt University, Germany	Starting from the premise that design is best viewed as an ongoing process (e.g. Callon 2004), one of the ensuing issues pertains to opportunities for collaborative interventions which could be made visible with, for example, interactions, path constitution, planning, agendas or design-in-use. Embracing Holmes' and Marcus' call for a "re-functioning of ethnography" (2005), the panel would like to invite a discussion on the effectiveness and benefits of actor-/process-oriented approaches to an ethnography of socio-material collaborations. The specific contribution of an anthropological perspective is that it affords thick descriptions and insights into the local politics / strategies / routines in order to account for limits or relations of design visions and actual operations. It is suggested here to use the notion of the "socio-material" in the sense of performative entanglements in dynamic processes of de- and re-arrangements (or: de- and re-alignments). The social and the material (and it should be emphasized here that this dissociation is made only for analytical purposes) collaborate in producing the environments or worlds into which new artefacts will enter - e.g. via ideas, agendas, plans, technoscientific innovations, etc. - and wish to be accommodated (e.g. Callon 1987). By focusing on locally enacted effects, anthropological re-arrangements make it possible

			to take into consideration the specific materialities of particular associations / agencements, thus cutting across, or splicing, concepts of, on the one hand, local knowledge, and, on the other, global flows. Thus, ethnography is in an advantageous position to investigate processes of systems design, requirements, specifications and implementations in particular socio-material arrangements / agencements of knowledge production, agenda-setting, path-creation and epistemic practices. Our panel, consequently, approaches design as a socio-material practice embedded in the framework from which it emerges, and which it, in turn, redesigns.
83	Studio studies & creative production	Alex Wilkie, a.wilkie@gold.ac.uk,Goldsmiths, University of London	Given the importance placed on 'creativity', 'creative economy' and 'creative industry' in both national and international policy contexts, it is surprising that understanding of creativity-in-action remains largely underdeveloped. What is more surprising is that creativity is commonly associated with (unobservable) cognitive activity that can only be stimulated by the environment, which has led many scholars to see social networks and/or urban environments as the main sources for creativity. What gets lost here are the concrete practices through which the 'new' comes into being in different disciplines and in different economic sectors. In foregrounding the view of creativity as a local process distributed amongst heterogeneous actors this panel seeks to explore and compare accounts of sites of creative practice. Our insight is that the studio is a defining feature of creative production. Thus, building on workplace and laboratory studies this panel aims to draw together emerging ethnographic work on creative practice and in doing so define and investigate a lacuna in the STS imagination. To address the studio, as a key site of creative production, we welcome presentations based on in-depth case studies that focus on key 'creative industries', including the arts, crafts and cultural and creative industries. Accordingly, this panel invites comparison of different creative models and practices, thereby acknowledging the diversity of in-situ creative practice as well as providing a survey of different creative disciplines. A non exhaustive list of themes: - The sociospatial organisation of the studio. - Socio-material practices of affect, sense and sensation. - Disciplinary & interdisciplinary work. - Problematisation and the form of projects. - The role of (visual) inscription and conscription devices. - Practices and technologies of imagination, conception, and projection. - The role and production of creative knowledge. - Testing, evaluation and accountability. - Newness, uniqueness and originality. - User-involvement in creative production. - Economic and temporal processes
84	Aesthetics in technological practices	Willems Dick, d.l.willems@amc.nl + Jeannette Pols, Academic Medical Center, University of Amsterdam	STS studies on normative questions have focused on how 'goodness' is enacted in practices. For instance, the forms of good care enacted in and wi th technology. Relatively unexplored are questions relating to values that traditionally fall in the realm of aesthetics. We call for papers that explore such questions in scientific and technological practices. For instance, the following (or others, of course): - What kind of aesthetical values (beautiful or ugly, sublime or banal, disgusting or pleasant, stylish or out-dated, or others) may be relevant? - How are aesthetic values enacted in technological and scientific practices? - What is the relation between ethical and aesthetical questions in science and technology? - What role does the design of technology (and its 'displacements', modifications, translations in practices) play in these enactments of aesthetical values? - What new ways of using our senses, what new sensitivities and appreciations come up with new scientific and technological possibilities, and are these the sensitivities we want?

			Here are a few examples from the field we work in, i.e. health care (obviously, the panel should cover all areas of STS!). In the burgeoning area of high tech home care, aesthetical questions come up about how much, and which form of, medical high-tech is compatible with a nice or cosy home. How users enact new forms of beauty and style in these practices, partly by tinkering with, 'displacing' the original design of the machinery.Another example: the aesthetical differences between the ways in which people die, accompanied by technologies or without them. With regard to new sensitivities, the recent development of telecare practices shows how nurses develop new ways of seeing and feeling at a distance what is going on with a patient, while they, at the same time, give up some of their old sensitivities, such as immediately feeling whether things are alright when visiting a patient at home. We invite you to submit papers that address aesthetics in ways that are relevant for STS studies, with contributions from different areas of STS.
85	Unruly matters - the queer side of things	Sebastian Mohr, semo@sund.ku.dk, University of Copenhagen + Marie-Louise Holm, Linköping University	The unruly side of materialities has been the focus of much of feminist science and technology studies as well as queer theory. From the cyborg woman (Haraway 1991) and bodies that matter (Butler 1993) to queering the non/human (Giffney & Hird 2008) and queer phenomenology (Ahmed 2006) the queer side of things provided a pathway into materialities and their meanings for life worlds. This open panel wants to pose the question of unruly matters anew and seeks to explore contemporary intersections of queer theoretical perspectives and STS approaches to research on science, society, and technologies. How do materialities open up a possibility for queering the normalized? What normative frameworks are set up in order to regulate the inherently queer nature of things? What are the queer dimensions of technologies? How are technologies appropriated in queer settings? How can and do technologies queer research? Do materialities put restraints on a queer research agenda and if so, in which ways? How do technologies enable interventions in heteronormative scripts of gender and sexuality? And what could queer STS mean? This open panel invites scholars working empirically as well as theoretically at the crossroads of STS and queer theory to discuss and engage with these and other related questions, thereby exploring what a queer approach might contribute to STS. Furthermore, the panel wishes to stimulate the formation of a network of scholars working within these fields, thereby providing an opportunity to share work in progress and to exchange ideas.
I	**EPISTEMIC PRACTICES, SCIENTIFIC DISCIPLINES, THEORY-PRACTICE, KNOWLEDGE, CLASSIFICATION (15)**		
86	Displacement and classification	Daniel Bischur, bischur@uni-trier.de + Stefan Nicolae, University of Trier	The social practices of displacement are imbedded into a variety of practices of knowledge production. This interconnection between the materiality of displacement's addressees and their way of being referred to in communicative contexts is stabilized by classificatory practices. Consequently, its analytical profile concerns a displacement by as well as in classification. A discussion of displacement by classification questions, firstly, how classifications structure and lead processes of displacement and knowledge production (e.g., inscriptions). Secondly, it shows how new designs, particularly networks of actants, become traceable in and can be analyzed through classificatory practices (e.g., canonizations in science and culture). A complementary perspective in dealing with displacement and classification focuses on forms of displacement in classifications. This presupposes the empirical reconstruction of pragmatic developments of classifications in scientific and technological contexts, and enhances the epistemological symmetry involved in the production of (scientific) facts. Such analyses concentrate on expertise and inscriptional practices and/or structures of domination guiding classification. The panel welcomes theoretical and empirical contributions from various areas of science and technology studies. We are especially interested into the mutual dynamics of classification and displacement as these are thematized for instance in empirical and theoretical analyses on processes of translation (e.g., inspired by ANT). Possible topics may refer to things, instruments, and tools; actants in science, technology and culture; emergence of new objects through classification; and may draw on epistemological, moral and pragmatic consequences of classifications and displacements as well as their justification.
87	Ignorance by design: rethinking knowledge, anti-knowledge and the unknown in STS	Matthias Gross, matthias.gross@ufz.de, Helmholtz Centre for Environmental Research, Leipzig + Linsey McGoey, University	The importance of ignorance knowledge gaps or nonknowledge as inherent features of knowledge making in science, engineering, and everyday life have recently gained broader attention from STS scholars. Studies have emphasized, to name just three areas, the potentially misleading role of risk assessments when clear knowledge about probabilities and outcomes are not available, the usefulness of feigned or strategic ignorance in efforts to deny knowledge of unsettling information, and the shortsightedness of strict distinctions between risk and uncertainty. This panel will expand on the observation that it is frequently things that are not known that are most integral to scientific and political decision-making, and thus central for social analysis. We will build on analyses that depart from treating ignorance as inevitably detrimental and instead investigate the unexpected obstacles and (occasional) merits of not knowing, scrutinizing how ignorance can often serve as an asset or a productive resource. This, of course, raises many unsolved questions both analytically and moral. If actors are legally

		of Essex	entitled to point to their "nonknowledge" as explanation or justification, when does this serve as subterfuge and when as a legitimate way of dealing with the unknown? This also raises questions about the strategies that actors adopt in order to avoid knowing about certain things. How can this be meaningfully registered by STS scholars given that it is difficult to demonstrate or to prove the strategic act of not knowing something? Relatedly, this raises the challenge of differentiating deliberate ignorance from mere disinterestedness or a lack of thoughtfulness and patience. To address these concerns and others, this panel invites presentations on the theoretical and empirical terrain of ignorance and uncertainty in STS and related fields
87	The design and displacement of social knowledge practices	Kristoffer Kropp, kkr@soc.ku.dk, University of Copenhagen + Per Wisselgren, Umeå University	The purpose of this panel is to open up the STS field for studies on the social sciences. Both the classical sociology of science and the STS field have by tradition been predominantly focused on the natural, technological and medical sciences, whereas the social sciences often have been largely neglected by STS scholars. However, changes seem to be under way. A good example is Camic, Gross & Lamont's new book Social knowledge in the making (2011), which points at this lacuna and calls for further studies on the makeup and distribution of social knowledge practices. In this panel we would like to follow up Camic, Gross & Lamont's initiative and invite papers dealing with different aspects of the making of social knowledge, both within and outside academia. Hence, the panel welcomes both theoretical and empirical papers that contribute to and improve our understanding of the different ways in which, for example, financial expertise, statistical practices or any other kind of social scientific knowledge have been and are being produced, evaluated and used.
89	Conditions for work and knowledge production in the social sciences	Veronika Woehrer, veronika.woehrer@univie.ac.at + Wiebke Keim, University of Freiburg	The reforms in higher education decided upon in Bologna and the ongoing privatization of the university sector lead to restructuring of universities in many countries around the world. This also changes the modes of knowledge production and the working conditions in scientific work. Working on short term contracts increases, while tenure track positions are decreasing, third party funded project based research is on the rise while individual, long-term research has become rare. Financial stability for intensive or long-term studies has become hard to find. Within STS the focus has mainly been on the effects of these changes on the natural sciences, but not much has been written about the social sciences and humanities. Within the social sciences there are some reflections going on, the International Sociological Association (ISA) has for example established a blog called "Universities in crises" with country reports from sociologists all over the world, describing how their higher education systems change and how universities try to adapt. We would like to bring these strands of research together and invite scholars to contribute to this session: How do the above described changes affect 'ourselves'? What are the consequences for those who are early stage researchers? What do processes of restructuring, uncertainties and differing expectations mean for young sociologists who want to remain in academia and continue to do research? How does this shape the knowledge that is produced in social research? In this open panel we are looking for papers focusing on the situation of early stage researchers in the social sciences. The presentations might deal with different aspects of working conditions and knowledge production. They should include brief contextualizing information about the country respectively academic system the research is coming from.
90	The social life of organization theory	Signe Vikkelsø, ssv.ioa@cbs.dk + Karen Boll & Paul du Gay, Copenhagen Business School	Through teaching, publishing and consultancy, organization theory is transported from the business school to the practical realm of the organization. This open panel investigates what happens when the science of organizing influences organizational realities: What are the effects on organizations and for practitioners of using different organization theories and devices? How do organization theories practically shape organizations and make 'the organizational' an object of intervention? The panel seeks to open STS investigations of how a science, i.e. organizational theory, interacts with, influences and shapes a practical field, i.e. the organization. The panel focuses upon the proliferation and employment of organization theories and devices in organizational life – both currently and historically. We welcome papers addressing how organizational theory and devices across time and space have shaped organizational and social life. This could for example be studies drawing upon anthropology of organizations and management, science and technology studies, which use studies of 'market devices' as an inspiration to study 'organizing devices', micro-sociological studies or ethnographic approaches. Also, we welcome contributions offering historical accounts of how organization theory has changed itself and its relation to its field.
91	Mutual exchanges of concepts and practices	Milena D. Bister, milena.bister@staff.hu-berlin.de, Humboldt Universität zu Berlin +	The relationship between theoretical concepts and hands-on practices is a well established topic of investigation and thought to STS scholars. While concepts might be privileged over practice and/or vice versa, STS perspectives have challenged those views in favor of exploring mutual processes of stabilization and destabilization of the both in general. Consequently, the focus of our panel is threefold: First, we ask how concepts (e.g. classifications as "chronically ill" or categories such as "gender") shape professional practices, and how they influence artifacts and infrastructures in workplaces. Second, we aim to grasp how infrastructures and everyday practices (e.g. in

		Emily Ngubia Kuria, Institute for Medical History, Charité Berlin,	laboratories and clinics) including objects involved, make concepts present or absent or provoke their relocation. Last but not least we also wish to expound on the methodological challenges of an ethnographic engagement that takes the interdependency of concepts and practices seriously. We would be very interested in papers that demonstrate empirical investigation of the above-mentioned focus of study, however, theoretical reflections will also be considered. Our own research tackles the issues mentioned above in the professional fields of psychiatry and synthetic biology respectively. Scholars engaged in ethnographic studies of other professional domains with similar questions at the center of their research are welcomed!
92	Connecting and comparing concepts of practice	Elizabeth Shove, e.shove@lancaster.ac.uk + Nicola Spurling & Gordon Walker, Lancaster University	Within STS there is a strong tradition of ethnographic analysis of situated practice, in which performative aspects are often key. Other writers emphasise the material anchoring of practice, as exemplified by efforts to analyse sociotechnical change, scripts and various forms of embodiment, persistence and obduracy. Meanwhile, those inspired by innovation studies focus on practices as "configurations that work", and on the routes through which regimes are enacted and reproduced. In 2001, Schatzki et. al. identified a "practice turn" in social theory; an ontological shift that placed "practice" as the central unit of analysis for the social sciences. A decade later, that movement is gathering steam, attracting increasing interest in various policy sectors and across a range of disciplines. This open panel provides a timely opportunity to take stock of what is going on, and to reflect on points of difference and connection between concepts of practice, and their use in empirical studies, as developed in sociology, geography and philosophy and across various branches of STS. There are different ways in which the discussion might flow. Theoretical and/or empirically grounded contributions might focus on what STS adds to the practice turn or on what practice-theoretical concerns are missing from STS: how do practices circulate and travel; how do practices combine and evolve; how do the lives of practitioners and institutions intersect; how are objects and daily life related? Presenters might consider whether an emphasis on practice presents unique methodological challenges, drawing on empirical work to show how specific concepts of practice have inspired methodological innovation. Alternatively, they might concentrate on issues of policy relevance. Are theories of practice, including those inspired by STS, of value in responding to contemporary problems like those of sustainability: what is distinctive about such approaches and exactly what do they have to offer?
93	Neuroscience as a science of the social?	Svenja Matusall, matusall@wiss.gess.ethz.ch + Johannes Bruder (eikones Basel), ETH Zurich	Scientists studying the brain and its function have always tried to find correlates of social behaviour in the brain: be it phrenologists in the 19th or localisationists and neuropsychiatrists in the early 20th century. In the last decades, neuroscientists began to look for the neuronal correlates of emotions like arousal or disgust and more generally for neural correlates of sociality, making unlikely bedfellows such as oxytocin and love, self-enhancement and hypothalamic-pituitary-adrenal axis or meditation and baseline brain electrical asymmetry. Yet, it remains to ask whether the evolution of neuroscience and the development of new instruments and techniques have brought advances strong enough to justify the claims of a breakthrough in the study of sociality through biological means. Is neuroscience on the brink of becoming the new science of the social? Did the science of the brain finally find the means to proof that sociality is simply a matter of biological and chemical mechanisms in the brain? Or is the current hype in so-called social neurosciences just another attempt to reduce sociality to quantifiable mechanisms? To discuss these questions, interrelations of scientific paradigms, research designs, technology and cultural ideas about sociality in the history and present of neuroscience have to be taken into account. The dynamics within research groups play a role in contributing to the development of technologies and research agendas; so do politically and economically motivated decisions in the promotion of particular technologies. One result of these social, cultural, political and economical dynamics in and around neuroscience are new theories about the social in the brain. We are asking for contributions that take this complex environment into account whilst studying the history and present of neuroscience research and assess the importance of knowledge generated by "the new brain sciences" for "classic" social sciences.
94	Emotions and affect in science: communities, spaces, and bodies	Staffan Bergwik, staffan.bergwik@idehist.uu.se, Uppsala University + Helena Pettersson, Umeå University	Modern science is often credited with producing objective matters of fact. Its authority partly stems from the idea that subjective emotions among knowledge makers are controlled, in particular through standardized scientific methods and scrutiny by peers. Nonetheless, emotions and affects are ubiquitous in science: the joy of discovery, the rage over adversaries' criticisms or the worry of fierce competition. The aim of this panel is to probe how scholars in science studies can investigate emotions and affects. What are the technologies, discursive deployments and embodiments that produce affects in relation to scientific work? In which historical, social, intellectual and material ecology do scientists learn and cultivate emotions? "Affective life" has been studied in a range of disciplines, including sociology, history, cultural studies and gender studies. This research

			has displayed that emotions are viable objects of study from cultural and social perspectives rather than only individual, biopsychologial phenomenon. Social scientists have argued that our late modern world is increasingly an "affective society". Given that knowledge constitutes a foundation of the post-industrial world, an analysis of the links between emotions and knowledge production is crucial. We welcome papers from a wide range of disciplines. Possible themes to address include (but are not limited to): - How are emotions collectively cultivated, performed and reiterated within scientific communities? How are affects played out in interactions? - Are there networks of emotions? - How can the study of scientific desires enhance our understanding of how gender, class and sexuality intersect in knowledge-making practices? - In what ways are emotions connected to power? Who is allowed to play out affects in knowledge making practices? What emotions are regarded creative or, conversely, non-scientific? - How are emotions embodied? What is the relationship between affects and the materiality of the sciences? What are the places and spaces of affect and desire within science?
95	Has feminism changed science studies?	Elvira Scheich, elvira.scheich@fu-berlin.de + Martina Erlemann, Freie Universität Berlin	Gender research in science and technology studies has opened new questions and several new lines of investigation. Its critical feminist starting point was the asymmetrical design of gender arrangements and how they were structurally embedded in scientific communities, their traditions, methods and arte/facts. A gender approach broadens the scope of scientific activities and analyses how parts of doing science became obscured in the production of facts and construction of ideas, both in life sciences and material sciences. Furthermore, gender studies brings into focus how these displacements were carried out through scientific language and practices and intersected with other social hierarchies. On these grounds we invite contributions to the following topics and questions: Which concepts are needed to describe gendered science collectives and to account for the marginalized and invisible work which is nevertheless indispensable for the working science? What are the consequences for shaping problem definitions, research approaches and material outcomes? Thus, how to understand the linkages between social orderings and the orderings of knowledge, what sorts of transfers occur and what gets excluded or displaced? Which are the relevant modes of representation and how to deconstruct them? Here in particular attention should be given to the simultaneous processes of en-gendering and de-gendering of arte/facts, practices and ideas, as e.g. in the patterns of universalism and otherness. What are the epistemological consequences for studying sciences, and conceptualizing the governance of science and science-society relations from the vantage point of feminist research? What alignments, conflicts and innovations have occurred when STS and feminist science studies meet? Instead of seeing gender research as yet another subfield of STS, the key aim of this panel is to re-assess basic STS concepts such as symmetry, trading zone, thought collective and materiality, and to examine and utilize the displacements of gender as a challenge for their redesign.
96	In search of "lines of flights" in/for/to/from Latin America	Ivan da Costa Marques, imarques@ufrj.br, HCTE - Federal University of Rio de Janeiro	Reliable knowledge today is strongly identified with scientific knowledge. The overwhelming majority of scientific facts and artifacts, however, are produced in the North and arrive in their stable forms (as ready objects) in Latin America, where they enjoy the attributes of universality and neutrality (in spite of STS results). In these terms it is possible to say that modern sciences from the West provide a cage that confines the space available for Latin Americans to search for solutions of their practical problems, since it would make no sense "to do" spaces and times or propose objects outside universal and neutral knowledge – they would be "simply wrong" since Latin Americans usually lack the resources to build counter-laboratories. As an example, in the name of science the Brazilian Association of Nutritionists opposes local habits of nutrition that are found effective by large parts of the Brazilian population to nourish their children. This session indicates a special welcome to papers about programs and/or controversies involving conflicts between Western scientific knowledge and local practical knowledge. This proposal seeks to further develop discussions that took place in Cleveland in 2011. New participants are very welcome.
97	What is STS for? What are STS scholars	Gary Downey, downeyg@vt.edu, Virginia tech	This panel examines practices STS scholars have used and are using to make a difference beyond the field, in both academic and non-academic arenas. STS builds on critiques of the diffusion model of knowledge creation, diffusion and utilization. Yet most STS scholarship depends primarily upon the diffusion model for its influence and effectiveness. STS is a small field. Its programs have spread across the

	for?		planet and gained significant scholarly status. Yet at each institution, STS tends to be a small configuration of scholars and activities in relatively marginal physical and intellectual spaces. Furthermore, STS scholarship may be increasingly at risk from a combination of budget reductions and challenges to its jurisdictional claims from related fields. Still, no other field takes as its explicit focus relationships between the so-called technical or knowledge dimensions of science and technology and the so-called nontechnical social, cultural, political, etc. dimensions. STS work to date has clearly demonstrated that all activities in and around science and technology span these distinctions. Our analytical tendency to rely on compound words (e.g., sociotechnical, technopolitical, socio-material, technoscience, etc.) is but one indicator. Yet STS scholarship has had uneven success in making a difference beyond the field, even though all STS scholars have developed practices to cross its boundaries (including through pedagogy). This panel calls attention to the problem of producing STS scholarship that can scale up. It asks if the issue of scale and practices of critical participation can and should become more routine concerns in STS venues. It challenges participants to reflect on how they think about and enact relationships between the academic and nonacademic dimensions of their work. To wit: Do I care about making a difference beyond the field? Should I? What sorts of difference do I seek? What sorts of scholarly practices have been successful? Which less so? Wherein lie barriers? Are there new opportunities? We are far from an upper limit on the number of STS scholars and STS-informed practitioners who can make a difference by addressing simultaneously the technical and nontechnical dimensions of issues involving science and technology. Why then stay small? STS might be at a key moment in its short history. Perhaps it is a good time to reflect and act more collectively on the twin questions: What is STS for? What Are STS Scholars For?
98	Mapping the dynamics of the social sciences and humanities	David Budtz Pedersen, davidp@hum.ku.dk + Frederik Stjernfelt, Aarhus University + Claus Emmeche, University of Copenhagen	In this panel we invite contributions that discuss recent conceptual and empirical approaches to mapping science (e.g., network analyses), especially the formation, dissemination and implications of the social sciences and humanities (SSH). An important emerging area in the sociology of knowledge is mapping exercises and surveys of large field data. The division of intellectual labour in science is ever growing: practitioners increasingly specialize in narrow topics. This trend may be an indication of the maturity of disciplines or the increased internationalisation of research. However, the unfortunate consequence is that sound synoptic overall visions become harder to obtain. New approaches to mapping and surveying fields of science carry the potential to unlock subtle patterns of cooperation and intra- and interdisciplinary theory building. By looking at the structure and dynamics of the humanities and social sciences at universities and other research institutions (e.g., museums, archives, cultural institutions), it is possible to provide insight into which theories, methods, concepts, etc. that are operative in today's science system. Indeed, by tracing the historical origins of the humanities and social sciences, and by examining their conceptual roots as well as their social organisation, new diagrams and topographies can be constructed that unveil important knowledge about the structure of science, how it changes, and which disciplines that tend to flourish or disappear. Empirical studies have shown that there is an increasing call for inter- and transdisciplinary cooperation in science. Hence, a particular aim of the workshop is to understand the humanities and social sciences as situated between disciplinary science and other modes of research. The panel invites contributions that discuss the flow between research areas within SSH, and between SSH and its neighbouring disciplines. We invite papers presenting: (i) empirical analyses of research fields on any level of aggregation, ranging from individual disciplines or sub-fields to large scale networks and patterns; (ii) explorations of the interactions and possible interference among different mapping instruments; (iii) analyses of the interaction and cooperation between research fields on a national and international level, and (iv) theoretical contributions to understanding the potentials of science mapping.
99	Future possible worlds, and the role of STS/speculative realist academics	Susan Starling, s.starling@lancaster.ac.uk, Lancaster University	2011 was a tumultuous year: the debt crisis deepened, and we saw uprisings, riots and protests all over the world. Most notably: the 'Arab Spring', Spanish protests, riots in London, protests and riots in Greece, and Wall Street occupied. The Left is more visible than it has been for decades, and capitalism, far from proclaiming 'There is No Alternative', seems to be teetering and tottering on the brink of who knows what. Aside from this political/economic dimension, we also have a looming environmental crisis to contend with. Environmental problems, which have in the past been moved around, displaced to poor areas or countries, threaten to engulf and bring disaster to even the developed, securitised, first world. Even seeming acts of God such as earthquakes and tsunamis have been linked to human-induced change, and we have seen unprecedented numbers of so-called 'natural disasters', such as floods, droughts, tornados, hurricanes and famines around the world; as well as the Fukishima nuclear plant melt-down. Back in 2004, Bruno Latour asked 'Why has critique run out of steam?'This panel proposes to revisit the substantive content of this paper, and Latour's question therein: 'Are we [academics] not like those mechanical toys that endlessly make the same gesture when everything else has changed around them?' Since 2004, Latour has been involved in the exciting

			(and closely allied to STS) new field of Speculative Realism. Therefore, this panel, drawing on the insights of scholars from STS and Speculative Realism, seeks to ask: 1) What possible future worlds are open to us? And, relatedly, 2) Can these be designed? Or, pace Žižek and Badiou, must we be 'patient watchmen'? 3) What is the role of academics in thinking these future worlds, and how do we a. think change, and b. respond to the changing world around us?
100	Displacing the laboratory and STS with it: new modes of engagement	Sharon Ku, sharon.ku@nih.gov, National Institutes of Health, University of Southern Indiana + Ana Viseu, York University	The empirical study of laboratories as sites of knowledge production has been a central part of the field of science and technology studies. STS scholars doing 'science in action' like studies have shown that laboratories are both contingent and trans-national in their character, entities that are simultaneously the producers and the products of culture intervening in natural and social worlds. The goal of this panel is to further examine the role of the laboratory in contemporary science and the means by which STS engages with it. In this context, where interests and funding to (and from) various disciplines, from the state, industry and academia are deeply intertwined, a series of displacements take place: the laboratory is no longer a discipline-based knowledge maker sponsored by a single patron, but a more fluid organic system which is constantly adjusting itself and its boundaries while interacting with others; STS scholars not only observe (and generate) but become 'enrolled' (Bensaude-Vincent). It is these shifts and displacements that we hope to examine. Among the questions we would like to raise are the following: - What shapes, roles and capabilities do laboratories now hold? How should we articulate this new role and dynamics? - What are the regulatory and industrial factors that contribute to these shifts? - Do we need new methodologies to conduct "laboratory studies"? What do these look like? - How should ethnographers engage and situate themselves in the field, not just being observers, but also actors? - What are the practices and implications of these 'new' modes of engagement and associated science policies? - Is Federal-Funded Big Social Science possible and/or helpful in facilitating better science? Our focus is on studies that deal with these questions empirically. Relevant studies might include examinations of 'STS in action', studies of emergent and interdisciplinary sciences (such as nanotechnology, synthetic biology, robotics, and healthcare technologies), studies of interdisciplinary expertise, studies of mission-oriented science, social science, and humanities, studies that address the issues of regulatory, industrial and academic science including analyses of science policy. Our aim for this panel is to bring together a wide variety approaches to in order to generate a critical discussion of the changing designs of laboratories and STS' role in their study and articulation.
J	**WORK PRACTICES, CORPORATIONS, GOVERNANCE, REGULATION (6)**		
101	Situational analysis at work – researching work practices in science and engineering.	Anders Buch, abuc@man.dtu.dk, Technical University of Denmark + Adele Clarke, UCSF	Still more scientists, engineers and other groups of professionals are involved with design, production and consultancy work in private and public corporations. Employed as either specialized researchers, project managers or in other positions and work functions they are immersed in complex organizational relations and held accountable to plural – and often opposing – standards of conduct and by diverse stakeholders. Researching scientific and technical work in corporative and organizational settings thus require a combination of research methods and approaches to tangle out and hold together the various elements and dynamics of work practice as constituted both within the specific work setting and by the repertoires of knowledge from education and other professional institutions. This panel session will provide participants with the opportunity to share and explore some of the methodological, conceptual and practical challenges of conducting qualitative empirical research of professional work practices in a diversity of settings. The session will invite contributions from recently accomplished or ongoing research projects, and will address questions concerning the quality of empirical research and its explanatory power and theoretical significance. In order to ensure a comprehensive discussion we invite papers from STS-scholars who study scientific and technological work practices building on situated ethnographies and eventually also including multiple sites in their empirical approach. Of particular interest are submissions that take a point of departure in Multi-sited Ethnographies, Grounded Theory, Ethnomethodology, Post-structuralist approaches and – in particular – Situational Analysis. Professor Adele Clarke, UCSF will take the role of discussant in one

			panel session. If more sessions are arranged other discussants will be invited.
102	STS and the corporation	Vincent Lepinay, lepinay@mit.edu, MIT	The panel will gather presentations by STS scholars who are dealing with corporations in their archival and/or fieldwork and wish to think of ways in which the toolbox of STS and the concepts developed in the context of the study of scientific and technological enterprises can be harnessed to investigate corporations. The study of corporations in US academia has followed several paths. Legal scholars have mostly focused on formal aspects of corporate law. In the wake of Alfred Chandler, business and economic historians have provided rich insights into the evolving structures of corporations, but they have neglected the corporation's impact on their political and regulatory environments. Economists have offered abstract models of corporations, torn between organizations and markets, in the fashion of Ronald Coase. In general, corporations have received periodic waves of scrutiny, each marked by differing levels of discontent and distrust. What lacks from each of these perspectives are a set of alternative approaches that might offer a more complete picture of the corporations' role in the transformation of the last 150 years of political economy. The challenge in studying corporations is allowing these multiple academic lenses to work together: To understand how new legal frameworks and economic models have fed major transformations through the 20th century, how the incredible economic power of corporations has allowed certain of them to surpass the revenues of Nation-States, and how corporations have reshaped the landscape and discourse of citizenry in the United States. The panel will be organized by themes, illustrated by different examples of types of corporations. The goal is to show how our economy as we currently know it is far less the natural unfolding of an economic Darwinism, but rather a contingent outcome that can be acted upon by repoliticizing what corporations are.
103	Ethics and technoscience: strengthening governance or losing grip?	Luigi Pellizzoni, pellizzonil@sp.units.it, University of Trieste + Marja Ylönen, University of Jyväskylä	Ethics represents an increasingly prominent element in the governance of technoscience. Entire journals are devoted to the ethical implications of innovation. Ethics councils proliferate. Research programmes ask that part of the projects' budgets be devoted to ethical inquiry. Ethics is pivotal to the soft regulation widely applied in cutting-edge or controversial fields. Ethics is also implicitly or explicitly evoked whenever the 'empowered' citizen-consumer is called for to 'decide' on commercial applications or to 'take responsibility' for nature and health protection. Critics point out a number of issues. Ethics allows to govern without law, or by blurring law and moral norms. Ethics councils take for granted ongoing innovation and its general benefits, and legitimate the trading and exchange of values, marginalizing 'irreducible' positions. Social (especially distributional) aspects are excluded or downplayed. Technical fix and ethical fix go hand in hand, strengthening the focus on risk and safety to the detriment of the politics and economics of technoscience and innovation. Despite growing attention the role of ethics in technoscience governance remains unclear. Applicative contexts (green and red biotech, nanotech, energy, psy-sciences…) raise different issues, while the available theoretical frameworks are ambivalent at best. Foucauldian governmentality, for example, accounts extensively for the growing relevance of ethics as a means for (self-)governing, yet scholars diverge about its ultimate ('subjectivating' or 'subjecting') import. Neo-Marxists remark the expansion of new forms of mobilization, where counter-science is intertwined with ethical concerns, yet they disagree over the capacity of such mobilizations to substantially affect the politics and economics of technoscience. The panel aims to collect papers that seek to provide a significant advancement in this debate. Theoretical contributions, expanding for example on the governmentality and neo-Marxian frameworks, are welcome, together with empirical inquiries focusing on such fields as biotechnology, nanotechnology, renewable energy and climate change policy.
104	The governance of innovation and socio-technical systems: design and displacements	Susana Borras, sb.dbp@cbs.dk, Copenhagen Business School + Jakob Edler, Manchester University	'Governance' is a notion that has gained increasing currency the past years in the field of STS. However, unfortunately, this notion remains largely imprecise in conceptual and empirical terms for the analysis of change processes of complex innovation and socio-technical systems. Generally speaking, governance refers to the ability of a society to design mechanisms that solve collective action problems in issues that involve science, technology and innovation. Hence, 'design' can be seen as a key aspect in the governance of socio-technical systems, dealing with the self-organization of the agents in the system, as well as with the institutional framework within which those agents operate. Through time, governance can be seen as a process of designing and re-designing the problem conceptualization and the mechanisms to mobilize and guide collective action. 'Displacement' refers to the legitimacy-based controversies and excluding dynamics that might occur through this process. This open panel aims at asking when and how is the governance of innovation and socio-technical systems effectively and legitimately designed; how and why is this governance inducing (or preventing) change in the system (and with what consequences); and how and why governance design becomes (or not) changed itself. This open panel aims at attracting papers by scholars working in the broad and interdisciplinary spectrum of the STS field. We invite papers comparing designs of systems' governance in areas like environmental sustainability, renewable energy, health, defence, ICT, and other complex systems. We invite as well cross-country/ cross-system comparisons of governance designs and of new policy instrument mixes in the coordination of change in complex

			systems.
105	Governance of nanotechnologies: risks and benefits for development	Koen Beumer, k.beumer@maastrichtuniversity.nl + Wiebe Bijker, Maastricht University	This session focuses on the risks and benefits of nanotechnologies for development. Nanotechnologies are likely to have substantial impact on emerging and developing countries. These impacts may be positive: nanotechnologies may help countries to enter new global markets; nanotechnologies may directly benefit the poor through the creation of cheaper and more efficient technologies, particularly in the field of water, energy and health. Consequently, numerous emerging and developing countries are investing in nanotechnologies research and development. However, nanotechnologies can also have unintended and negative consequences: nano-toxicity may imply new risks to human health and the environment; nanotechnology materials developed in Europe or the US may substitute rare minerals that currently are an important source of income for emerging and developing countries; and the benefits of nanotechnology may be unevenly distributed, thus deepening the global divide. Nanotechnology developments and debates are closely followed by STS scholars. Yet whereas nanotechnology is likely to affect developed and developing countries alike, STS studies have almost exclusively focused on developed countries. This session therefore shifts the attention and asks how emerging and developing countries deal with the challenges raised by nanotechnologies? Questions that can be addressed may include, but are not limited to: - What potential risks and benefits of nanotechnology are identified in emerging and developing countries? - How are the potential risks and benefits of nanotechnology dealt with in emerging and developing countries? - Which issues have been raised in emerging and developing countries with respect to the governance of these potential risks and benefits? - Can investigating emerging and developing countries shed new light on theories and practices of nanotechnology governance originated in developed countries?
106	The shaping of international regulation and local practices	Michael Soegaard, Joergensen, msjo@dtu.dk, Technical University of Denmark + Bruno Milanez, Universidade Federal Juiz de Fora, Brazil	The panel focuses on the shaping of international regulation and how the applications of these shape local practices. International regulation plays an increasing role in shaping international product chains when businesses are sourcing products from other countries and selling products in other countries. The international regulation is of different types: product standards, standards for environmental management systems, rules for international trade with products and waste etc. Some regulation have been developed for regulation of international trade like the Basel protocol restricting trade with hazardous waste, while others like ISO14001 have developed into important standards in transnational customer-supplier relations. The shaping of international regulation takes place in complex processes of negotiations, often heavily influenced by businesses and with conflicts among national representatives. ISO14001 was shaped into a standard with few demands for environmental performance of businesses certified within the standard. How the regulation influence local practices and local environmental, health and social conditions, which are part of international product chains, is shaped in complex interactions between businesses, governments and civil societies involved in the product chains. A standard like ISO14001 might be rather effective in a Northern European context because of effective national environmental regulation, effective private certifiers and auditors, strong civil society organisations and responsible companies aiming at improving their environmental performance. However, when the standard is part of sourcing products or organizing production in newly industrialized countries the value might be doubtful due to weaker enforcement of national and international regulation. On the other hand, International regulation has also inspired national authorities in newly industrialised countries to try strengthening national regulation, but they have been met with resistance from national and international businesses. The panel welcomes papers with theoretical and empirical analyses of the shaping of international regulation and the shaping of local practices where they are applied.