

# Responsibility Research for Trustworthy Autonomous Systems

Vahid Yazdanpanah  
Enrico Gerding  
Sebastian Stein  
Mehdi Dastani  
Catholijn Jonker  
Timothy Norman

To develop and effectively deploy **Trustworthy Autonomous Systems (TAS)**, we face various social, technological, legal, and ethical challenges in which different notions of **responsibility** can play a key role.

## Challenges

- Accountability Reasoning for TAS Functionality.
- Responsibility Reasoning for TAS Resilience.
- Responsibility Attribution Tools for TAS.
- Liability Ascription Methods for TAS.

## Research Themes

- Meta Responsibility Reasoning.
- Norm-Balancing Responsibility Reasoning.
- Hybrid Responsibility Learning and Reasoning.

## Discussion Points

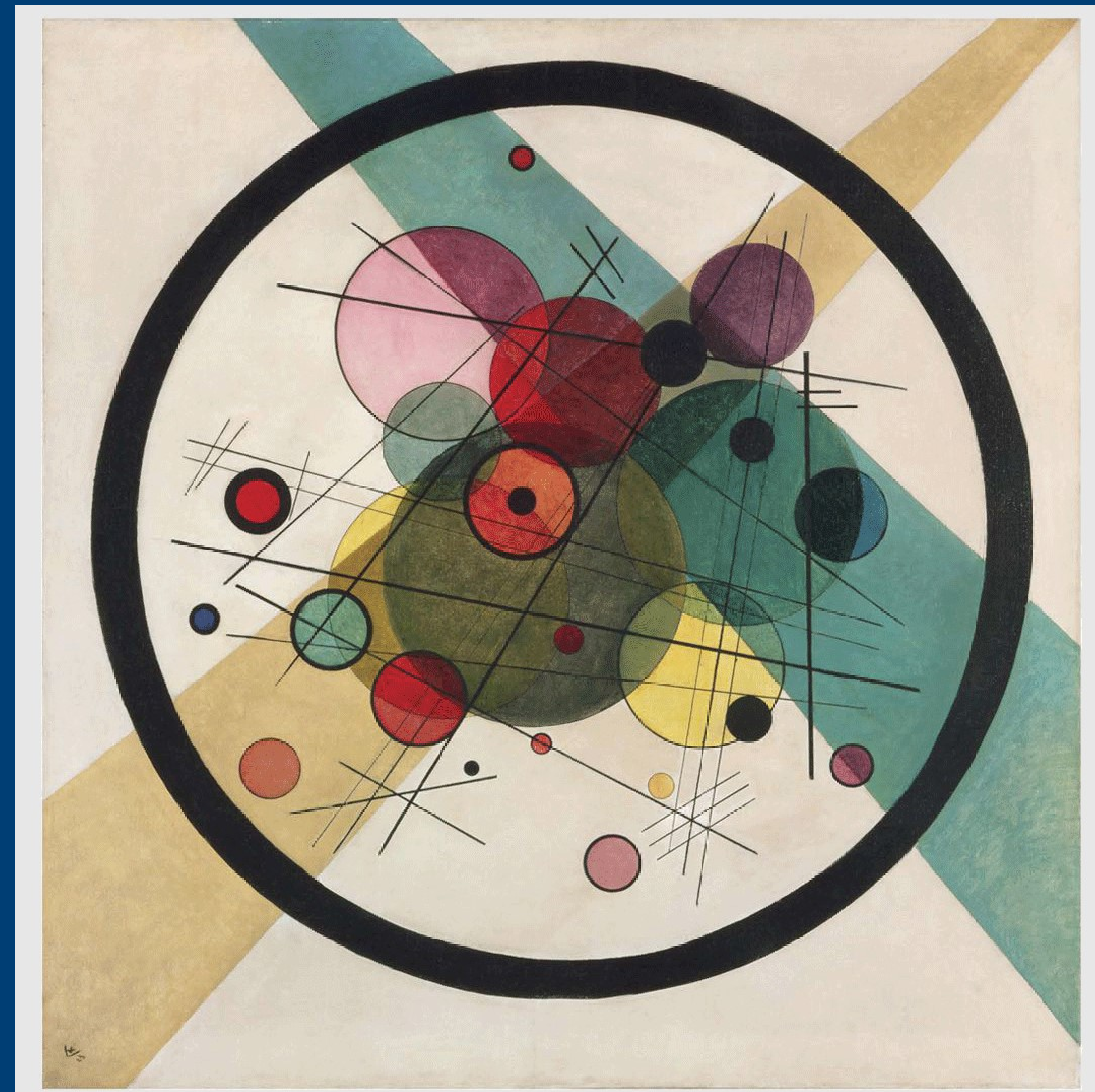
- Other **general classes** of responsibility-related challenges (e.g., linking type and actual responsibility)?
- What are more **specific and practice-oriented** applications?
- How to reason about responsibility under **flexible autonomy**?

UNIVERSITY OF  
**Southampton**



Utrecht University

**TU Delft** Delft  
University of  
Technology



Wassily Kandinsky – *Circles in a Circle*, 1923

# With more autonomy comes more and different forms of responsibility.



Take a picture to  
download the full paper