

Law in the Age of Algorithms: Interdisciplinary Investigations

25 July – 19 August 2022

CATEGORY Law & Economics

COURSE STRUCTURE

You will receive a total of 45 hours of academic lessons (one lesson equals 45 minutes; 15 hours per week). Lessons will comprise lectures, group work, discussion sessions, and excursions.

WEEKLY SCHEDULE (Track C)

- Tuesday: 1.30 pm – 3 pm & 3.30 pm – 5 pm
- Wednesday: 1.30 pm – 3 pm & 3.30 pm – 5 pm
- Friday: 9 am – 10.30 am & 11.00 am – 11.45 am

COURSE LANGUAGE

This course is taught in English, including the readings. For the understanding of the texts and the discussions in class, language-level B2 (Common European Framework of Reference for Languages) is required.

TARGET GROUP

Undergraduate students of with an interest in the subject of the course.

CREDITS = 5 ECTS

All courses are accredited according to the European Credit Transfer System (ECTS).

CULTURAL ACTIVITIES

Learning extends beyond your course! As a participant in HUWISU, you are invited to join our cultural and social programs. We offer a fine selection of interesting extra-curricular activities that aim to give all participants an unforgettable stay in Berlin. Through excursions, social gatherings, and sport activities, we are providing you with the opportunity to get to know the city, the university, and your classmates and to meet students from all parts of the world. The costs for these offers are included in the program fee.

Below, you find examples of previously offered cultural activities. You will be informed about the respective cultural program after your enrolment via email as well as during the course period.



POLITICAL AND HISTORICAL GUIDED TOURS

- Federal Chancellery (Bundeskanzleramt)
- German Parliament (Bundestag)
- House of Representatives (Abgeordnetenhaus)
- Topography of Terror exhibition
- Political Archive of the Federal Foreign Office

CULTURAL GUIDED TOURS

- Kreuzberg Tour
- Museum Island (Museumsinsel)
- Berlin Cathedral (Berliner Dom)
- Daytrip to Potsdam
- Exhibitions

SOCIAL GATHERINGS

- Welcome Get-Together
- Beach Volleyball
- Farewell Part

EXPECTATIONS & POLICIES

Preparation for lively discussions in the classroom: be on time, have at least the required readings completed, and points in mind for discussion or clarification.

Assignments: complete all assignments according to the specified requirements on the schedule including handing them over to the lecturer.

Commitment in class: pay particular attention to the lecturer and respect differences of opinions (classmates', lecturers).

Academic guidelines: Comply with academic integrity policies (such as no plagiarism or cheating, nothing unethical) especially the academic honor code and the student code of conduct.

Attendance policy: No unexcused absences are permitted. Students must contact their class teachers to catch up on missed work – to excuse absence please contact the HUWISU office.

COURSE DESCRIPTION

Algorithmic technologies mediate ever larger parts of our social relations. Whether it is online platforms seeking to combat hate speech, employers searching for job candidates or public officials trying to optimize efficient resource allocation: human work and human decision-making, increasingly, are supported, reshaped or even entirely replaced by algorithmic decision-making systems.

The course "Law in the Age of Algorithms: Interdisciplinary Investigations" will introduce students with backgrounds in law, the social sciences or informatics to different academic perspectives on the novel political and regulatory issues which these technological transformations entail. The course will proceed in three steps:

Foundations: The logics of algorithmic computation

In a first step, the course will introduce students to the methods and modes of operation of current algorithmic technologies. What is an algorithm and how do current computational methods (specifically different forms of Machine Learning) differ from more conventional programming? How do algorithms mediate the world and how do these representations differ from human meaning-making? Can algorithms really „outperform“ humans and what cognitive limitations do they usually incur? How are processes of algorithmic design organized and how do specific workflows benefit the resulting product?

Students will investigate these questions through introductory literature from the Computer Sciences, insights into the work of programmers and hands-on experiments with creating their own coded solutions.

Context: How algorithms shift political conflicts

In the course's second section, students will learn about the ways in which algorithmic technologies change political dynamics. How do algorithmic technologies reframe political conflicts? Which actors benefit from their employment? What are people calling for when they demand "explainable", „responsible“, "accountable" or "fair AI"? What strategies exist to further democratic participation in the development and implementation of algorithmic systems? And in which ways can algorithms be described as political themselves?

Students will be introduced to these topics through literature from the political sciences and STS, explorative research methods (e.g. twitter case studies) and exchange with policy organisations.

Focus: Algorithmic regulation and the role of law

In the course's third and final section, students will get a deeper look at specific regulatory issues and the different ways in which law can be used to address societal issues raised by algorithmic automation. What areas of law affect the design and use of algorithms and what are their potentials and limitations? What broader regulatory strategies exist to counter the dangers and harms provoked by algorithmic systems? Can legal decisions be automated and are such developments desirable from a legal and political point of view?

Next to an introduction into the most important current legislative proposal on AI regulation and the EU's Digital Service Act, students will be able to choose whether they want to focus on particular regulatory issues (e.g. algorithmic content moderation on online platforms, use of algorithms in social service resource allocation, liability of algorithms) or on more structural areas of concern (e.g. algorithmic discrimination, explainable AI, fair AI). Reading and response sessions will be combined with assignments to engage in proactive legal interventions for instance through contributing to ongoing EU public consultation processes or filing a complaint for a domestic Data Protection Authority.

Throughout the course's timeline, students will have several possibilities to exchange with experts from the different academic fields as well as with IT, political and legal practitioners. In an effort to harness the potential of diverse perspectives, the course is committed to fostering an inclusive and creative intellectual environment open for all.

COURSE OBJECTIVES AND LEARNING OUTCOMES

The aim of the course is to familiarize students with the technical basics of algorithmic systems and their impact on the legal, political and social sphere. The course encourages an interdisciplinary approach to a multi-dimensional problem and thus invites students to think outside beyond their usual theoretical and methodological terrain. We encourage a critical view on sociotechnical systems and students to actively question the ways in which AI technologies are framed and deployed in their home countries and environments.

By the end of the course, students should have gained an overview of basic functionalities of algorithmic technologies and be familiar with terminologies describing AI systems. Furthermore, they should be able to critically assess the potentials and risks of algorithmic technologies from a social and legal science perspective, be capable to identify specific challenges which algorithmic systems pose to the existing legal framework and know literature from the field of critical AI studies.

READINGS

See 'course schedule' below. Readings will be provided by the course tutors in advance.

ASSIGNMENT INFO

Assignments will cover a wide range of formats: smaller group presentations and creative pitches for solutions to real-world problems will accompany the more research-oriented coursework. After the introduction week, in which all participants will read mostly the same texts, each student will be asked to pick a focus topic according to their own knowledge and interest and prepare a literature input as well as questions for a group discussion. Each focus session should be accompanied by a handout of max. two pages in written text or bullet points.

To receive 5 ECTS, students need to attend a minimum 80 % of the course, participate actively in the sessions and prepare their focus session with a presentation as well as discussion questions and provide a handout for their fellow students.

YOUR INSTRUCTORS

Mr. Paul Friedl, LL.M. (EUI)

Paul Friedl, LL.M. (EUI) is a Ph.D. student and research assistant at the DynamInt graduate school at Humboldt Law School Berlin. His research interests lie mainly in legal theory, information law and law and technology more broadly. He has studied law in Munich, Berlin, Rome and Florence.

Ms. Rita Jordan, M.A.

Rita Jordan, M.A. currently works as advisor at the Technologiestiftung Berlin. Previously, she was Ph.D. researcher at ScaDS.AI Dresden/Leipzig and the Chair for Legal and Constitutional Theory with Interdisciplinary Relations at TU Dresden. Her work focuses on the intersections of law, political theory and technology. She has studied European studies, law and political science in Amsterdam, Berlin, London, Dresden and Vienna.

Guest lecturers tba.

COURSE SCHEDULE

The course will be structured as follows: The first part (Foundations – Logics of Algorithmic computation) will give students an introduction and overview to the technical basics of Machine Learning. In the first week (Sessions 1–7), we will work together on the same texts and end with a round of smaller group presentations. From the second week (Session 8 ff.) on, we will look at the political and social contexts in which automated systems are deployed, before we proceed into more specific legal questions and regulatory answers. In this second part of the course, students will pick a topic according to their own interest and prepare the respective session by reading the recommended optional literature and present their insights to the class. This encompasses an introduction to the topic at hand, an overview of the optional literature and a lead discussion on the input (i. e. prepared questions for the group).

To prepare the presentations and tailor them according to the interests of the group, the tutors are available for consultation and assistance in advance.

Session 1: Introduction

In our first session we will get to know each other, talk about our preconceptions concerning algorithmic technologies and their societal impact, and discuss our expectations and wishes for the coming weeks.

Readings and assignments:

Bring a local newspaper article dealing with automated technologies

Browse the Artificial Intelligence Incident Database, <https://incidentdatabase.ai/>

Session 2: First forays into the field of Artificial Intelligence

The second session will provide an overview on AI research to make sure that our discussions rest on a shared understanding of the topic at hand. We will discuss the introductory chapter of a widely used textbook on AI.

Peter Norvig & Stuart J. Russel (1995/2020). *Artificial Intelligence: A modern approach*. 4th edition: 1–35.

To prepare the session, read the text thoroughly and write down any questions that come to mind. Also reflect on which areas are new to you and which seem familiar. Try to think about which parts of the text might have been revised since the first edition was published in 1995.

Session 3: Machine Learning 1 - Origins, assumptions and objectives

In our first session on Machine Learning we will investigate why Machine Learning approaches came to dominate the field of Artificial Intelligence, what assumptions these technologies incorporate and what objectives they pursue.

Alon Halevy, Peter Norvig and Fernando Pereira, 'The unreasonable effectiveness of data' (2009) *IEEE Intelligent Systems* 24(2): 8.

Pedro Domingos, 'A few Useful Things to Know about Machine Learning' (2012) *Communications of the ACM* 55(10): 78.

Session 4: Machine Learning 2 - An Overview of the Machine Learning Pipeline

In our second session on Machine Learning we will take a deep dive into the Machine Learning pipeline to understand how developers go about creating Machine Learning systems. Students will become familiar with the different stages of the Machine Learning development process and gain a practical understanding of what challenges Machine Learning software engineers are faced with.

Paul Friedl, 'Dis/similarities in the Design and Development of Legal and Algorithmic Normative Systems: the Case of *Perspective API*' (introduction and chapters 1 and 2).

Session 5: Machine Learning 3 - Problematizations

Proponents of Machine Learning often advertise these technologies as rational, neutral and value-free. The label "Artificial Intelligence" itself connotes an idea of pure mathematics or pure intelligence. In this final session on Machine Learning we will further problematize such framings, by shedding light on the (value) choices Machine Learning necessarily implicated in the construction of any automated systems. To this end, the students will be split up in smaller groups, each tasked to map common value choices focus implicated in one of the phases of Machine Learning development.

Split up in groups and pick one of the steps of the Machine Learning pipeline (problem conception – data collection/preparation – model building – deployment). Research further by starting with the literature below and find out more on this particular step of the ML process. Prepare a short (max. 10 minutes) presentation of your findings for the next session.

Lora Aroyo and Chris Welty, 'Truth Is a Lie: Crowd Truth and the Seven Myths of Human Annotation' (2015) *AI Magazine* 36(1): 15.

Lucas Dixon and others, 'Measuring and Mitigating Unintended Bias in Text Classification' (2018) *AIES '18: Proceedings of the 2018 AAI/ACM Conference on AI, Ethics, and Society*: 67.

Magdalena Biesialska, Katarzyna Biesialska and Marta R Costa-Jussà, 'Continual Lifelong Learning in Natural Language Processing: A Survey' (2020) *Proceedings of the 28th International Conference on Computational Linguistics*: 6532.

Alaa Tharwat, 'Classification Assessment Methods' (2021) *Applied Computing and Informatics* 17(1): 168.

Mitchell L. Gordon and others, 'The Disagreement Deconvolution: Bringing Machine Learning Performance Metrics In Line With Reality' (2021) *CHI '21: Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*.

Mitchell L. Gordon and others, 'Jury Learning: Integrating Dissenting Voices into Machine Learning Models' (2022) *CHI Conference on Human Factors in Computing Systems*.

Dieuwertje Luitse and Wiebke Denkena, 'The Great Transformer: Examining the Role of Large Language Models in the Political Economy of AI' (2021) *Big Data & Society*, doi:10.1177/205395172111047734

Session 6: Machine Learning 4 – Reports and exchange

In session 6 students will report the findings of their research conducted in session 5 to the group and discuss them.

Session 7: Labor 1

In our first session on the social and political implications of AI, we will take a closer look at the application of algorithmic technologies in the workplace. We will get familiar with the frameworks of 'technopolitics' and 'cybernetic proletarianization'.

Simon Schaupp, 'Technopolitics from Below: A Framework for the Analysis of Digital Politics of Production' (2021) *NanoEthics* (15): 71–86.

Optional:

Simon Schaupp, 'Cybernetic proletarianization: Spirals of devaluation and conflict in digitalized production' (2021) *Capital & Class* (online first) doi: 10.1177/03098168211017614.

Alessandro Delfanti, 'Machinic dispossession and augmented despotism: Digital work in an Amazon warehouse' (2021) *New Media & Society* 23(1): 39.

Session 8: Labor 2

In our second session on labor we will investigate how the introduction of algorithmic technologies in the workplace interferes with current legal protections and which strategies regulators are adopting to rein in (or pass over) potential harms to workers.

Vincenzo Pietrogianni, 'Deliveroo and Riders' Strikes: Discriminations in the Age of Algorithms' (2021) *International Labor Rights Case Law* 7(3): 317

Natasha Lomas, 'UK Uber drivers are taking the algorithm to court' (*Techcrunch*, 20 July 2020)

Natasha Lomas, 'Italy's DPA fines Glovo-owned Foodinho \$3M, orders changes to algorithmic management of riders' (*Techcrunch*, 6 July 2021)

Optional:

Adrian Todolí-Signes, 'Spanish Riders Law and the Right to Be Informed about the Algorithm' (2021) *European Labour Law Journal* 12(3): 399

Jeremias Adams-Prassl, 'Regulating Algorithms at Work: Lessons for a "European Approach to Artificial Intelligence"' (2022) *European Labour Law Journal* 13(1): 30

Session 9: Gender 1

In this session, we will engage with a feminist, intersectional critique of algorithmic technologies. How does gender play a role in data science and automated technologies and how does it manifest in technologies? Page Break

Lily Hu and Issa Kohler-Hausmann. 'What's sex got to do with machine learning?' (2020) *FAT* '20: Proceedings of the 2020 Conference on Fairness, Accountability, and Transparency. January 2020*, doi.org/10.1145/3351095.3375674.

Sarah Myers West, 'Redistribution and Rekognition: A Feminist Critique of Algorithmic Fairness' (2021), *Catalyst: Feminism, Theory, Technoscience*, 6(2): 1-24.

Lauren F. Klein and Catherine D'Ignazio, *Data Feminism* (2020): 1-47.

Session 10: Gender 2

This session will focus on specific strategies to overcome the gender bias identified in the first session. We will discuss a range of approaches and evaluate their use.

Caitlin Kraft-Buchanan and Renée Arian, 'Affirmative Action for Algorithms. Artificial Intelligence, Automated Decision-Making & Gender' (2019): *A+ Alliance Position Paper*.

Sasha Costanza-Chock, 'Design Justice, A.I., and Escape from the Matrix of Domination' (2018), *Journal of Design and Science*. <https://doi.org/10.21428/96c8d426>.

Session 11: Public Administration 1

After students have researched examples of how algorithmic technologies are introduced into public administration in their own home country or region, the course will question how algorithmic automation changes public administration processes and what kinds of risks it introduces for citizens.

Research examples of how algorithmic technologies have been/are being introduced into the public administration sector in your home country or home region.

Danielle Keats Citron, 'Technological due process' (2007) *Wash. UL Rev.* (85): 1249.

Optional:

Aziz Z Huq, 'Constitutional Rights in the Machine-Learning State' (2019) *Cornell L. Rev.* (105): 1875 (1892-1917; 1938-1952)

Session 12: Public Administration 2

Tba; students will choose a topic, possibly a case study on the impacts of AI on migration, social benefits, etc.

Session 13: Privacy and Power 1

Privacy has long been held as the primary normative value protecting individuals against the power of institutions in possession of their personal information. These days, however, academics are increasingly doubting whether privacy still holds explanatory or normative relevance. In this first session on privacy and power, we will look at different concepts of privacy and debate which potential different privacy concepts hold for analyzing and critiquing the specific issues raised by algorithmic automation and AI technologies.

Philip E. Agre, 'Surveillance and capture: Two models of privacy' (1994) *The Information Society* 10(2): 101

Optional:

Julie E. Cohen, "What Privacy is For" (2013) *Harvard Law Review* 126(7): 1904.

Hildebrandt, Mireille. "Privacy as Protection of the Incomputable Self: From Agnostic to Agonistic Machine Learning", (2019) *Theoretical Inquiries in Law*, 20(1): 83-121.

Session 14: Privacy and Power 2

In our second session on Privacy and Power, we will engage with the concept of "predictive privacy" to investigate a conceptual proposal from the field of applied ethics to overcome specific problems arising from the use of predictive algorithms.

Rainer Muehlhoff, Rainer. 'Predictive privacy: towards an applied ethics of data analytics' (2021) *Ethics and Information Technology* (23): 675-690.

Session 15: Liability for artificial intelligence

Liability issues are amidst the most debated ones when it comes to regulating new technologies, and particularly artificial intelligence (AI). People can be harmed by unintended and unforeseen AI outcomes, regardless of the presence of any flaws in the original design of the algorithm. The lecture will discuss the applicability of existing liability regimes to AI users: strict liability, vicarious liability, fault liability. Moreover, it will analyse some of the first legislative initiatives on the matter, such as the amendments to the German Road Traffic Act (Straßenverkehrsgesetz), and the regulatory proposal put forward by the European Parliament in its Resolution on a civil liability regime for AI of 20th October 2020.

Next to discussing the literature, the students will engage in activities such as drafting a position paper for the EU public consultation on liability and discuss a use case.

Christiane Wendehorst, 'Strict Liability for AI and other Emerging Technologies' (2020) *Journal of European Tort Law* (11): 150.

Public Consultation on Civil Liability. Adapting Liability Rules to the Digital Age and Artificial Intelligence. Response of the European Law Institute (January 2022), available at https://europeanlawinstitute.eu/fileadmin/user_upload/p_eli/Publications/ELI_Response_to_Public_Consultation_on_Civil_Liability.pdf (only pp. 21-27).

Optional:

Woodrow Barfield, 'Liability for autonomous and artificially intelligent robots' (2018) *Paladyn, Journal of Behavioral Robotics* (9): 193–203.

Session 16: Conclusion of contracts by software agents

As software becomes more sophisticated, in some cases, it may act autonomously in forming contracts, requiring little to no human input. Agreements may no longer be generated through machines but by them. Hence, the contracting parties may well be unaware of the specific terms of each contract formed by the software they are using. They may even be unaware of the very same existence of the agreement. This means that no intention to be bound can be inferred and thus, theoretically, no binding contract exists between the human parties (the so-called 'contracting problem'). After all, contract law was developed with human parties in mind. Therefore, applying concepts such as 'meeting of the minds,' 'due diligence,' 'good faith' to AI systems may not be straightforward. The lecture will explore the possible solutions to the contracting problem and discuss the validity and enforceability of contracts concluded by software agents.

Tina Balke and Torsten Eymann, 'The Conclusion of Contracts by Software Agents in the Eyes of the Law', in Padgham, Parkes, Müller and Parsons (Eds), *Proc. of 7th Int. Conf. on Autonomous Agents and Multiagent Systems (AAMAS 2008)*: 771-778.

Emad Abdel Rahim Dahiyat, 'Law and software agents: Are they "Agents" by the way?' (2021) *29 Artificial Intelligence and Law*: 59–86.

Optional:

Vincent Ooi and Kian Peng Soh, 'Rethinking Mistake in the Age of Algorithms: *Quoine Pte Ltd v B2C2 Ltd*' (2020) *31 King's Law Journal*: 367–372.

Session 17: Online discourse 1

As online platforms have gained tremendous power as central fora of public discussion, concern is growing over their influence on societal discourse. In moderating on-site discussions, many large platforms rely on algorithmic technologies to identify and remove (allegedly) harmful, toxic or illegal content. In this first session on online discourse and online speech regulation, we will investigate how such technologies are utilized and what role they play in the larger moderation infrastructure.

Check out Facebook's latest Transparency Report. What information does it provide, what information does it not provide? What more information should it provide?

Niva Elkin-Koren, 'Contesting Algorithms: Restoring the Public Interest in Content Filtering by Artificial Intelligence' (July 2020) *Big Data & Society*, <https://doi.org/10.1177/2053951720932296>: 1-7.

Kate Klonick, 'The new governors: The people, rules, and processes governing online speech' (2017), *Harvard Law Review* (131): 1598, 1630-1658.

Optional:

evelyn douek, 'Content Moderation as Administration' (2022, forthcoming) *Harvard Law Review* (136): 1-39

Tarleton Gillespie, 'Content Moderation, AI, and the Question of Scale' (2020) *Big Data & Society*, <https://doi.org/10.1177/2053951720943234>.

Jack M. Balkin, 'Old-School/New-School Speech Regulation' (2014) *Harvard Law Review* 127(8): 2296.

Session 18: Online discourse 2

In our second session on online discourse, we will look at academic and state proposals on how to regulate (or not regulate) online content moderation and take a close look at the EU's proposed Digital Services Act.

European Commission, Proposal for a Regulation of the European Parliament and of the Council on a Single Market For Digital Services (Digital Services Act) and amending Directive 2000/31/EC.

One of the interventions provided here <https://edri.org/our-work/digital-service-act-document-pool/#members> or here <https://edri.org/our-work/digital-service-act-document-pool/#analysis>.

Jack M. Balkin, 'How to Regulate (and Not Regulate) Social Media' (2020), <https://knightcolumbia.org/content/how-to-regulate-and-not-regulate-social-media>.

Session 19: Regulatory strategies

In our first session on regulatory strategies, we will engage with approaches to regulate the 'black box' of algorithmic technologies. We will take a critical look at proposals for "explainable AI", "accountable AI", "democratic AI" and Human-in-the-Loop (HITL)-involvement.

Faßbender, Judith. 2022. "Why explainable AI needs such a thing as society". 17 February 2022. DOI: 10.5281/zenodo.6076848.

Ben Green, 'The Flaws of Policies Requiring Human Oversight of Government Algorithms' (2021) <https://arxiv.org/ftp/arxiv/papers/2109/2109.05067.pdf>.

Video: Frank Pasquale on "The promise (and threat) of algorithmic accountability", <https://www.lse.ac.uk/lse-player?id=3350>.

Johannes Himmelreich, 'Against "Democratizing AI"' (2022) *AI & Society* doi.org/10.1007/s00146-021-01357-z.

Session 20: Inverting regulation: design justice

In our second session on regulatory strategies, we will engage with a critical view on the limits and possibilities of algorithmic systems. Inspired by design theory and practice, we will discuss and reflect the approaches discussed in Session 19 and make ourselves familiar with emancipatory, user-centered and community-driven approaches to technology development. What makes a "good AI system" in your eyes? How might that perception differ to other individual's lived experiences?

Sasha Costanza-Chock, *Design Justice* (2020) (recommended chapters: "Design Practices: "Nothing about Us without Us"" and "Directions for Future Work: From #TechWontBuildIt to #DesignJustice")

Session 21: AI Act 1

In our first session on the EU's AI Act we will gain an overview of its general regulatory approach and learn about some of its advantages and disadvantages as highlighted by academics.

European Commission Proposal for a regulation of the European Parliament and the Council laying down harmonised rules on Artificial Intelligence (Artificial Intelligence Act) and amending certain Union legislative acts. EUR-Lex – 52021PC0206.

Michael Veale and Frederik Zuiderveen Borgesius, 'Demystifying the Draft EU Artificial Intelligence Act—Analysing the good, the bad, and the unclear elements of the proposed approach' (2021) *Computer Law Review International* 22(4): 97.

Optional:

Nathalie A. Smuha and others, 'How the EU Can Achieve Legally Trustworthy AI: A Response to the European Commission's Proposal for an Artificial Intelligence Act' (2021) https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3899991.

Luciano Floridi, 'The European Legislation on AI: A Brief Analysis of its Philosophical Approach' (2021), doi.org/10.2139/ssrn.3873273.

Session 22: AI Act 2 and other regulatory projects

In our second session on the EU AI Act we will investigate some of its regulatory elements in greater detail and compare the European approach to other global initiatives to regulate AI systems more broadly.

Read one of the following articles and elaborate what its theses mean for the AI Act:

Biometric remote identification systems, Nina Amelung and others, 'A Brief History of the Evolution of Biometrics and Biometric Database Systems Crossing Borders in EU Law Enforcement' in *Modes of Bio-Bordering* (Springer 2020).

Risk-based regulatory approaches, e.g. Herny Rothstein, 'The risks of risk-based regulation: Insights from the environmental policy domain' (2006) *Environment international* 32(8): 1056.

Regulated self-regulation, e.g. Julia Black, 'Decentring regulation: Understanding the role of regulation and self-regulation in a 'post-regulatory' world' (2001) *Current Legal Problems* 54(1): 103.

Standardization and standardization bodies in EU law, e.g. Carlo Tovo, 'Judicial review of harmonized standards: Changing the paradigms of legality and legitimacy of private rulemaking under EU law' (2018) *Common Market Law Review* 55(4): 1187.

Regulatory Sandboxes, e.g. Jon Truby and others, 'A Sandbox Approach to Regulating High-Risk Artificial Intelligence Applications' (2021) *European Journal of Risk Regulation*.

Other Regulatory Projects: Search for other regulatory projects and map differences and similarities to the EU's AI Act, for inspiration see e.g. <https://www.brookings.edu/blog/techtank/2022/02/01/the-eu-and-u-s-are-starting-to-align-on-ai-regulation>; <https://oecd.ai/en/dashboards>; or Huw Roberts and others, 'The Chinese approach to artificial intelligence: an analysis of policy, ethics, and regulation' (2021) *AI & Society* 36: 59.

Session 23 & 24: Closure

In our last two sessions, we will reflect on the past weeks and collect our learnings. How has the course changed our understanding of societal and legal questions concerning algorithmic technologies? Which vision do we have for the future of AI in society? How can legal instruments help us? How do you plan to engage with the topic (academically, creatively, ...) in the future?

The course and its syllabus are subject to change. Last update: March 2022