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## About the Authors

### Dana Abi Ghanem

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Dana Abi Ghanem is currently a research associate at the Manchester Architecture Research Centre at the School of Environment and Development, University of Manchester, where she is working on energy consumption in office buildings. She recently obtained her Ph.D. in Planning from the School of Architecture, Planning and Landscape at Newcastle University, UK. Her research interest lies within the tradition of science and technology studies, particularly in the way users and technologies are co-constructed during their design and use. Her Ph.D. research focused on the dynamics involved in the installation of photovoltaics in homes and aims to develop a sociotechnical approach for the analysis of renewable energy technologies and their implementation.

Dana Abi Ghanem was Visiting Scholar at IAS-STS in November 2006. During her fellowship, she further developed a framework for analysing the different ways users are imagined during the planning and installation of RET projects. Actors involved in the projects construct images or representations of the end-users, as they try to imagine how such technologies are used and how users can engage, or not, during their implementation and use. The analysis presented focuses on the different user representations and the impacts these have on configuring the users' role with respect to RETs.

#### *Selected publications*

Heath, R. L., A. Rouhana, and D. Abi Ghanem (2005), 'Asymmetric bias in perception of facial affect among English and Arabic readers', *Laterality: Asymmetries of Body, Brain and Cognition* 10 (1): 51–64.

Makhoul, Judy, Dana Abi Ghanem, and Mary Ghanem (2003), 'An ethnographic study of the consequences of social and structural forces on children: The case of two low-income Beirut suburbs', *Environment & Urbanisation* 15 (2): 249–259.

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### **Arno Bammé**

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Born in 1944; studied economics, education and sociology at the Free University of Berlin (DFG fellowship); several years in industry, research assistant at the Technical University Berlin, participated in establishing Ökotopia GmbH in Berlin Mehringhof, which provided vocational education to socially deprived young people and supported alternative cultivation methods of production cooperatives in Third World countries; founding member of the interdisciplinary Technology and Social Sciences Research Institute in Berlin (TESOF); research assistant at the University of Hamburg (DFG project); since 1985: Full Professor for Didactics in Further Education at the University of Klagenfurt and Head of the Department for Science and Technology Research (TEWI) at the Institute for Interdisciplinary Studies (Klagenfurt – Graz – Vienna) (IFF); since 1998: Director of the Institute for Advanced Studies on Science, Technology and Society in Graz; 1986 to 1992: Chairman of the Interuniversity Commission (IUK); 1996 to 2001: Deputy Head of Institute of IFF and Dean of Studies; 1988 to 2000: member of the international advisory committee of the journal 'Innovation'; 1992 to 1997: member of the commission for 'Integrated Technology Research' of the Hessian Ministry for Science and the Arts; 1997 to 2000: member of the scientific advisory committee for 'Technological Development Research' of the Institute for Natural Sciences Education in Kiel; since 2004: member of the editorial advisory board of the online journal 'Science, Technology & Innovation Studies'; numerous publications in different textual and publishing forms and translations from English and French; current focus of work includes science and technology studies, literature and sociology, didactics of the social sciences, didactics of continuing education in science.

### **Corinna Bath**

E-mail: corinna.bath@gmx.at

Corinna Bath was a Research Fellow at IAS-STS from October 2006 to December 2008. She is now finishing her dissertation thesis on the gendering and de-gendering of computational artefacts to submit at the University

of Bremen, Germany (computer science department). She studied mathematics and political sciences and held research and teaching positions in mathematics, computer science, gender studies and philosophy of science at several German and Austrian universities (Technical University Berlin, University of Applied Sciences Anhalt, University of Bremen, University of Vienna, University of Klagenfurt, Technical University Vienna). Her main research interests are gender studies in computer science, feminist techno-science studies, feminist epistemology, socio-emotional software agents and semantic technologies.

*Selected publications*

Bath, Corinna (2007), “‘Social’ robots & ‘emotional’ software agents: Gendering processes and de-gendering strategies for ‘technologies in the making’”, in Zorn, Isabel, Susanne Maaß, Els Rommes, Carola Schirmer, and Heidi Schelhowe (Eds.), *Gender DesignsIT. Construction and Deconstruction of Information Society Technology*, Wiesbaden: VS-Verlag, 53–63.

Bath, Corinna (2006), ‘Overcoming the socio-technical divide. A long-term hope in gender studies of computer science’, in *TripleC—Cognition, Communication, Co-operation* 4 (2): 303–314.

Bath, Corinna, Yvonne Bauer, Bettina Bock von Wülffingen, Angelika Saupe, Jutta Weber (Eds.) (2005), *Materialität denken. Studien zur technologischen Verkörperung. Hybride Artefakte, posthumane Körper*, Transcript: Bielefeld.

**Project abstract**

*Gender studies in computer science: Towards a de-gendered design of computational artefacts*

‘Gender studies in computer science’ is often understood as either addressing the problem of getting more women into IT professions or focusing on alleged gender differences in the design and use of information technologies. In contrast, the main objective of my dissertation is to identify and systemize gendering processes in products, theories, methods and foundations of computer science, in order to propose an alternative technology design, which aims at a de-gendering of these artefacts. The thesis focuses on three levels of inquiry:

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- (1) Theoretical foundation: How can gendering processes of products, methods, theories and assumptions in computer science be theorized?
- (2) Practices of gendering: What are the dimensions and mechanisms of the gendering of computational artefacts?
- (3) Methodological concepts for a de-gendering: How to build 'de-gendered' computational artefacts?

Parts of the main results are summarized in my contribution to this Yearbook. In future research projects I plan to apply the de-gendering framework I propose in my dissertation thesis to technologies that might change the way we think, feel and interact socially, e.g. human-like machines and semantic technologies.

### **Christina Dunbar-Hester**

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Christina Dunbar-Hester is currently a Postdoctoral Fellow at the Annenberg School for Communication at the University of Pennsylvania, in Philadelphia, PA, USA. In spring 2008, she obtained her Ph.D. in Science & Technology Studies at Cornell University, after completing her dissertation on low-power radio activism in the U.S. Her research interests include: Social studies of technology; Media, technology, and activism; Users and technical (sub)cultures; Radical media and incarceration; Sociology of work / professions.

Christina Dunbar-Hester was Research Fellow (awarded with an Ernst Mach grant) at IAS-STS from November 2006 to June 2007.

#### *Recent publications*

Dunbar-Hester, Christina (in preparation), 'Beyond "Dudecore"? Challenging Gendered and "Raced" Technologies through Media Activism'.

Dunbar-Hester, Christina (forthcoming, 2009), 'Listening to cybernetics: Music, machines, and nervous systems, 1950–1980, *Science, Technology & Human Values* (accepted 2008).

Dunbar-Hester, Christina (forthcoming, 2009), "Free the spectrum!" Activist

encounters with old and new media technology', *New Media & Society* 11, special issue on history of new media.

Dunbar-Hester, Christina (2008), 'Geeks, meta-geeks, and gender trouble: Activism, identity, and low-power FM radio', *Social Studies of Science* 38: 201–232.

### Project abstract

During her months at the IAS-STS in 2006–2007, Christina Dunbar-Hester wrote much of her doctoral dissertation, an ethnographic examination of contemporary U.S. media activism specifically centred around low-power FM radio. Her project takes an interest in recent widespread claims about the potential for technologies, especially new, ubiquitous, digital technologies, to foster democratic social relations, and in particular, rhetoric that equates access to technology with a democratizing project.

A central question of the dissertation is how engagement with technology interacts with political agency in practice. The radio activists see their technical engagement as *directly linked to* other actions to promote social justice, which differentiates their activism from other social movements around science and technology. However, as they pursue their political beliefs around and through work with technology, various contradictions emerge which require management and creative work. Rather than being pulled in different directions, they instead strategically reconcile or ignore these tensions, and their work around these potential ruptures offers insights into the processes of assignation of meaning to technology as well as identity work around technology.

This research project provides a tangible example of citizens' use of a local, non-commercial media form, which is applicable to present and future debates about the continuing importance of FM radio and other forms of alternative media.

### Anne-Françoise Gilbert

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Anne-Françoise Gilbert is a Senior Research Fellow at the Interdisciplinary Centre for Gender Studies (IZFG) at the University of Bern (Switzerland).

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Her main research interests include gender issues, sociology of knowledge and qualitative methodology.

She graduated in geography at the University of Zurich (Switzerland) and received her Ph.D. in Sociology from the University of Frankfurt/Main (Germany). Her doctoral thesis investigated the changing identities and cultural spaces of single women in Europe from the 18th to the 20th century (Gilbert 2001). She has participated in several research projects in the fields of women and gender studies as well as higher education studies, using ethnographic methods and in-depth interviews. Between 2001 and 2003 she headed a research team at the Swiss Federal Institute of Technology in Lausanne and conducted a survey comparing the experience and attitudes of female and male students towards studying science and engineering (Gilbert 2004a; 2004b; Gilbert et al. 2006). The results of this study highlighted the importance of specific disciplinary cultures for the reproduction of gender segregation in the field of higher education. In her current research on 'Gender and Engineering Cultures in Academia' she uses an ethnographic approach to analyze the gendering of practices and identities in two engineering departments of a technical university. Her research runs from 2005 to 2008 and is funded by the Swiss National Science Foundation.

Anne-Françoise Gilbert was Visiting Scholar at the IAS-STIS in Graz, Austria, in May and June 2007.

*Selected publications*

Gilbert, Anne-Françoise (2008), 'Academic careers in engineering science: Gender effects of recent developments', in Godfroy-Genin, Anne-Sophie (Ed.), *Women in Engineering and Technology Research*, Proceedings of the PROMETEA Conference, Paris October 26–27 2007, Zürich: Lit Verlag (in press).

Gilbert, Anne-Françoise, Fabienne Crettaz von Roten, and Elvita Alvarez (2006), 'Le poids des cultures disciplinaires sur le choix d'une formation supérieure technique ou scientifique: une perspective genre', *Schweizerische Zeitschrift für Soziologie* 32 (1): 121–141.

- Gilbert, Anne-Françoise (2004a), 'Frauen in technischen und naturwissenschaftlichen Studiengängen. Studienmotivation und Erfahrungen im Grundstudium – eine Erhebung an vier Schweizer Hochschulen', *Soziale Technik. Zeitschrift für sozial- und umweltverträgliche Technikgestaltung* 3: 19–21.
- Gilbert, Anne-Françoise (2004b), 'Erfahrung und Diskurs – Plädoyer für einen doppelten Blick auf qualitative Daten in der Geschlechterforschung', in Bühler, Elisabeth and Verena Meier Kruker (Eds.), *Geschlechterforschung: Neue Impulse für die Geographie*, Schriftenreihe Wirtschaftsgeographie und Raumplanung, Band 33, Zürich, 5–20.
- Gilbert, Anne-Françoise (2001), *Kampf um die Welt – Sorge um sich selbst. Lebensentwürfe und kulturelle Räume lediger Frauen in der Moderne*, Königstein / Taunus: Ulrike Helmer.

#### Project abstract

*Gender and engineering cultures in academia: The case of mechanical engineering and materials science*

Given the persistence of gender imbalance in engineering education and the limited success of programmes to attract more women to the field, this project shifts the focus to the practices and identities of engineering cultures themselves. Technical universities have a long tradition as male institutions. At the time of their establishment at the end of the 19th century, their practices were gendered in several ways, including types of technology, educative practices and social relations. This raises the following questions: To what extent are practices and identities in technical education still linked to patterns of masculinity, thereby contributing to the process of gender segregation? On the other hand, how are these patterns affected by changing gender relations and a rapidly evolving technological context?

This research draws on ethnographic fieldwork in two engineering departments of a technical university in Switzerland: mechanical engineering and materials science. While mechanical engineering is an academic field that continues to resist feminization, materials engineering has attracted a rising proportion of women in the last decade. How do

these different contexts influence the gendering of practices and identities? The study aims at reconstructing the typical patterns of interpretation (*Deutungsmuster*) underlying practices and identities of engineers in each field. Moreover, it takes a close look at the tacit dimensions of engineering cultures and their gendering or de-gendering potential.

### **Georgi Kapriev**

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Georgi Kapriev was born in Burgas, Bulgaria, on 3 March 1960. In 1987 he received a Master degree in Philosophy from the St. Kliment Ochridski University of Sofia. In 1990 he was appointed assistant at the newly established Department of Philosophy of the Middle Ages and Renaissance. He obtained his Ph.D. in Philosophy in 1991 and since then has been co-editor of the 'Bibliotheca Christiana' book series. In 1992 he became member of the Société Internationale pour l'Étude de la Philosophie médiévale (S.I.E.P.M.). Since 1994 he has been co-editor of the journal *Archiv für mittelalterliche Philosophie und Kultur*. In 1995 he was granted his habilitation and was appointed Professor at the St. Kliment Ochridski University of Sofia. Between 1997–2002 he was Vice-President of the Byzantine Philosophy Commission at S.I.E.P.M. Between 1999–2007 he was head of the Department of the History of Philosophy at the Faculty of Philosophy, University of Sofia. In December 2000 he co-founded the Institute for the Philosophy and Culture of the Middle Ages. In November 2001 he was appointed Full Professor of Mediaeval Philosophy at the Faculty of Philosophy, University of Sofia. In August 2002 he was elected President of the Byzantine Philosophy Commission at S.I.E.P.M. Since December 2004 he has been a member of the Society for the Philosophy of the Middle Ages and Renaissance—GPMR (Germany). He was guest professor at the University of Cologne in 2005/2006.

#### *Selected publications*

Kapriev, Georgi (2005), *Philosophie in Byzanz*, Würzburg: Königshausen & Neumann.



Boiadjiev, T., G. Kapriev, and A. Speer (2000), *Die Dionysius-Rezeption im Mittelalter*, Brepols: Turnhout.

Kapriev, Georgi (1998), ... *ipsa vita et veritas. Der 'ontologische Gottesbeweis' und die Ideenwelt Anselms von Canterbury*, Leiden / Boston / Köln: Koninklijke Brill NV.

### Steffen Koch

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Steffen Koch graduated from Martin Luther University, Halle-Wittenberg (Germany), with a degree in Environmental Engineering. He worked at R&D departments at Thames Water (Reading, UK) and Schott Glas (Mainz, Germany) during a gap year placement as well as for his diploma project.

As a post-graduate student he joined the Graduate School 'Technology and Society' at the Technical University of Darmstadt (Germany) and has been a Visiting Scholar at the Centre for Innovation Research in the Utility Sector (CIRUS), a research group at the Swiss Federal Institute of Environmental Science and Technology (EAWAG, Switzerland). He was a Research Fellow (awarded with an Ernst Mach grant) at the Institute for Advanced Studies on Science, Technology and Society (IAS-STs) in Graz from October 2006 to July 2007.

His research interests are water and wastewater infrastructures, transformation processes, engineering knowledge, and 'socio-technical insights'.

### Project abstract

*Water and waste water infrastructures—technological changes & socio-technical perspective*

Starting from the premise that participation is a vital aspect of sustainability, the project aims predominantly at contributing to the engineering perspective. Traditional engineering knowledge is therefore brought together with the wider societal context in which engineering work takes places. The two overall purposes are: firstly to stimulate disciplinary reflections, and secondly to assist the ability of engineers to take an active part in current and future debates on sustainability.

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As an example, a case study revisits the career of rainwater. The analysis focuses in particular on why and how the infiltration of rainwater succeeded in becoming established as an innovation in the field of sewage disposal rather than in that of water supply. A historical approach is thus combined with a socio-technical perspective. Conclusions point to the context in which debates take place and decisions are made. Socio-technical insights would provide engineers with knowledge to understand transformation processes in a more differentiated way, and could help to advance future innovations.

### **Les Levidow**

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Les Levidow is a Senior Research Fellow at the Open University, UK, where he has been studying agri-environmental issues since 1989. A long-running case study has been the safety regulation, innovation and controversy over agbiotech. This research has focused on the European Union, USA and their trade conflicts. The controversy provides a case study of concepts such as regulatory science, sustainability, European integration, governance, transnational civil society and organizational learning. For project details and publications, see the Biotech Policy Group website, <http://technology.open.ac.uk/cts/bpg>.

During 2008–2010 he coordinates an EC-funded project, 'Cooperative Research on Environmental Problems in Europe' (CREPE) and participates in another, 'Facilitating Alternative Agri-food Networks' (FAAN). He is also Editor of the journal *Science as Culture*.

Les Levidow was Visiting Scholar at IAS-STC in January 2007.

### **David Mercer**

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David Mercer is Associate Professor and Convener of the STS program at the University of Wollongong. His main area of research is public policy in relation to science / expertise and law / regulation. These themes have been investigated by the study of scientific controversies involving litigation. Case studies have included: Bendectin (pharmaceutical safety), Electric

and Magnetic Fields (safety of powerlines / mobile telephones), Creation Science (problems of fringe-science / science education), *Daubert* (evidence jurisprudence / role of expert witnesses), Asbestos (theories of causation in Toxic Torts), Evidence Based Medicine (bureaucratization of expertise). Other research interests include the social history of the telephone and communications, with a particular interest in the way perceptions of time and space influence theories of technological change.

David Mercer was Visiting Scholar at IAS-STS in May 2007.

*Recent publications*

Mercer, David (2008, forthcoming), 'Science, legitimacy, and folk epistemology in medicine and law; Parallels between legal reforms to the admissibility of expert evidence and evidence based medicine', *Social Epistemology*.

Edmond, Gary and David Mercer (2008), 'Daubert and the exclusionary ethos: The convergence of corporate and judicial attitudes towards the admissibility of expert evidence in tort litigation', *Law and Policy: 'Virtual Issue: Thirty Years of Key Contributions to Debates on Law and Policy'* 30: 1 ([www3.interscience.wiley.com/journal/119400699/](http://www3.interscience.wiley.com/journal/119400699/) issue).

Mercer, David (2007), 'Capturing the positive educational possibilities of creation science debates?', in Jones, L. S. and M. Reiss (Eds.), *Teaching about Scientific Origins: Taking Account of Creationism*, New York: Peter Lang: 43–58.

Mercer, David (2007), "HEVIE knowledge": The public accountability of hyper expertise and the vertical integration of expertise', in Arno Bammé, Günter Getzinger, and Bernhard Wieser (Eds.), *Yearbook 2006 of the Institute of Advanced Studies on Science and Technology Graz: Austria*, Munich: Profil, 337–356.

Edmond, Gary and David Mercer (2006), 'Anti-social epistemologies', *Social Studies of Science* 36 (6), 843–853.

Mercer, David (2006), *The Telephone: The Life Story of a Technology*, Greenwood *Technographies*, Westport / Connecticut / London: Greenwood Press.

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### **Anup Sam Ninan**

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Anup Sam Ninan is pursuing his doctoral studies at the Bremen International Graduate School of Social Sciences (BIGSSS), a joint centre under the DFG excellence initiative of the University of Bremen and Jacobs University in Bremen, Germany. He earned his Bachelor degree in Development Administration from the Gandhigram Rural Institute, Tamil Nadu, India and his Master degree in Sociology and M.Phil in Science Policy Studies from Jawaharlal Nehru University (JNU), New Delhi, India. At BIGSSS, he is working in the thematic field of global integration, with a focus on the technopolitical construction and functioning of the climate change regime: his dissertation is tentatively titled 'Framing Sustainability: Carbon Offsets in India'.

He was Research Fellow (awarded with a North South Dialogue Programme grant) at IAS-STG from December 2006 to January 2008.

#### *Recent publications*

Ninan, Anup Sam (2009 forthcoming), 'Outsourcing pollution: Clean development mechanism (CDM) as ecological modernisation', Springer Publications.

Ninan, Anup Sam (2008), Gandhi's technoscience: Sustainability and technology as themes of politics, *Sustainable Development* 10.1002/sd.381.

#### **Project abstract**

The project 'Rural Innovations: Technology Systems and Sustainability—Emerging Issues' attempted to understand the notion of development, particularly rural development and its relation to sustainability discourses, in the context of globalization and the advent of new technologies. Drawing largely from the Indian experience, it attempted to investigate the hitherto rural industrialization process with its 'technological frames' and the ongoing transformation which appears to redefine the very notion / peculiar focus of the rural due to its emerging forms of linkages. It explored the social and historical context in which the idea of rural industrialization has emerged in India along with the prevailing institutional

forms. It examined the constellation of ideas, values and techniques that defined the course and nature of technological practices against the backdrop of colonial experience of modern India and its politically sensitive association with the Freedom Movement.

As a whole, the project looked into how the technological systems and practices embody a set of social relations, environment and users, and explored how they can be understood as the sites of interest articulation. An article on Gandhi's technoscience was one of the outcomes of the project.

### Huei-Chih Niu

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Huei-Chih Niu is Associate Professor at the Institute of Law for Science and Technology, National Tsing Hua University (Taiwan).

- Research Fellow at the Institute of Advanced Studies on Science, Technology and Society (IAS-STs), Graz, Austria from January to July 2007.
- Visiting Scholar at the Centre for the Study of Globalisation and Regionalisation, Warwick University, UK, from August to December 2006.
- Visiting Scholar at the Institute of Advanced Legal Study, University of London, UK from June to September 2003.

#### *Recent publications*

Niu, Huei-Chih (2008), 'In search of a mechanism to define and manage the potential risk of human biobanks', *Biennial Review of Law, Science and Technology* 5 (3): 143–196.

Niu, Huei-Chih (forthcoming), 'An observation on the development and potential impacts of the international health regulations 2005', *National Taiwan University Law Review*.

Niu, Huei-Chih (2007), 'The governance challenges of biotechnology: The case of GMOs', *Soziale Technik* 4: 10–12.

Niu, Huei-Chih (2007), 'The potential controversies of "the Doha declaration on the TRIPS agreement and public health" in determining

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“national emergency or other circumstances of extreme urgency”, *The Chengchi Law Review* (in Mandarin, TSSCI).

Niu, Huei-Chih (2007), ‘Can Article 5.7 of the WTO SPS agreement be a model for the precautionary principle?’, *A Journal of Law, Technology & Society* 4 (4): 367–388 ([www.law.ed.ac.uk/ahrc/script-ed/issue4-4.asp](http://www.law.ed.ac.uk/ahrc/script-ed/issue4-4.asp)).

Niu, Huei-Chih (2007), ‘The emerging of international human subjects research—Ethical issues and debates on double standard controversies’, *Asian Journal of WTO & International Health Law and Policy* 2 (1): 161–188.

Niu, Huei-Chih (2007), ‘TBT agreement and safe trade—An observation on environmental labelling and GMO labelling’, *The Chengchi Law Review* 95: 323–383 (in Mandarin, TSSCI).

#### **Project abstract**

*Right and duty in genome medicine: A regulatory approach for individual autonomy, risks and social justice in human subject research*

This project seeks to propose a regulatory approach to deal with the risks and benefits generated from the operation of human subject research, as well as to explore ethical, legal and social theories / approaches to deal with new issues involved in human subject research stipulated by the development and application of modern biotechnology. In addition, medical research increasingly took place in developing countries over the past two decades and attracted attention to and debates over issues of information and power asymmetry, justice, exploitation and health care standards. A proposal of a collaborative partnership approach is examined. This approach is an attempt to create a partnership between biomedical researchers and research subjects in the context of modern biomedical research and multinational medical research.

#### **Tanja Paulitz**

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Tanja Paulitz, Ph.D., is Assistant Professor at the Department of Sociology (gender studies), University of Graz, Austria. In 2006/07 she was a Lise Meitner Scholar, funded by the Austrian National Science Fund (FWF),

at IAS-STIS in, Graz. Her main fields of research are: design theories und constructivism in science and art, engineering studies, virtual cooperations as well as qualitative research methodologies, transformations of work, theories of subjectivity.

*Selected recent publications*

Paulitz, Tanja (2009), *Gender in Engineering Design. Continuities and Transformations in Theories and Textbooks in Engineering*, Graz, Online-Resource: [www.ifz.tugraz.at/index.php/article/articleview/1566/1/153/](http://www.ifz.tugraz.at/index.php/article/articleview/1566/1/153/).

Lucht, Petra and Tanja Paulitz (Eds.) (2008), *Recodierungen des Wissens. Stand und Perspektiven der Geschlechterforschung zu Naturwissenschaften und Technik*. (engl. title: Recodification of knowledge), Frankfurt am Main / New York: Campus.

**Project abstract**

*Gender in engineering design: Continuities and transformations in theories and textbooks in engineering*

The project ‘Technical Construction and Gender in the Information Society’ examines formations in the knowledge tradition of engineering that form the major symbolic basis for current continuities and/or shifts in the context of the information society. By what means are ‘construction’ and ‘design’ in the field of technology considered to be a gendered activity and what ideas of masculinity and femininity are associated with them? The key concern is to follow the gender issue in engineering design historically, i.e. from the time of the emergence of engineering as an academic discipline in Germany in the second half of the 19th century. Later periods are addressed as the broader background of the study.

The project results show that there are at least two different modes of gendering engineering design. They both show certain conceptions of masculinity. One is the idea of the western, highly educated ‘scientist of machinery’, the other figures as the powerful and ingenious male artist who invents machines. Both images are interwoven with other social categories such as ‘ethnicity’ and ‘class’. The leading images of the engineer, as found in the material, are constituted with the help of dis-

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cursive references to other dominant images of masculinity in the modern society around 1900. They are linked to the field of (natural) science, to the educated class (*Bildungsbürgertum*) and the field of craftsmanship and art. Additionally, the investigation clearly shows that early conceptions of design in German engineering reflect the economic structures and symbolic order of the colonial world.

These outcomes of the project provide a basis for questioning homogenized conceptions of the male-coded modern technological rationality. Thus the findings shed light on the fact that the image of the male engineer was unstable and disparate, especially in the period when engineering was first established as an academic discipline. They also indicate that there is a broad range of traditional images available for engineers today that result from these historic formations. Such a heterogeneous symbolic basis of how knowledge in engineering is shaped by social categories has to be taken into account for today's reform initiatives in engineering. By this means, the findings in hand have the potential to enhance current transformative activities in the field of engineering, since they allow the scope of critique of the modern image of the engineer to be exceeded.

### **Tess Pierce**

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Dr. Tess Pierce is an Assistant Professor in Communication at the University of Ontario Institute of Technology (UOIT) in Canada, where she heads the Science and Technology specialization. Pierce's scholarship and research focus on the implications of digital technology and the ways in which people negotiate their cultural identities in order to resolve complex situations when online. The central theme of her research is the production of meaning in every day life. Current projects include research on online conflict, and editing a textbook on the development of human communication. Projects under development include an examination of intercultural communication in Computer Science between programming cultures, and transdisciplinary research on the implications of culture, computer science, and business ethics in e-healthcare in Canada. Pierce earned a B.A. in Speech Communication from Colorado State University,



and a M.A. in Human Communication Studies from the University of Denver. Her Ph.D. is in Women's Studies from Clark University in Massachusetts. She conducted this research as a Visiting Scholar at IAS-STS in January 2007.

*Selected publications*

Pierce, Tess (under review), 'Muslim women bloggers: Cyberconduit activists living with conflict and connecting as digital nomads', *Women's Studies in Communication*.

Pierce, Tess (2008), 'Blogging in drag: How women bloggers subvert enculturated gendered religious practices', Western Communication Conference, Denver, CO, February 2008.

Pierce, Tess (2007), 'Baghdad's burning up the blogosphere: Redefining 'text' in the Internet age', *The Agora: Luther College In Conversation* 20 (fall).

Pierce, Tess (2007), 'Islam, purdah, poetry, and internet-based politics of women in Iran, Iraq, and Afghanistan', Global Studies Conference, Omaha, NE, October 2007.

**Project abstract**

Using feminist rhetorical metaphor analysis, I compared the institutionalized gender stereotypes embedded in the official web sites of the European Green Party and The Green Party of the United States. I found that the online communication strategies used on these sites both mirror offline strategies by following cultural gender stereotypes, and are sites of resistance to those same stereotypes. This reinforces the notion that society's dominant group (patriarchy) encodes and controls both the meaning and the form of an expression. It also contributes to the growing body of communication literature that seeks to explain how cyberactivists perform and subvert cultural gender roles and rules, thus illuminating the transformative and persuasive processes the activists employ. This project also helped frame my current research on online conflict and e-healthcare privacy.

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### **Aleksandra Stupar**

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Dr Aleksandra Stupar is Assistant Professor at the Faculty of Architecture, University of Belgrade (Department of Urbanism and Regional Planning). Besides lecturing on the 'Built Environment', the 'City in Globalization' and the 'Urban design studio', she has been a Research Fellow in several national and international research studies and projects such as 'Management, urban renewal and regeneration of regions in Serbia' (2005–2007) and 'The application of the advanced spatial structures in 3D transformations, modelling and new materials' (2008–2011), both funded by the Ministry of Science of the Republic of Serbia. Her professional interests in research and teaching are political, technological and cultural aspects of urban environment and globalization, urban morphology and transformations, sustainable development and development policies. She is a member of ISOCARP (International Society of City and Regional Planners) and the winner of the Gerd Albers Award in 2007 (honourable mention) and 2008 (best article).

Aleksandra Stupar was Research Fellow at IAS-STIS in June 2007.

#### *Recent publications*

Stupar, Aleksandra (2009), *The City of Globalization—Challenges, Transformations, Symbols*, Belgrade: Faculty of Architecture, University of Belgrade / OrionArt.

Stupar, Aleksandra (2008), 'The magic mirror of sustainability: Glittering ideas, gloomy reality', in *Thematic Conference Proceedings 1, International Scientific Conference 'Sustainable Spatial Development of Towns and Cities'*, Belgrade: IAUS, 99–114.

Stupar, Aleksandra and Aleksandra Djukic (2007), 'Patchwork or matrix? Testing the capacity of the contemporary city', *Spatium* 15/16, Belgrade: IAUS: 1–9.

Stupar, Aleksandra (2007), 'The city of technology: Redefining the role of STS approach in the global comprehension', in Harald Rohrer, Ivan Tchalakov, and Franc Mali (Eds.), *Governing Sociotechnical Change*

*in Southeastern Europe—Contributions From a Science and Technology Studies Perspective*, Sofia: Iztok-Zapad Publishing House: 242–255.

### Project abstract

*Shaping the image of globalization: The role of technology in urban regeneration*

Responding to the new imbalance of power influenced by numerous changes in the political, economic, cultural and technological environment, the contemporary city has been forced to adjust itself to the speed of global flows. One of the most widely accepted and elaborated methods of urban activation, intensification and ‘beautification’ of abandoned urban areas is certainly urban regeneration—a process which uses the flamboyant match of technology and ‘sustainability’ as a spin-off for further urban development and global competitiveness. Since the final output of this synthesis is still highly questionable and unconfirmed, however, the main aim of the research conducted at IAS-STS was to analyze the relation between technology and urban regeneration defining the numerous modes of its application in the process of planning, (re)designing, using and perceiving.

The first part of the research was focused on the broader socio-economic context of contemporary cities, presenting the state of the globalized society, advanced technological possibilities, modified urban dynamism and changed space-time perception. The second part was oriented towards morphological, functional and technological characteristics of the regenerated areas in relation to their political, cultural, ecological and economic significance for the urban environment. As a result, it was possible to identify a set of motifs which directed these transformations and, consequently, influenced the introduction / application of new technologies. Finally, the third part of the research defined the multiple role of technology in the process of urban regeneration, its real significance within the redesigned cityscape and its influence on urban perception.

### Sakari Tamminen

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Sakari is finishing his Ph.D. entitled ‘Calculating life’ on nonhuman nationhood and international politics of nature. The thesis looks at how bio-

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diversity has been cast in genetic terms during the years following the Convention of Biological Diversity and has led to the emergence of national genetic natures, resulting in the genetic demarcation of national boundaries.

During his stay as Research Fellow at IAS-STS in Graz between the summer and fall of 2007, Sakari worked on the analysis of gene banking practices and genetic identification of national genetic materials. The fellowship was made possible by the Graz IAS-STS and the Academy of Finland.

*Recent publications*

Tamminen, S. and J. Matikainen (2007), 'Teknologian sosiaalipsykologiaa?', *Psykologia* 6: 465–476, [The Social Psychology of Technology?, Finnish Journal of Psychology].

Pyyhtinen, O. and S. Tamminen (2007), 'Kohtaamisia materiaalisessa: Foucault, Latour ja antropologinen painajainen', *Tiede & Edistys* 3: 229–251, [Meetings in Materiality: Foucault, Latour and the Anthropological Sleep, Tiede & Edistys].

**Ivan Tchalakov**

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Ivan Tchalakov is Associate Professor at the University of Plovdiv, Bulgaria, and head of the Department of Sociology at the same university. He is also Senior Research Fellow at the *Technology Studies Group* of the 'Sociology of Science and Education' Department at the Institute of Sociology, Bulgarian Academy of Sciences. He completed his Ph.D. in 1988 at the same institute with a thesis on the Marxist sociology of knowledge.

Ivan Tchalakov is working in the fields of *Sociology of Science and Technology* and *Economics of Technical Change*. Between 1993–1997 he carried out an ethnographic study of the holographic laboratory (CLOSPI) at BAS, where he developed the notion of the *heterogeneous micro-community*, constituted on the relationships of *passivity* and *responsibility* between human and nonhuman actors. He is currently elaborating these ideas, studying the Byzantine contributions to Aristotle's theory of action and its relevance for understanding scientific and engineering practice.

Since the mid-1990s Ivan Tchalakov has also extensively studied the transformation of the research and innovation systems in post-socialist countries. He is working in the field of *historical sociology of socialism* and focuses on science and technology development in South-Eastern Europe after WW II.

In 1999 he received the Award of the Bulgarian National Fund for Scientific Research for the book '*Making a Hologram: A Book about Light, Scientists and their World*', Marin Drinov Academic Publishers, Sofia, Bulgaria. Between 1999 and 2003 he was President of the Bulgarian Sociological Association.

Ivan Tchalakov was Research Fellow at IAS-STIS from March to June 2007.

#### *Selected publications*

Tchalakov, Ivan (2008), '*The Networks of Transition: What Indeed Happened in Bulgaria after 1989*', Sofia: East-West Publishers (in Bulgarian, in co-authorship, 704 pages).

Tchalakov, Ivan (2007), 'Technology and the models of post-socialist economic transition: Some evidence from the Bulgarian experience', in *Governing Sociotechnical Change in Southeastern Europe: Contributions from A Science & Technology Studies Perspective*, Sofia: East-West Publishers, 169–201.

Tchalakov, Ivan (2006), 'Socialism as society of networks and the problem of technological innovations', *Sociological Problems*, Special Issue 2006, Sofia: BAS Academic Publishers, 343–371.

Tchalakov, Ivan (2005), 'Technology and the models of post-socialist economic transition', *Sociological Problems*, Special Issue 2005, Sofia: BAS Academic Publishers, 145–165.

Tchalakov, Ivan and Georgi Kapriev (2005), 'The limits of causal action: Actor-network theory notion of translation and Aristotle's notion of action', in Arno Bammé, Guenter Getzinger, and Bernhard Wieser (Eds.), *Yearbook 2005 of the Institute for Advanced Studies on Science, Technology, and Society*, Munich: Profil, 389–433.

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Tchalakov, Ivan (2005), 'The history of holographic optical storage on the both sides of the Iron Curtain—1969–1989', *ICON – The Journal of the International Committee for the History of Technology* 11.

Tchalakov, Ivan (2004), 'The object and the other in holographic research —Approaching passivity and responsibility of human actors', *Science, Technology & Human Values* 29 (1).

Tchalakov, Ivan (2004), 'Language and perception in the coupling between human and non-human actors', in Arno Bammé, Günter Getzinger and Bernhard Wieser (Eds.), *Yearbook 2004 of the Institute for Advanced Studies on Science, Technologies & Society*, Munich: Profil: 192–215.

Tchalakov, Ivan (2003,) 'Joseph Schumpeter rethought: the classic ideas on innovations in no-exchange economy in the light of some recent studies of the communist economy', *Theorie Vedy / Theory of Science* Vol. XII/XXV, No. 3, Prague.

### **Project outline**

*Everyday practice in the research laboratory: The tension between 'Causal Action' and 'Existential Action' of the human agents (some possible lessons from the Byzantine interpretation of Aristotle's theory of action)*

Based on previous works, the project studies *heterogeneous micro-communities* in science and technology. It focuses on the problem of what stabilizes these communities and makes it possible for humans to endure the hardship of research work. The project takes a critical stand towards actor-network theory (Latour, Callon, Law) and especially its notion of translation, and attempts to reconsider it by reintroduction of the idea of asymmetry between human and non-human actors, yet on a different (non-Cartesian) foundation. The basic claim is that traditional sociological theories of human action reduce it to a type of *causal* action. Aristotle calls this type of action 'movements' that have a 'limit', and which are directed not to the goal itself, but to what leads toward this goal (*Metaphysics*, Book 9, ch. 6). This reduction makes it so easy to substitute the notion of human action with that of translation as the common designation for the activities of both human and non-human actors.

The project elaborates further Aristotle's notions of 'causal action' (*kynesis*) and 'existential action' (*energeia*) and their development in the framework of Byzantine philosophical tradition (Maximus Confessor, Gregorius Palamas). It finds that their dynamic ontology has much in common with contemporary science studies (actor-network theory in particular), with its refusal of the sociological notion of 'action with a point of origin' (Latour). The results of the project point out that the Byzantine notions of *hypostasis*, *perihoresis* and *hexis* reveal a promising perspective in understanding the intimate relationships between human and non-human agents in heterogeneous micro-communities.

### Isabel Zorn

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Isabel Zorn is a doctoral candidate at the research centre for Digital Media in Education at the University of Bremen, Germany, and a lecturer in Media Education at the University of Landau, Germany. From different perspectives, Isabel has always been interested in the interlink of technology design and education.

Her dissertation is empirical research on the educational process people undergo when being involved in IT construction processes.

From 2002–2006, she was research assistant at the centre for Digital Media in Education, Department of Computing Sciences at the University of Bremen, Germany. In close collaboration with schools, teachers and students, she developed IT design activities for learning contexts in schools (ZIM@School). She was responsible for the scientific management of the International Symposium on Gender and Information Society GIST 2004. In 2003, she worked on a project that evaluated 100 e-learning modules for Gender Mainstreaming criteria and co-developed a guideline for gender-sensitive e-learning design. Before that she worked on virtual community building among international scholars in the context of developing the web server for the Virtual International Women's University.

Isabel Zorn was Research Fellow (awarded with an Ernst Mach grant) at IAS-STS from October 2006 to September 2008.

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*Selected publications*

Zorn, Isabel (2008), 'Active construction of Digital Media as socio-technical construction of a learning space', ED-MEDIA World Conference on Educational Multimedia, Hypermedia & Telecommunications, Wien.

Zorn, Isabel, Maika Büschenfeldt, and Heidi Schelhowe (2008), 'Kooperative Softwareentwicklung einer Sekretariatsplattform als Bildungsprozess', *Mensch & Computer 2008, Jahreskonferenz des Fachbereichs Mensch-Computer-Interaktion der Gesellschaft für Informatik (GI)*, München: Oldenbourg Wissenschaftsverlag.

Zorn, Isabel, Susanne Maass, Els Rommes, Carola Schirmer, and Heidi Schelhowe (Eds.) (2007), *GenderDesignsIT—Construction and Deconstruction of Information Society Technology. Studien Interdisziplinäre Geschlechterforschung*, Wiesbaden: Verlag für Sozialwissenschaften.

**Project abstract**

*Education by IT construction: The activity of constructing information and communication technology and its potential for evoking new views on the interrelations of self, technology and world*

During my stay at the IAS-STIS I worked on the empirical study for my Ph.D. thesis. I conducted interviews with lay persons who had been involved in IT construction activities. The environment at the IAS-STIS gave me the time and space to concentrate on coding the interviews. I also got a chance to join a research colloquium at the University of Graz.

The activity of constructing information technology is analysed for its potential learning opportunities. The objective of my dissertation research is to specify the inner processes that are evoked when former ordinary 'users' (mainly girls and women) are involved in the production and design of information technology. The research project tries to find out more about the evocation of learning processes, the evocation of new understandings of interrelationships between themselves, technology, and the world they live in, and the new perspectives and fields of action users see opened to them. As ICT design is a strongly male dominated field, a gender perspective with strong emphasis on experiences of women is necessary to explore the diverse aspects of this field.