Call for Papers: special issue

Energy, Emerging Technologies and Gender in Homes

Guest editors:
Kirsten Gram-Hanssen (Aalborg U) **Yolande Strengers** (Monash U)

Deadline for abstract submission: 7 SEPTEMBER 2021

How are visions, relationships and practices with emerging technologies and energy interacting with gender relations and dynamics in homes?

From aspirations for leisure-enhancing electronic and digital gadgets through to self-cleaning buildings, imaginaries (visions) of technology in the home reflect long-held gendered associations (Berg 1994; Cowan 1989). *This special issue investigates how emerging technologies are informed by gender and generate gendered effects in ways that support or undermine energy policies and initiatives. The issue will explore the relationship between gender, emerging technologies and energy from many perspectives, to help realise more gender-inclusive technologies, buildings, policies, programs and outcomes, and to ensure that gender insights can assist in making energy policy more effective by building on everyday life understandings.*

Aims

The special issue aims to improve understanding regarding the gendered diversity and effects in the development of, and experiences with, emerging technologies of relevance to energy in homes. The issue will provide critical advice for key stakeholders such as policy makers, regulators, planners, technologists, designers and housing developers for future gender-inclusive energy technologies and approaches which work in everyday life.

For this special issue, issues of concern include household interactions and relationships with *energy* or *smart* technologies, as well as experiences with a broad range of emerging technologies — such as consumer electronics, robotics and automation — and how these shape and are shaped by gender in ways that affect energy outcomes. We are interested in contributions that address gendered visions, experiences and outcomes with a wide variety of emerging technologies including:

- **Smart home devices**: broadly encompassing smart appliances, thermostats, digital voice assistants, consumer electronics, home robotics, Internet of Things (IoT), and other automated home technologies
- **Energy technologies**: e.g. solar PV, batteries, electric vehicles, microgrids, and virtual power plants
- **Other technologies** having potential energy implications e.g. augmented /virtual reality, artificial intelligence, cryptocurrencies, autonomous vehicles, pay-as-you-go energy purchasing via mobile phone (common in the Global South).

The special issue also explores the impact of gender on realising policy, regulatory and building efficiency aspirations. Set against broader political agendas and imaginaries for Big Tech, decarbonisation and energy reform, emerging technologies are often considered key enablers of future visions for low-carbon futures. Yet questions about whose futures are being enabled and imagined, or who is doing the work to enable them, are left unanswered (Aagaard 2021; Jasanoff 2015; Sovacool 2019). Insufficient attention to gender and socio-cultural dynamics may undermine the green and just transition of the energy system.

Background

The smart or digital home has long been a tantalising prospect, with enticing visions regularly on display in science fiction books, films and display homes (Dourish & Bell 2011). In recent and specific iterations of the energy (smart) home — featuring home automation and load control, electric vehicles, solar and battery integration, real-time feedback, demand response and/or improved efficiency — questions of gender are inescapable, as everyday practices and technologies are gendered and thus inform energy outcomes. There has been considerable attention paid to the social and household dynamics involved with smart technologies and the impacts this has on energy outcomes (Darby 2018; Gram-Hanssen & Darby 2018; Hansen *et al.* 2019; Hargreaves & Wilson 2017, 2018; Nicholls & Strengers 2019; Ransan-Cooper *et al.* 2020). However, less attention has been given to gender in such analyses, making it an important issue in need of concerted focus (Johnson 2020; Furszyfer *et al.* 2021; Mechlenborg & Gram-Hanssen 2020; Pink 2004; Strengers 2013; Tjørring *et al.* 2018). Questions remain about whose interests are represented in the visions for technologies; who does the work involved in setting up, maintaining, using or responding to technologies in the home (Kennedy *et al.* 2015; Rode & Poole 2018; Strengers & Nicholls 2018); how smart technologies are gendered by design or ergonomics (Perez 2019; Strengers & Kennedy 2020); how the non-human agency of emerging technologies interacts with gender in both the design and use phase (Gram-Hanssen, 2019; Morley 2019; Kuijer 2019); and what new 'cyborgs' are emerging that transcend traditional understandings of gender and feminism (Haraway 2013).

Suggested Topics

Emerging technologies in the home
- What are the gendered experiences of the occupants of energy smart homes? How do emerging technologies shape and impact on gender relations within the home, including gendered dynamics of different households (heterosexual or same sex couples) and/or of 'digital housekeeping' (Tolmie *et al.* 2013)?
- How is gender shaping the learning and use of emerging technology? What kinds of gendered knowledge and experiences are prioritised in the technologies for energy smart homes?
- What impact will gendered relations with emerging energy technologies have for a decarbonised transition?
- How do the gendered experiences of occupants in sustainable homes and other types of homes compare to smart homes?
- How do emerging technologies physically embody gender, how do different types of non-human agency interact with gender? What implications does this have for social relations in and beyond the home?
- How should we understand gender in relationship to emerging technologies in the home? Do we need to revise our assumptions, concepts or theories of gender or feminism?

Industry visions and policy progress
- How are visions/imaginaries of the energy smart home, IoT devices and other emerging technologies gendered by different types of actors (Big Tech; energy companies; policy makers etc.) and what impact does this have on their development?
- How do visions/imaginaries of emerging technologies reflect, reinforce or depart from historically gendered associations between energy, technology and/or the home?
- How do science fiction, popular culture or other imaginaries contribute to gendered technology and energy imaginaries in the home?
- Who stands to gain or lose from current visions of smart homes and energy technologies? Are there positive examples for changing and challenging gendered energy and technology visions and outcomes?
- How can policies and industry stakeholders respond to the gendered challenges and make their technologies, policies and programs for the home more gender inclusive and equitable?
- What gender insights on emerging technologies and energy are important to include in policy for a sustainable transition?

Neighbourhoods and communities
- How does gender play a role in neighbourhood and community energy projects?
- Do neighborhood projects differ from household-based energy technologies in their gendered visions or effects?

Intersectional approaches
- How do the gendered visions and/or experiences of energy and technology intersect with issues of race, culture, disability, socio-economic status or other forms of diversity and potential disadvantage?
- How does technology shape gendered relations and roles in the home, across different countries, geographical contexts and socio-political situations?

Briefing Note for Contributors

You are invited to submit an abstract for a journal paper in this special issue of *Buildings & Cities*. In the first instance, please send a 500 word (maximum) abstract defining the scope, methods and results to Richard Lorch richard@rlorch.net by **TUESDAY 7 SEPTEMBER 2021**. The initial abstract submission must include:

1. The author's and all co-authors' names, affiliations, and contact details
2. The question(s) and topics in this Call for Papers that the abstract and intended paper addresses
3. The abstract (300-500 words maximum) which should include a description of methods and key findings.

Abstracts will be reviewed by the editors to ensure a varied, yet integrated selection of papers around the topic of the special issue. Authors of accepted abstracts will be invited to submit a full paper which then undergoes a double-blind peer review process. The journal publishes the several different types of papers: research, synthesis, policy analysis, methods, & replication, see: https://bit.ly/3n0mIIz

SYMPOSIUM: Authors of accepted abstracts will receive feedback from the editors and be asked to prepare a short (5-10 minute) presentation of their paper at an online symposium (held over several weeks and across multiple time zones) for the special issue authors, to be held in November 2021. Papers will be thematically grouped and each lead author will be asked to comment on another paper's abstract and presentation. Authors will be invited to attend all sessions of the symposium but are only required to attend those featuring their paper and/or the paper they are asked to comment on. After the symposium which will allow for further feedback and discussion around the special issue, full papers will be submitted by 11 March 2022.

Timeline

Deadline for abstract submission	**7 September 2021**
Symposium to discuss and develop paper ideas	3, 4, 8, 9 November 2021
Full papers due	**11 March 2022**
Referees' comments	15 May 2022
Final version due	30 June 2022
Publication	August 2022 (NB: papers are published as soon as they are accepted)

Editorial team: R. Lorch (*Buildings & Cities*), K. Gram-Hanssen (Aalborg U), Y. Strengers (Monash U), L. K. Aagaard (Aalborg U), K. Dahlgren (Monash U)

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