

# The Paradigm Conflict and Convergence Between Artificial Intelligence and Evidence Law: A Study Through EU Regulation and Global Case Law

Xinyi Peng, Yueshan Hua  
New South Wales University; Sichuan University

## Research Question



How does AI reshape judicial fact-finding?

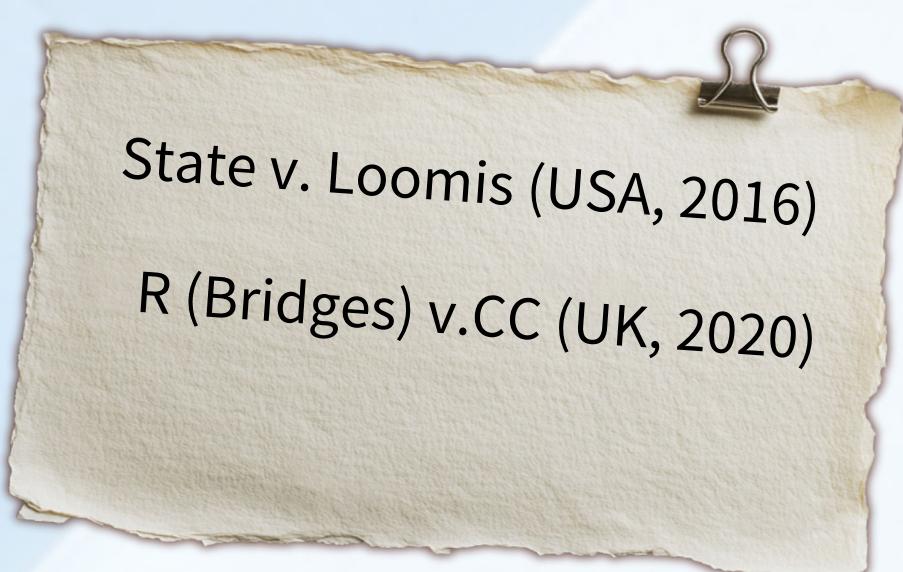
How do algorithmic opacity, data bias, and generative AI challenge traditional evidence law principles?

## Analytical Framework

Legislation



Comparative case law



## Dual Paradigm: AI as Enabler vs. Disruptor

Enabler

Disruptor

Chains of custody → chains of provenance

Algorithmic black box erodes right to challenge evidence

Human review → computational insight

Data bias undermines fair trial

Individual discretion → data-Informed Calibration

Generative AI collapses authenticity

## Key Judicial-regulatory insight

Case/Act

Core issue

Evidence law reform implication

State v Loomis (US, 2016)

Algorithmic opacity; impossible cross-examination

Explainability as a precondition for admissibility

R (Bridges) v CC (UK, 2020)

Unassessed gender/racial bias in predictive AI

Mandatory pre-deployment bias impact assessment

EU AI ACT (2024)

Regulatory gap for high-risk judicial AI system

Provides system blueprint: risk tiers, transparency, audits

## The Way Forward: Responsive Regulation Model

### Pillar 1: risk-based admissibility rules

- ① High risk AI evidence → rebuttable presumption of inadmissibility
- ② Low risk AI evidence → mandatory provence disclosure

### Pillar 2: dynamic evidentiary disclosure

Qualified right for defense to conduct "red-team" testing of prosecution's AI System under court supervision

### Pillar 3: right to algorithmic due process

- ① Right to be notified of AI use in proceedings
- ② Right to an intelligible, case-specific explanation
- ③ Right to human review of AI-assisted decisions

## Conclusion

Responsive regulation + risk-based admissibility + dynamic disclosure + algorithmic due process = safeguard of evidence law in digital era

## Key words

AI | Evidence Law | EU AI Act | Algorithmic Justice | Responsive Regulation