







# **Responsible Software Engineering**

Jim Buckley, Luigina Ciolfi, Conor Linehan, John McCarthy, Clare McInerney, Bashar Nuseibeh, Irum Rauf, Sarah Robinson

# <sup>1</sup> MOTIVATION:

- Software shapes lives across domains such as health, finance, civil and social interactions
- Unfortunately, **public trust** in software has been eroded by evidence of corporations prioritizing profits over the common good.
- Sociotechnical systems subtly shape our (sense of) security, trust, and comfort in decision-making and actions.
- This research's experience-centred design approach prioritizes representing & enhancing lived experiences, with software serving as a support rather than a constraint.

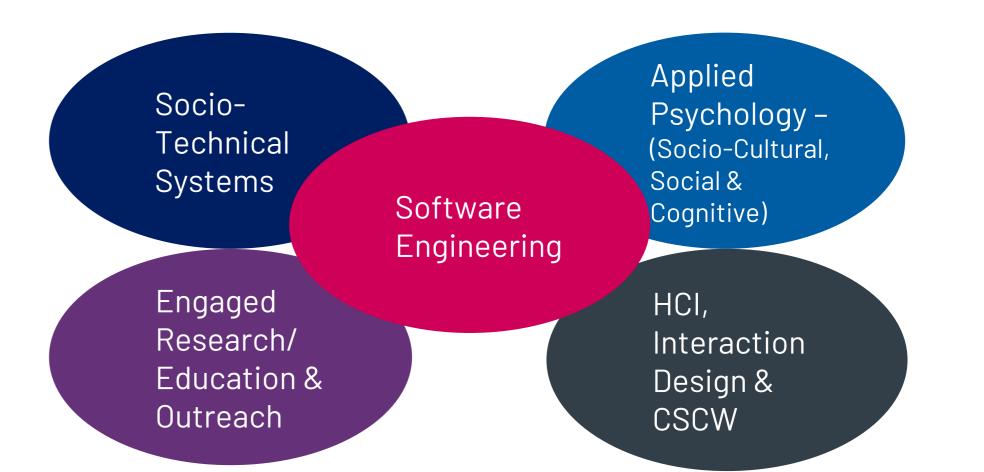
## **RESEARCH CHALLENGES:**

• To develop understanding (s) of **Reflexively Responsible Software** 

# **2 PERSPECTIVES AND METHODS:**

## An Interdisciplinary experience-centred design approach

Our team comprises researchers from diverse disciplines.



## Engineering

- To understand Responsible Software Engineering as an embedded socio-technical practice
- To derive, develop & evaluate tools & practices for experiential practice-based understanding of Responsible Software Engineering
- To specify the education needed for citizens to be able to act knowledgeably in the modern IT society

#### Our Methods include (but are not limited to):



Surveys with

Public &

Software

Engineers





Creative workshops using Visual & Forum Theatre methods Semi- Ethr structured of re interviews s te



Ethnography of real-world sociotechnical practices Creative Dissemination as Education and Public Engagement

# <sup>3</sup> WORK IN PROGRESS:

### Conceptual Work

- We've coined "Infrastructural Injustice" for RSE, inspired by Susan Leigh Star & Iris Marion Young's work.
- Infrastructural Injustice arises from diverse actors pursuing their specific interests often within accepted norms (Young, 2011, p. 54).

# Empirical Work to assess the validity of Infrastructural Justice as a perspective

- Survey research with public & software engineers
- Semi-structured interviews with software engineers
- Forum & Image Theatre as a form of Education & Public Engagement

## **4 TAKE-AWAYS:**

- Feeling infrastructurally powerless can impact public actions to address ethical concerns
- Finding infrastructural means to support ethical action is important
- Making the visible the invisible concerns that people have, and how to address them can be achieved using Forum Theatre





## Applications of Infrastructural Justice Work

- Creative workshops with public & software engineers
- Ethnographic study of RSE practices in software industry and research.
- Development of a tool-kit to support RSE
- Design Challenge Workshops
- Forum Theatre for public engagement & requirements engineering

- Figure 1 &2 : Graphic harvest of Form Theatre by MTU's Creativity & Change, & Forum Theatre exploring Algorithmic Justice
- Freelance security developers practices around security are impacted by freelance developer platforms, indicating the importance of infrastructural practices for cybersecurity

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