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Algorithmic **Fairness** for Asylum Seekers and Refugees

Curriculum

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Editors

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About

The Algorithmic Fairness for Asylum-Seekers and Refugees (AFAR) project explores the workings of automated decision-making (ADM) and other algorithmic and digitised practices in migration-asylum governance (MAG) in Europe. We referred to these technologies collectively as ‘newtech’ for convenience, mindful of the diversity of technologies and practices. Some of the tools may meet the legal definition of artificial intelligence (AI), but many do not. The EU’s definition in its AI Act was informed by that of the OECD, and refers to “a machine-based system designed to operate with varying levels of autonomy, that may exhibit adaptiveness after deployment and that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments.” (Article 3(1) EU AI Act).

AFAR is a collaborative research project based at the Centre for Fundamental Rights at the Hertie School, Berlin. The AFAR project emerged out of conversations between Cathryn Costello and Derya Ozkul, then a postdoctoral researcher on the RefMig project. In her research on refugee recognition and reception practices, Derya was encountering increasing use of digital and algorithmic systems, in particular forms of automated (mostly part-automated) decision-making in the refugee regime – which we referred to as ‘newtech’ for short. They then developed the proposal for a collaborative project, including a team from across Europe - Professor Thomas Gammeltoft-Hansen, University of Copenhagen, together with assistant professor William Hamilton Byrne and doctoral researcher Asta Sofie Stage Jarlner; Professor Iris Goldner-Lang, University of Zagreb, together with PhDs Matija Kontak and Ana Kršinić; and Professor Martin Ruhs, European University Institute, together with research fellow Lenka Dražanová. The project launched in 2021, funded by the VW Foundation through the “Challenges for Europe” program. At the Hertie School, the first postdoctoral researcher to join the project, Francesca Palmiotto, researched and published on AI and fairness in asylum, the concept of automation decision-making, and (with Derya Ozkul) the hurdles to strategic litigation. She also took the lead in establishing the TechLitigation Database. At the end of her term, she went on to an assistant professorship at IE Law School in Madrid. Upon completion of his postdoctoral research at EUI, Mirko Đuković joined the AFAR team, who has been working on technology regulation and non-discrimination.

The AFAR team co-created this AFAR Curriculum, a resource aimed at assisting researchers working in this field. It reflects materials curated informally for an internal AFAR Reading Group in the early stage of the project, and revised in 2025 by Cathryn Costello and Mia Bridle, PhD candidate at the Kaldor Centre for International Refugee Law, University of New South Wales. Given the technological and legal pace of change, we have updated some of the materials and included the AFAR team publications on the themes concerned. However, even at the time of finalising the document, legal changes had been announced, with the EU announcing a potential dilution of its AI Act.

^[1] For more on the evolution of the project, see Cathryn Costello and Mirko Đuković, 'Introduction to the Symposium on Algorithmic Fairness for Asylum Seekers and Refugees' (VerfBlog, 27 November 2025) <<https://verfassungsblog.de/asylum-ai-algorithm-symposium/>>

Introduction

Newtech in the field of migration-asylum governance presents pressing challenges. In Part A, the Curriculum first sets out readings that provide insights into the practical works of the governance of migration and asylum in Europe. When assessing a potential role for newtech, it is important not to idealise current systems and human decision-making. Part B then introduces conceptions and perceptions of fairness, the central normative concern of the AFAR project. Part C then provides some of the main applicable legal frameworks. Part D then turns to the main issues around the use of newtech in public administration generally, and in migration and asylum in particular. ^[2]

The AFAR project was interdisciplinary, and the aim was to explore newtech and fairness, not only through law, but by applying insights from migration studies, data science and sociology. The curriculum reflects these diverse disciplinary approaches. It is in no way comprehensive. It reflects our collective selection of useful works, and we hope it could provide a useful starting point for anyone starting new work in this field.



^[2] All links provided to the materials in this curriculum worked as of 1 December 2025.

Part A: Understanding the governance of migration and asylum in Europe

The project aimed to understand decision-making in migration and asylum, focusing on visas and asylum decision-making. These are heavily regulated by EU law, but also where domestic law and institutions continue to have a role. Below are some of the empirically well-informed works that provide an insight into the workings of these fields. We have divided up the material into four main fields: (1) asylum decision-making; (2) asylum appeals; (3) allocation of responsibility for asylum claims; and (4) visa policies and decision-making.

(1) Asylum decision-making, including evidential assessment

- Cathryn Costello, 'Who is Recognised as a Refugee? Insights from Diverse Disciplines' (2023) 7(1) *Zeitschrift für Flucht- und Flüchtlingsforschung* 120 <<https://www.nomos-elibrary.de/10.5771/2509-9485-2023-1-120/who-is-recognised-as-a-refugee-insights-from-diverse-disciplines-jahrgang-7-2023>>
- Álvaro Botero and Jens Vedsted-Hansen, 'Asylum Procedure' in Cathryn Costello, Michelle Foster and Jane McAdam (eds), *The Oxford Handbook of International Refugee Law* (OUP 2021)
- Gregor Noll, 'Credibility, Reliability, and Evidential Assessment' in Cathryn Costello, Michelle Foster and Jane McAdam (eds), *The Oxford Handbook of International Refugee Law* (OUP 2021) <<https://academic.oup.com/edited-volume/41310/chapter/352057263>>
- Cathryn Costello and Emily Hancox, 'The Recast Asylum Procedures Directive 2013/32/EU: Caught between the Stereotypes of the Abusive Asylum Seeker and the Vulnerable Refugee' in Vincent Chetail, Philippe De Bruycker, and Francesco Maiani (eds), *Reforming the Common European Asylum System: The New European Refugee Law* (BRILL 2016), pre-print available at <<https://ssrn.com/abstract=2609897>>
- Bruce Burson, 'Refugee Status Determination' in Cathryn Costello, Michelle Foster and Jane McAdam (eds), *The Oxford Handbook of International Refugee Law* (OUP 2021) <<http://www.oxfordhandbooks.com/view/10.1093/law/9780198848639.001.0001/law-9780198848639-chapter-32>>
- Hilary Evans Cameron, *Refugee Law's Fact-Finding Crisis: Truth, Risk, and the Wrong Mistake* (CUP 2018) <<https://www.cambridge.org/core/books/refugee-laws-factfinding-crisis/E450109D562B3CB55521EBCE62CA70D2>>

(2) Asylum appeals

- Robert Thomas, 'Administrative Justice and Asylum Appeals: A Study of Tribunal Adjudication' (Hart 2011)
- Teresa Büchsel, 'Performing Professionalism—Emotions in Asylum Courts' (2023) 7(1) *Zeitschrift für Flucht- und Flüchtlingsforschung* 86

(3) Allocation of responsibility for asylum claims & resettlement practices

- Luisa Feline Freier, Eleni Karageorgiou and Kate Ogg, 'The Evolution of Safe Third Country Law and Practice' in Cathryn Costello, Michelle Foster and Jane McAdam (eds), *The Oxford Handbook of International Refugee Law* (OUP 2021) <<https://doi.org/10.1093/law/9780198848639.003.0061>>
- Susan Kneebone and Audrey Macklin, 'Resettlement' in Cathryn Costello, Michelle Foster and Jane McAdam (eds), *The Oxford Handbook of International Refugee Law* (OUP 2021), pre-print available at <<https://ssrn.com/abstract=3659321>>
- Minos Mouzourakis, 'We Need to Talk about Dublin: Responsibility under the Dublin System as a blockage to asylum burden-sharing in the European Union' (2014) *Refugee Studies Centre Working Paper Series No 105* <<https://www.rsc.ox.ac.uk/files/files-1/wp105-we-need-to-talk-about-dublin.pdf>>
- Florian Trauner, Philipp Lutz and Philipp Stutz, 'Towards a Fairer EU Asylum Policy: Lessons from the Dublin system for the EU's Solidarity Mechanism' (2025) *European Migration and Diversity Program Discussion Paper* <<https://d1xp398qalq39s.cloudfront.net/uploads/ckeditor/2025/11/26/dublin-dp-v3.pdf>>

(4) Visas: Policy evolution and decision-making

- Steffen Mau and others, 'The Global Mobility Divide: How Visa Policies Have Evolved over Time' (2015) 41 Journal of Ethnic and Migration Studies 1192
<<https://doi.org/10.1080/1369183X.2015.1005007>>
- Mathias Czaika, Hein de Haas and María Villares-Varela, 'The Global Evolution of Travel Visa Regimes' (2018) 44 Population and Development Review 589
<<https://doi.org/10.1111/padr.12166>>
- Frédéric Mégret, 'The Travel Visa as the Ubiquitous Legal Infrastructure of Everyday Global Mobility Arbitrariness' (2024) 25 German Law Journal 1265
<<https://doi.org/10.1017/glj.2024.72>>
- Federica Infantino, *Schengen Visa Implementation and Transnational Policymaking: Bordering Europe* (Springer International Publishing 2019)
<<http://link.springer.com/10.1007/978-3-030-10647-8>>
- Federica Infantino, 'The Making of Decisions' in Federica Infantino (ed), *Schengen Visa Implementation and Transnational Policymaking: Bordering Europe* (Springer International Publishing 2019)
<https://doi.org/10.1007/978-3-030-10647-8_7>



Part B: Conceptions and perceptions of fairness

One could fill entire libraries on fairness, a key aspect of the rule of law, especially fair procedures. Attention to fair outcomes brings a range of egalitarian political theories, notably since Rawls' Justice as Fairness. These are just a taster.

(1) Core readings on procedural fairness vs. substantive fairness (outcomes)

- Jonathan Wolff, 'Fairness, respect, and the egalitarian ethos' (1998) *Philosophy & Public Affairs* 27
- Jeremy Waldron, 'The Rule of Law and the Importance of Procedure' (2011) 50 *Nomos* 3
<<https://www.jstor.org/stable/24220105>>
- Jeremy Waldron, *Thoughtfulness and the Rule of Law* (Harvard University Press, 2023)

(2) Is 'algorithmic fairness' distinctive?

- Arvind Narayanan, *Tutorial: 21 Fairness Definitions and Their Politics* (Association for Computing Machinery's Conference on Fairness, Accountability, and Transparency, 2 March 2018) <<https://www.youtube.com/watch?v=jlXluYdnyyk>>
- Deborah Hellman, 'Algorithmic Fairness' in Edward N Zalta and Uri Nodelman (eds), *The Stanford Encyclopedia of Philosophy* (Fall 2025, Metaphysics Research Lab, Stanford University 2025)
<<https://plato.stanford.edu/archives/fall2025/entries/algorithmic-fairness/>>
- Laurens Naudts and Anton Vedder, 'Fairness and Artificial Intelligence' in Nathalie A. Smuha (ed), *The Cambridge Handbook on the Law, Ethics and Policy of Artificial Intelligence* (Cambridge University Press 2025)
<<https://doi.org/10.1017/9781009367783.006>>

(3) Distributive fairness in allocation mechanisms

There is also a literature in political theory which looks at outcomes, not for the individuals, but rather collectivities, specifically states or other places of refuge.

- David Owen, 'Refugees, Fairness and Taking up the Slack: On Justice and the International Refugee Regime' (2016) 3 Moral Philosophy and Politics 141 <<https://doi.org/10.1515/mopp-2016-0001>>
- Matt Gibney, 'Refugees and Justice between States' (2015) 14(4) European Journal of Political Theory 448 <<https://doi.org/10.1177/147488511558532>>

(4) Fairness perceptions

AFAR sought to interrogate fairness perceptions, which have relevance for the legitimacy of decision-making in the eyes of the affected individuals (as per the works of Tom Tyler and others working on 'procedural justice') and for the acceptability of migration policy.

- Tom R Tyler, 'Procedural Justice, Legitimacy, and the Effective Rule of Law' (2003) 30 Crime and Justice 283 <<https://www.jstor.org/stable/pdf/1147701.pdf>>
- Anne-Marie Jeannet, Tobias Heidland and Martin Ruhs, 'What Asylum and Refugee Policies Do Europeans Want? Evidence from a Cross-National Conjoint Experiment' (2021) 22 European Union Politics 353 <<https://doi.org/10.1177/14651165211006838>>
- Kirk Bansak, Jens Hainmueller and Dominik Hangartner, 'Europeans Support a Proportional Allocation of Asylum Seekers' (2017) 1 Nat Hum Behav 0133 <<https://doi.org/10.1038/s41562-017-0133>>
- Lenka Dražanová and Martin Ruhs, *Understanding Public Perceptions of Fairness in Asylum Decision-Making* (Hertie School, Algorithmic Fairness for Asylum Seekers & Refugees (AFAR) Policy Brief 2025) <<https://www.hertie-school.org/en/news/detail/content/understanding-public-perceptions-of-fairness-in-asylum-decision-making>>
- Joe Tomlinson and others, 'Whose procedural fairness?' (2023) 45(3) Journal of Social Welfare and Family Law 278 <<https://doi.org/10.1080/09649069.2023.2243150>>



Part C: General legal frameworks: Fair procedures, non-discrimination, privacy and EU AI Act

While Part B focuses on works in legal and political philosophy on different types of fairness, as well as empirical work on procedural justice and fairness perceptions, this section turns to how some of those principles are reflected and refracted in law, particularly EU law, and also some aspects of human rights law.

(1) Fair procedures: Hearing and reason-giving

- Madalina Moraru, 'The European Court of Justice Shaping the Right to Be Heard for Asylum Seekers, Returnees, and Visa Applicants: An Exercise in Judicial Diplomacy Special Issue' (2022) *European Journal of Legal Studies Special Issue* 21 <<https://doi.org/10.2924/EJLS.2022.002>>
- Joana Mendes, 'The Foundations of the Duty to Give Reasons and a Normative Reconstruction' in Elizabeth Fisher, Jeff King J and Alison Young (eds), *The Foundations and Future of Public Law: Essays in Honour of Paul Craig* (OUP 2020) <<https://doi.org/10.1093/oso/9780198845249.003.0015>>
- Vivek Krishnamurthy, 'A Tale of Two Privacy Laws: The GDPR and the International Right to Privacy' (2020) 114 *AJIL Unbound* 26 <<https://doi.org/10.1017/aju.2019.79>>
- Orla Lynskey, 'Deconstructing Data Protection: the "Added-Value" of a Right to Data Protection in the EU Legal Order' (2014) 63 *International and Comparative Law Quarterly* 569 <<http://eprints.lse.ac.uk/id/eprint/57713>>
- Carissa Véliz, *Privacy Is Power: Why and How You Should Take Back Control of Your Data* (Penguin Random House, 2020)
- Shoshana Zuboff, *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power* (Public Affairs, 2019)

(2) Borders & non-discrimination

- Catherine Briddick and Cathryn Costello, 'Introduction to the Symposium on Undoing Discriminatory Borders' (2021) 115 *AJIL Unbound* 328 <<https://doi.org/10.1017/aju.2021.49>>
- Maarten den Heijer, 'Visas and Non-Discrimination' (2018) 20(4) *European Journal of Migration and Law* 470 <<https://doi.org/10.1163/15718166-12340039>>
- E Tendayi Achiume, 'Racial Borders' (2022) 110 *The Georgetown Law Journal* 445 <https://www.law.georgetown.edu/georgetown-law-journal/wp-content/uploads/sites/26/2022/05/Achiume_RacialBorders.pdf>
- Cathryn Costello and Michelle Foster, '(Some) Refugees Welcome: When Is Differentiating between Refugees Unlawful Discrimination?' (2022) 22 *International Journal of Discrimination and the Law* 244 <<https://doi.org/10.1177/13582291221116476>>

(3) Privacy & data protection

- Jennifer King and Caroline Meinhard, 'Rethinking Privacy in the AI Era: Policy Provocations for a Data-Centric World' (2024) *Stanford University Human-Centred Artificial Intelligence White Paper* <<https://hai.stanford.edu/assets/files/2024-02/White-Paper-Rethinking-Privacy-AI-Era.pdf>>

(4) The AI Act

The EU AI Act regulates AI as a product, creating obligations for designers and deployers. It takes a risk-based approach to regulation, and AI products in the field of migration and asylum are generally high-risk. In November 2025, the EU announced plans to streamline the EU AI Act and related measures in the 'digital omnibus'.

- Francesca Palmiotto, 'The AI Act Roller Coaster: The Evolution of Fundamental Rights Protection in the Legislative Process and the Future of the Regulation' (2025) 15(1) *European Journal of Risk Regulation* 770 <<https://doi.org/10.1017/err.2024.97>>
- Nathalie A. Smuha and Karen Yeung, 'The European Union's AI Act: beyond motherhood and apple pie?' in Nathalie A. Smuha (ed), *The Cambridge Handbook on the Law, Ethics and Policy of Artificial Intelligence* (Cambridge University Press 2025) <<https://doi.org/10.1017/9781009367783.015>>
- Sandra Wachter, *Limitations and Loopholes in the EU AI Act and AI Liability Directives: What This Means for the European Union, the United States, and Beyond* (2024) 26 *YALE J L & TECH* 671 <https://yjolt.org/sites/default/files/wachter_26yalejlttech_71.pdf>

Part D: Introducing the role of newtech in migration-asylum governance

Once you have an understanding of how decision-making in asylum and visas works, the various dimensions of fairness and the legal standards that give effect to them, we can start to think about the impact of ‘newtech.’ In the AFAR project, we had a range of different forms of technology in mind and were aware that definitions are themselves contested. There are legal definitions in EU law of ‘AI’ and automated decision-making, but many of the forms of technology we studied would not necessarily fall within these definitions.

Our first task in the AFAR project was to map the emerging uses of what we termed ‘newtech’:

- Derya Ozkul, *Automating Immigration and Asylum: The Uses of New Technologies in Migration and Asylum Governance in Europe* (Refugee Studies Centre, University of Oxford, 2023) <<https://www.rsc.ox.ac.uk/publications/automating-immigration-and-asylum-the-uses-of-new-technologies-in-migration-and-asylum-governance-in-europe>>
- Amina Memon, Zoe Given-Wilson, Derya Ozkul and others, ‘Artificial Intelligence (AI) in the Asylum System’ (2024) 64(2) *Medicine, Science and the Law* 87 <<https://doi.org/10.1177/00258024241227721>>

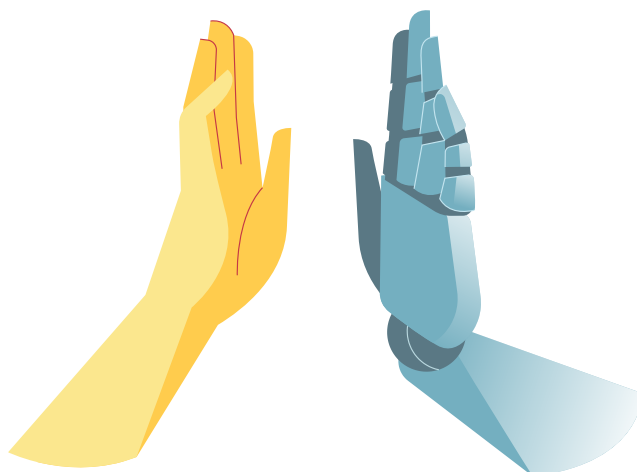
These works also provide useful introductions to the themes:

- Petra Molnar and Lex Gill, ‘Bots at the Gate: A Human Rights Analysis of Automated Decision Making in Canada’s Immigration and Refugee System’ (International Human Rights Program, Citizen Lab 2018) <<https://citizenlab.ca/wp-content/uploads/2018/09/IHRP-Automated-Systems-Report-Web-V2.pdf>>
- Petra Molnar, *The Walls Have Eyes: Surviving Migration in the Age of Artificial Intelligence* (The New Press 2024)
- Katie Schwarzmann, ‘The Computer Says so: Automated Recommendation-Making Tools in Immigration Systems: A Comparative Analysis between Canada, the USA and the UK’ (Churchill Fellowship 2024) <<https://km4s.ca/publication/the-computer-says-so-automated-recommendation-making-tools-in-immigration-systems-2024/>>
- E Tendayi Achiume, ‘Racial discrimination and emerging digital technologies: a human rights analysis – Report of the Special Rapporteur on contemporary forms of racism, racial discrimination, xenophobia and related intolerance’ (18 June 2020) Un Doc A/HRC/44/57 <<https://digitallibrary.un.org/record/3879751?ln=en&v=pdf>>

- Niovi Vavoula, ‘Artificial Intelligence (AI) at Schengen Borders: Automated Processing, Algorithmic Profiling and Facial Recognition in the Era of Techno-Solutionism’ (2021) 23(4) *EJML* 457 <<https://doi.org/10.1163/15718166-12340114>>
- Ana Beduschi, ‘International Migration Management in the Age of Artificial Intelligence’ (2020) 9(3) *Migration Studies* 576 <<https://doi.org/10.1093/migration/mnaa003>>
- Petra Molnar, ‘AI and Migration Management’ in Markus D Dubber, Frank Pasquale and Sunit Das (eds), *The Oxford Handbook of Ethics of AI* (OUP 2020)

This book has a UK focus, but identifies the practice of ‘risky experiments’ in UK immigration governance

- Jack Maxwell and Joe Tomlinson, *Experiments in Automating Immigration Systems* (Bristol University Press 2022).



(1) Critical AI: Selected works

The AFAR project was conceived and launched before the generative AI wave, and the launch of ChatGPT in November 2022, as well as other commercial LLMs (eg, Google Gemini, Llama and DeepSeek). Keeping up with the pace of change and developing a sense of what the tech is capable of, and how it works, is challenging. This is due to the pace of technical change, the prevalence of extreme AI hype, and the dominance of commercial self-interest in this field. We would recommend that anyone embarking on new research in the field engage with the work of computer scientists, and ideally find collaborators in that field. Here we have included a short bibliography of critical works on AI. Notably, they are by both computer scientists and investigative journalists. The work of the latter has been vital to exposing the inner workings of AI, given that it is often shrouded in business secrecy.

- Kate Crawford, *The Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence* (Yale University Press 2021)
- Arvind Narayanan and Sayash Kapoor, *AI Snake Oil* (Princeton University Press 2024)
- Arvind Narayanan and Sayash Kapoor, 'AI as Normal Technology' (Knight First Amendment Institute at Columbia University, 15 April 2025) <<https://knightcolumbia.org/content/ai-as-normal-technology>>
- Joy Buolamwini, *Unmasking AI: My Mission to Protect What Is Human in a World of Machines* (Penguin Random House 2023)
- Emily M. Bender and Alex Hanna, *The AI Con: How to Fight Big Tech's Hype and Create the Future We Want* (Harper 2025)
- Mary L. Gray and Siddharth Suri, *Ghost Work: How to Stop Silicon Valley from Building a New Global Underclass* (HMH Books 2019)
- Virginia Eubanks, *Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor* (St Martin's Press, 2018)
- Karen Hao, *Empire of AI: Inside the Reckless Race for Total Domination* (Penguin 2025)
- Kashmir Hill, *Your Face Belongs to Us: A Secretive Startup's Quest to End Privacy as We Know It* (Simon & Schuster UK 2023)

The computer scientist Dagmar Monnet has compiled a further list of critical AI works:

Dagmar Monnet, 'A non-exhaustive collection of worth-reading

on topics strongly related to Critical AI (Fourth edition)' (Prof. Dr. Dagmar Monnet, 2025) <<https://monettdiaz.com/books-critical-ai.html>>

(2) The rule of law and the automated state: A primer

Many public law and human rights scholars have identified that AI poses a profound challenge to the rule of law and its underlying values. These readings offer foundational and important insights into these themes. It is not comprehensive, but rather gives a primer on some important interventions in this field.

- Mireille Hildebrandt, 'Algorithmic regulation and the rule of law' (2018) 376 Phil. Trans. R. Soc. A 20170355 <<http://doi.org/10.1098/rsta.2017.0355>>
- Carol Harlow and Richard Rawlings, 'Proceduralism and Automation: Challenges to the Values of Administrative Law', in Elizabeth Fisher, Jeff King, and Alison Young (eds), *The Foundations and Future of Public Law: Essays in Honour of Paul Craig* (Oxford, 2020; online edn, Oxford Academic, 18 June 2020) <<https://doi.org/10.1093/oso/9780198845249.003.0014>>
- Natalie Smuha, *Algorithmic Rule By Law: How Algorithmic Regulation in the Public Sector Erodes the Rule of Law* (CUP 2024) <<https://doi.org/10.1017/9781009427500>>
- Aziz Z Huq, 'Artificial Intelligence and the Rule of Law', Routledge Handbook of the Rule of Law (Routledge 2024)
- Mike Gregory, 'Deciding with Dignity: Automated Decision-Making, the Rule of Law, and Procedural Disrespect' (2025) Ratio Juris <<https://doi.org/10.1111/raju.70007>>
- John Tasioulas, 'The Rule of Algorithm and the Rule of Law' in Christoph Bezemek, Michael Potacs and Alexander Somek (eds), *Vienna Lectures on Legal Philosophy, Volume 3: Legal Reasoning* (Hart 2023), <https://academyoflaw.org.au/wp-content/uploads/2024/10/Tasioulas_The-Rule-of-Algorithm-and-the-Rule-of-Law.pdf>
- Monika Zalnieriute, Lyria Bennett Moses and George Williams, 'The Rule of Law and Automation of Government Decision-Making' (2019) 82(3) *The Modern Law Review* 425, pre-print available at <<https://ssrn.com/abstract=3348831>>
- Ryan Calo and Danielle Citron, 'The Automated Administrative State: A Crisis of Legitimacy' (2021) 70(4) *Emory Law Journal* 797 <<https://scholarlycommons.law.emory.edu/elj/vol70/iss4/1>>
- Frank Pasquale, 'A Rule of Persons, Not Machines: The Limits of Legal Automation' (2019) 87 *George Washington Law Review* 1 <<https://www.gwlr.org/wp-content/uploads/2019/01/87-Geo.-Wash.-L.-Rev.-1.pdf>>

(3) Human rights concern 1: Privacy & surveillance in migration governance

- Ben Hayes, 'Migration and Data Protection: Doing No Harm in an Age of Mass Displacement, Mass Surveillance and "Big Data"' (2017) 99 International Review of the Red Cross 179 <<https://doi.org/10.1017/S1816383117000637>>
- Mireille Hildebrandt, 'Privacy as Protection of the Incomputable Self: From Agnostic to Agonistic Machine Learning' (2019) 20 Theoretical Inquiries in Law 83 <<http://www7.tau.ac.il/ojs/index.php/til/article/download/1622/1723>>
- Evelien Brouwer, 'Large-Scale Databases and Interoperability in Migration and Border Policies: The Non-Discriminatory Approach of Data Protection' (2020) 26(1) European Public Law 71 <<https://kluwerlawonline.com/journalarticle/European+Public+Law/26.1/EURO2020005>>
- Niovi Vavoula, *Immigration and Privacy in the Law of the European Union: The Case of Information Systems* (BRILL | Nijhoff 2022)

(4) Human rights concern 2: Discriminatory algorithms

Pioneering work in the field by many scholars, including Joy Buolamwini, Timnit Gebru, Abebe Birhane, and Virginia Eubanks, demonstrates the particular propensity of algorithmic systems to discriminate, at scale.

This section contains a small selection of works exploring the algorithmic systems, their discriminatory impacts, and the particular importance of maintaining EU law's principled contextual approach to discrimination in the face of algorithmic practices.

- Joy Buolamwini and Timnit Gebru, 'Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification' (Proceedings of the 1st Conference on Fairness, Accountability and Transparency, PLMR 81, 2018) <<https://proceedings.mlr.press/v81/buolamwini18a/buolamwini18a.pdf>>

- Sandra Wachter, Brent Mittelstadt and Chris Russell, 'Why Fairness Cannot Be Automated: Bridging the Gap Between EU Non-Discrimination Law and AI' (2021) 41 Computer Law & Security Review 105567, pre-print available at <<https://ssrn.com/abstract=3547922>>
- Sandra Wachter, Brent Mittelstadt and Chris Russell, 'Bias Preservation in Machine Learning: The Legality of Fairness Metrics under EU Non-Discrimination Law' (2021) 123(3) West Virginia Law Review 735 <<https://researchrepository.wvu.edu/wvlr/vol123/iss3/4>>
- Sandra Wachter, 'The Theory of Artificial Immutability: Protecting Algorithmic Groups under Anti-Discrimination Law' (2023) 97(1) Tul L Rev 149, pre-print available at <<https://ssrn.com/abstract=4099100>>
- Michael Veale and Reuben Binns, 'Fairer Machine Learning in the Real World: Mitigating Discrimination without Collecting Sensitive Data' (2017) 4(2) Big Data & Society <<https://doi.org/10.1177/2053951717743530>>
- Mireille Hildebrandt, 'The Issue of Proxies and Choice Architectures. Why EU Law Matters for Recommender Systems' (2022) 5 Frontiers in Artificial Intelligence <<https://doi.org/10.3389/frai.2022.789076>>
- Philipp Hacker, 'Teaching Fairness to Artificial Intelligence: Existing and Novel Strategies against Algorithmic Discrimination under EU Law' (2018) 55(4) Common Market Law Review 1143, pre-print available at <<https://ssrn.com/abstract=3164973>>
- Jeremias Adams-Prassl, Reuben Binns and Aislinn Kelly-Lyth, 'Directly Discriminatory Algorithms' (2022) 86(1) The Modern Law Review 144 <<https://doi.org/10.1111/1468-2230.12759>>
- Hilde Weerts and others, 'Unlawful Proxy Discrimination: A Framework for Challenging Inherently Discriminatory Algorithms' (ACM Conference on Fairness, Accountability, and Transparency, 2024) <<https://doi.org/10.48550/arXiv.2404.14050>>

German Federal Anti-Discrimination Agency's 2023 legal opinion on ADM systems:

- Indra Spiecker and Emanuel V. Towfigh, *Coded Bias: The General Equal Treatment Act and protection against discrimination by algorithmic decision-making systems* (Legal opinion on behalf of the Federal Anti-Discrimination Agency, 2023) <https://www.antidiskriminierungsstelle.de/SharedDocs/downloads/EN/publikationen/ki_study.pdf?__blob=publicationFile&v=2>
- European Union Agency for Fundamental Rights, *Bias in Algorithms – Artificial Intelligence and Discrimination* (Report, Vienna, 2022) <https://fra.europa.eu/sites/default/files/fra_uploads/fra-2022-bias-in-algorithms_en.pdf>



(5) The concept of automated decision-making, and the right not to be subject to fully automated processes

The EU's GDPR (Article 22) contains a 'right not to be subject to a decision based solely on automated processing, including profiling, which produces legal effects concerning him or her or similarly significantly affects him or her.' As a doctrinal matter, the scope of this provision is contested. Moreover, whether it reflects a human right not to be subject to fully automated decision-making, or in other words, whether there is a human right to a human decision-maker, remains to be seen. One of the regulatory implications of this guarantee is the tendency to rely on a 'human in the loop' to ensure that decisions are not 'fully automated.' However, whether this is a meaningful protection is also open to debate.

- Francesca Palmiotto, 'When Is a Decision Automated? A Taxonomy for a Fundamental Rights Analysis' (2024) 25 German Law Journal 210 <<https://doi.org/10.1017/glj.2023.112>>
- Yuval Shany, 'The Case for a New Right to a Human Decision Under International Human Rights Law' (2023) Working Paper <<http://dx.doi.org/10.2139/ssrn.4592244>>
- Reuben Binns and Michael Veale, 'Is That Your Final Decision? Multi-Stage Profiling, Selective Effects, and Article 22 of the GDPR' (2021) 11(4) International Data Privacy Law 319 <<https://doi.org/10.31235/osf.io/7mq6z>>
- Jake Goldenfein, 'Lost in the Loop – Who is the “human” of the Human in the Loop?' forthcoming in Gavin Sullivan, Fleur Johns and Dimitri Van Den Meerssche (eds) Global Governance by Data
- (Cambridge University Press, 2024), pre-print available at <<https://ssrn.com/abstract=4750634>>
- European Data Protection Supervisor, 'Human Oversight of Automated Decision-Making' (TechDispatch, 2025) <https://www.edps.europa.eu/data-protection/our-work/publications/techdispatch/2025-09-23-techdispatch-22025-human-oversight-automated-making_en>

(6) Automation and the duty to give reasons

One objection to automated decision-making is that AI is a black box, and so we cannot offer subjects an appropriately reasoned decision. This is not viewed as a technically intrinsic feature of ADM, and it is possible to develop tools that provide some sort of 'reasons'. There is a whole field of 'explainable AI' on these tools. Whether they meet the legal standards of reasoning remains to be seen.

- Sandra Wachter, Brent Mittelstadt and Chris Russell, 'Counterfactual Explanations Without Opening the Black Box: Automated Decisions and the GDPR' (2018) 31(2) Harvard Journal of Law & Technology 841 <<https://jolt.law.harvard.edu/assets/articlePDFs/v31/Counterfactual-Explanations-without-Opening-the-Black-Box-Sandra-Wachter-et-al.pdf>>
- Melanie Fink and Michèle Finck, 'Reasoned A(I)Dministration: Explanation Requirements in EU Law and the Automation of Public Administration' (2022) 47(3) European Law Review 376 <<https://hdl.handle.net/1887/3439725>>
- Karen McGregor Richmond and others, 'Explainable AI and Law: An Evidential Survey' (2024) 3(1) Digital Society <<https://doi.org/10.1007/s44206-023-00081-z>>
- Sahil Verma, John Dickerson and Keegan Hines, 'Counterfactual Explanations for Machine Learning: A Review' (ACM CHI Workshop on Human-Centered Explainable AI, May 2021) <<https://doi.org/10.48550/arXiv.2106.07756>>
- Henrik Palmer Olsen, Jacob Livingston Slosser and Thomas Troels Hildebrandt, 'What's in the Box?: The Legal Requirement of Explainability in Computationally Aided Decision-Making in Public Administration' in Amnon Reichman and others (eds), Constitutional Challenges in the Algorithmic Society (Cambridge University Press 2021) <<https://www.cambridge.org/core/books/constitutional-challenges-in-the-algorithmic-society/whats-in-the-box/A03967E93A40F4D38447EE3562C6ECFC>>
- Cynthia Rudin, 'Stop Explaining Black Box Machine Learning for High Stakes Decisions and Use Interpretable Models Instead' (2019) 1(5) Nature Machine Intelligence 296, pre-print available at <<https://doi.org/10.48550/arXiv.1811.10154>>

(7) Debating the role of newtech in asylum decision-making

Several scholars have identified a role for AI in asylum decision-making, either to substitute for human decision-makers or to nudge them away from common mistakes. These readings are just a sample, and they reflect very different views on what goes wrong in asylum decision-making and the potential role for technical fixes.

- Cass R Sunstein, 'Governing by Algorithm? No Noise and (Potentially) Less Bias Automating the Administrative State' (2021) 71 Duke LJ 1175 <<https://scholarship.law.duke.edu/dlj/vol71/iss6/1>>
- Hilary Evans Cameron, Avi Goldfarb and Leah Morris, 'Artificial Intelligence for a Reduction of False Denials in Refugee Claims' (2022) 35(1) Journal of Refugee Studies 493 <<https://doi.org/10.1093/jrs/feab054>>
- Niamh Kinchin, 'Technology, Displaced? The Risks and Potential of Artificial Intelligence for Fair, Effective, and Efficient Refugee Status Determination' (2021) 37 Law in Context 45 <<https://doi.org/10.26826/law-in-context.v37i3.157>>
- William Hamilton Byrne and Thomas Gammeltoft-Hansen, 'Digital Evidence in Refugee Status Determination' (2024) 118 AJIL Unbound 62 <<https://doi.org/10.1017/aju.2024.6>>
- Maya Ellen Hertz, William Hamilton Byrne and Thomas Gammeltoft-Hansen, 'What "Real Risk" Means For AI-Assisted Refugee Status Determination' (VerfBlog, 28 November 2025) <<https://verfassungsblog.de/what-real-risk-means-for-ai-assisted-refugee-status-determination/>>
- Mario Pasquale Amoroso, 'Intelligent Borders: Exploring the Suitability of Artificial Intelligence Systems in Refugee Status Determination Under International Law' (2024) 43 Refugee Survey Quarterly 410 <<https://doi.org/10.1093/rsq/hdae021>>
- Lucia Nalbandian, 'An Eye for an "I." A Critical Assessment of Artificial Intelligence Tools in Migration and Asylum Management' (2022) 10 Comparative Migration Studies <<https://doi.org/10.1186/s40878-022-00305-0>>
- Francesca Palmiotto, 'Procedural Fairness in Automated Asylum Procedures: Fundamental Rights for Fundamental Challenges' (2024) 55 Computer Law and Security Review <<https://www.sciencedirect.com/science/article/pii/S0267364924001316>>

(8) Mobile phone data extraction

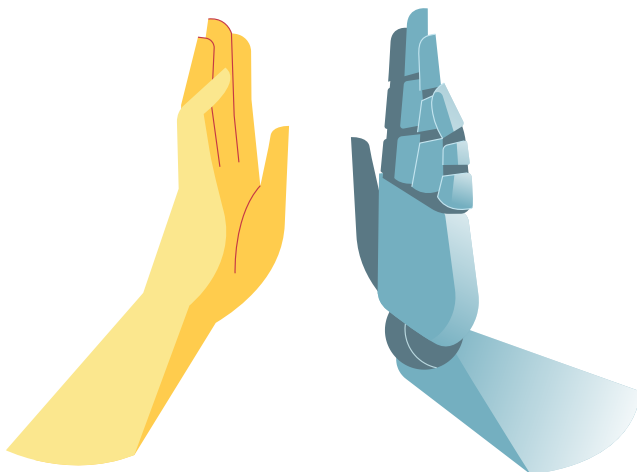
One practice that the AFAR mapping uncovered was mobile phone data extraction of asylum-seekers. This has been found to be an unjustified violation of the right to privacy by courts in [Germany](#) and [the UK](#). The writings in this section explore this practice, its impacts and legal contestations around it.

- Francesca Palmiotto and Derya Ozkul, "Like Handing My Whole Life Over": The German Federal Administrative Court's Landmark Ruling on Mobile Phone Data Extraction in Asylum Procedures' (VerfBlog, 28 February 2023) <<https://verfassungsblog.de/like-handing-my-whole-life-over/>>
- Trine Rask Nielsen, Thomas Gammeltoft-Hansen and Naja Holten Møller, 'Mobile Phone Data Transforming Casework in Asylum Decision-Making: Insights from the Danish Case' (2024) 1 ACM J Responsib Comput 27:1 <<https://dl.acm.org/doi/10.1145/3696469>>
- Stefan Scheel, 'Epistemic Domination by Data Extraction: Questioning the Use of Biometrics and Mobile Phone Data Analysis in Asylum Procedures' (2024) JEMS 2289.
- Kinan Alajak, Derya Ozkul, Koen Leurs, Rianne Dekker and Albert Ali Salah, 'The dangers and limitations of mobile phone screening in asylum processes' (2024) 73 Forced Migration Review <https://www.fmreview.org/digital-disruption/alajak-ozkul-leurs-dekker-salah>
- Derya Ozkul, 'Constructed objectivity in asylum decision-making through new technologies' (2025) 51(14) Journal of Ethnic and Migration Studies 3629 <<https://doi.org/10.1080/1369183X.2025.2513161>>

(9) Discriminatory borders and the role of newtech

In the previous sections, we demonstrated that newtech has the propensity to exacerbate discrimination at scale. Doctrinally, challenging discrimination at borders is challenging, as the [Undoing Discriminatory Borders](#) project has explored. This section provides some scholarship and reportage on discriminatory algorithms in the migration context.

- E Tendayi Achiume, 'Digital Racial Borders' (2021) 115 American Journal of International Law 333 <<https://doi.org/10.1017/aju.2021.52>>
- Dimitri Van Den Meerssche, 'Virtual Borders: International Law and the Elusive Inequalities of Algorithmic Association' (2022) 33 Eur J Int Law 171 <<https://doi.org/10.1093/ejil/chac007>>
- 'We Won! Home Office to Stop Using Racist Visa Algorithm' (Joint Council for the Welfare of Immigrants) <<https://www.jcwi.org.uk/news/we-won-home-office-to-stop-using-racist-visa-algorithm>>
- Mirko Duković and Cathryn Costello, 'Digital Visas Risk Deepening Discriminatory Borders' (VerfBlog, 27 November 2025) <<https://verfassungsblog.de/digital-visas-risk-deepening-discriminatory-borders/>>



(10) Preference matching for asylum-seekers and refugees

Existing systems for the allocation of responsibility for asylum-seekers and refugees deny their agency, are often based on crude criteria, and are only selectively enforced. (The EU's Dublin System and other STC-based systems are exemplars.) Matching algorithms offer the potential to create better (based on various metrics) outcomes in allocating asylum seekers and refugees to places of refuge, and can also be designed to include the preferences of the affected individuals. There are some such systems in operation.

- Will Jones and Alexander Teytelboym, 'Matching Systems for Refugees' (2017) 5 Journal on Migration and Human Security 667 <<https://doi.org/10.1177/233150241700500306>>
- Will Jones and Alexander Teytelboym, 'The International Refugee Match: A System That Respects Refugees' Preferences and the Priorities of States' (2017) 36 Refugee Survey Quarterly 84 <<https://doi.org/10.1093/rsq/hdx004>>
- Kirk Bansak and others, 'Improving Refugee Integration Through Data-Driven Algorithmic Assignment' (2018) 349(6373) Science 325 <https://www.researchgate.net/publication/322585718_Improving_refugee_integration_through_data-driven_algorithmic_assignment>
- Avidit Acharya, Kirk Bansak and Jens Hainmueller, 'Combining Outcome-Based and Preference-Based Matching: A Constrained Priority Mechanism' (2020) arXiv:1902.07355 <<http://arxiv.org/abs/1902.07355>>
- Craig Damian Smith and others, 'Re:Match - Relocation via Matching' (Interim Evaluation Report, Berlin Governance Platform, Pairity, salam lab, January 2024) <<https://www.governance-platform.org/en/portfolio/interim-evaluation-rematch/>>
- 'Streamlining Refugee Resettlement: GeoMatch's Partnership with Global Refuge' (Immigration Policy Lab) <<https://immigrationlab.org/geomatch/streamlining-refugee-resettlement-geomatchs-partnership-with-global-refuge/>>
- Clara Strasser Ceballos and Christoph Kern, 'Location Matching On Shaky Grounds: Re-Evaluating Algorithms For Refugee Allocation' (2025) Proceedings of the 2025 ACM Conference on Fairness, Accountability, and Transparency 2180 <<https://doi.org/10.1145/3715275.3732149>>

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