Curriculum Vitae: MATTHIJS MICHIEL MAAS

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Centre for the Study of Existential Risk, 16 Mill Lane, Cambridge, CB2 1SB, United Kingdom

<u>Postdoctoral Research Associate</u>, Centre for the Study of Existential Risk, University of Cambridge, UK. <u>College Research Associate</u>, King's College, University of Cambridge, UK.

Research statement: my research focuses on the regulation & governance of high-stakes risks from emerging technologies, specifically artificial intelligence. This involves, amongst others, assessments of the challenges and opportunities AI systems may pose for international law; the design of global regime complexes for the governance of emerging technologies, and the legal basis and political conditions for the international control or nonproliferation of destabilizing military AI systems.

Academic Experience

05 / 2021 - 07 / 2021	Summer Research Fellow, Legal Priorities Project
10 / 2020 – present	Postdoctoral Research Associate, Centre for the Study of Existential Risk &
	Centre for the Future of Intelligence (University of Cambridge—Cambridge, UK)
10 / 2020 – present	College Research Associate (King's College, University of Cambridge).
09 / 2017 – 09 / 2020	PhD Fellow, Centre for International Law and Governance (The University of
	Copenhagen, Faculty of Law—Copenhagen, Denmark)

- PhD Dissertation <u>Artificial Intelligence Governance Under Change: Foundations, Facets, Frameworks</u>, under Prof. Hin-Yan Liu and Prof. Kristian Lauta. Defended on 21st of April, 2021, to a panel consisting of Prof. Mikael Rask Madsen, Lyria Bennett Moses, and Ingvild Bode.
- Spring 2019: prepared and taught MA-level course 'Artificial Intelligence and Legal Disruption'
- Prepared MA-level course 'Law and Policy for Global Catastrophic and Existential Threats'
- October-November 2018: research stay at Center for the Governance of AI (Future of Humanity Institute, University of Oxford).
- 01 / 2018 07 / 2020 | Research Affiliate, Center for the Governance of AI (University of Oxford).

 05 / 2016 01 / 2018 | Researcher, Global Politics of Artificial Intelligence (GP-AI) Research Group,
 (Yale University and University of Oxford)
- Supported research projects, including 'AI Governance: a Research Agenda'
- Coordinated a network of over a dozen research assistants in conducting diverse research projects.

05 / 2016 – 08 / 2018 | Junior Associate, Global Catastrophic Risks Institute (GCRI)

Education & Qualifications

04 / 2016 – 07 / 2016	FullStack Web Development Bootcamp, (Le Wagon / B. Startup School
	Amsterdam)
09 / 2012 – 08 / 2013	MSc in International Relations; graduated With Distinction (The University of
	Edinburgh—Edinburgh, UK)
08 / 2009 – 05 / 2012	BA, Liberal Arts & Sciences; graduated Cum Laude (GPA of 3.6/4.0)
	(University College Utrecht—Utrecht, The Netherlands)

Selected Publications

Journal articles:

- Stix, Charlotte, and **Matthijs M. Maas**. "Bridging the Gap: The Case for an 'Incompletely Theorized Agreement' on AI Policy." *AI and Ethics*, January 15, 2021. https://doi.org/10.1007/s43681-020-00037-w.
- Liu, Hin-Yan, and **Matthijs M. Maas**. "Solving for X?" Towards a Problem-Finding Framework to Ground Long-Term Governance Strategies for Artificial Intelligence." *Futures* 126 (February 1, 2021): 22. https://doi.org/10.1016/j.futures.2020.102672.
- Cihon, Peter, **Matthijs M. Maas**, and Luke Kemp. "Fragmentation and the Future: Investigating Architectures for International AI Governance." *Global Policy* 11, no. 5 (November 2020): 545–56. https://doi.org/10.1111/1758-5899.12890.
- Liu, Hin-Yan, **Matthijs Maas**, John Danaher, Luisa Scarcella, Michaela Lexer, and Leonard Van Rompaey. "Artificial Intelligence and Legal Disruption: A New Model for Analysis." *Law, Innovation and Technology* (September 16, 2020): 1–54. https://doi.org/10.1080/17579961.2020.1815402.
- Liu, Hin-Yan, Kristian Cedervall Lauta, and **Matthijs M. Maas**. "Apocalypse Now? Initial Lessons from COVID-19 for the Governance of Existential and Global Catastrophic Risks" *Journal of International Humanitarian Legal Studies* 11, no.2 (2020): 1-16. https://doi.org/10.1163/18781527-01102004
- Levin, John-Clark, and Matthijs M. Maas. "Roadmap to a Roadmap: How Could We Tell When AGI is a 'Manhattan Project' Away?" *Proceedings of ECAI/EPAI 2020*.
 http://dmip.webs.upv.es/EPAI2020/papers/EPAI 2020 paper 11.pdf
- Hayward, Keith J, and Matthijs M Maas. "Artificial Intelligence and Crime: A Primer for Criminologists." Crime, Media, Culture, June 30, 2020, 1741659020917434.
 https://doi.org/10.1177/1741659020917434.
- Cihon, Peter, **Matthijs M. Maas**, and Luke Kemp. "Should Artificial Intelligence Governance Be Centralised? Design Lessons from History." In *Proceedings of the 2020 AAAI/ACM Conference on AI, Ethics, and Society (AIES '20)*, 228-34. New York, NY, USA: ACM, 2020. https://doi.org/10.1145/3375627.3375857.
- Maas, Matthijs M. "International Law Does Not Compute: Artificial Intelligence and The Development, Displacement or Destruction of the Global Legal Order." *Melbourne Journal of International Law* 20, no. 1 (2019): 29–56.
 law.unimelb.edu.au/_data/assets/pdf_file/0005/3144308/Maas.pdf
- **Maas, Matthijs M.** "Innovation-Proof Governance for Military AI? How I Learned to Stop Worrying and Love the Bot." *Journal of International Humanitarian Legal Studies* 10, no. 1 (2019): 129–57. doi.org/10.1163/18781527-01001006.
- **Maas, Matthijs M.** "How Viable Is International Arms Control for Military Artificial Intelligence? Three Lessons from Nuclear Weapons." *Contemporary Security Policy* 40, no. 3 (February 6, 2019): 285–311. doi.org/10.1080/13523260.2019.1576464.
 - Paper shortlisted for the <u>2020 Bernard Brodie Prize</u>.
- Baum, Seth D., Stuart Armstrong, Timoteus Ekenstedt, Olle Häggström, Robin Hanson, Karin Kuhlemann, **Matthijs M. Maas**, et al. "Long-Term Trajectories of Human Civilization." *Foresight* 21, no. 1 (February 11, 2019): 53–83. doi.org/10.1108/FS-04-2018-0037.
 - (paper also featured in the BBC Future, at www.bbc.com/future/story/20190109-the-perils-of-short-termism-civilisations-greatest-threat).
 - Paper awarded the 2020 Literati Award for 'Outstanding Paper'
 https://www.emeraldgrouppublishing.com/journal/fs/literati-awards/foresight-literati-award-winners-2020
- Liu, Hin-Yan, Kristian Cedervall Lauta, and **Matthijs Michiel Maas**. "Governing Boring Apocalypses: A New Typology of Existential Vulnerabilities and Exposures for Existential Risk Research." *Futures* 102 (2018): 6–19. doi.org/10.1016/j.futures.2018.04.009.

- Maas, Matthijs M. "Two Lessons from Nuclear Arms Control for the Responsible Governance of Military Artificial Intelligence." In *Envisioning Robots in Society Power, Politics, and Public Space*, Vol. 311. Frontiers in Artificial Intelligence and Applications. IOS Press, 2018. doi.org/10.3233/978-1-61499-931-7-347.
- Maas, Matthijs M. "Regulating for 'Normal AI Accidents'—Operational Lessons for the Responsible Governance of AI Deployment." In *Proceedings of the 2018 AAAI / ACM Conference on Artificial Intelligence, Ethics and Society*. New Orleans: Association for the Advancement of Artificial Intelligence, 2018. www.aies-conference.com/wp-content/papers/main/AIES_2018_paper_118.pdf.

Other publications (reports):

- Belfield, Haydn, José Hernández-Orallo, Seán Ó hÉigeartaigh, Matthijs M. Maas, Alexa Hagerty, and Jess Whittlestone. "Consultation on the White Paper on AI a European Approach".
 Submission to European Commission public consultation. Centre for the Study of Existential Risk. https://www.cser.ac.uk/news/response-european-commissions-consultation-ai/ June 15, 2020.
- Kemp, Luke, Peter Cihon, **Matthijs Michiel Maas**, Haydn Belfield, and Zoe Cremer. "UN High-Level Panel on Digital Cooperation: A Proposal for International AI Governance." UN High-Level Panel on Digital Cooperation, February 26, 2019. digitalcooperation.org/wp-content/uploads/2019/02/Luke_Kemp_Submission-to-the-UN-High-Level-Panel-on-Digital-Cooperation-2019-Kemp-et-al.pdf.
- Maas, Matthijs M., Tim Sweijs, and Stephan De Spiegeleire. *Artificial Intelligence and the Future of Defense: Strategic Implications for Small- and Medium-Sized Force Providers*. The Hague, The Netherlands: The Hague Centre for Strategic Studies, 2017. https://docs.nl/report/artificial-intelligence-and-future-defense.

Reviewer:

Global Policy; Futures; European Journal of International Security, Science and Engineering Ethics, Foresight; RUSI Journal; St Antony's International Review; Risk, Hazards & Crisis in Public Policy; International Review of the Red Cross; Retskraft.

Student Thesis Supervision:

- June-August 2021: mentor at Cambridge Existential Risk Initiative
- Fall 2020: Suvradip Maitra: independently coached a former student to rewrite an excellent course paper, and submit to AAAI/ACM Conference on *AI*, *Ethics and Society*, where he was consequently accepted as only undergraduate.
 - See: Maitra, Suvradip. "Artificial Intelligence and Indigenous Perspectives: Protecting and Empowering Intelligent Human Beings." In Proceedings of the AAAI/ACM Conference on AI, Ethics, and Society, 320–26. New York NY USA: ACM, 2020. doi.org/10.1145/3375627.3375845.
- Summer 2019-present (supervision of independent research, organized through FHI-GovAI). Tobias Pulver: *Shaping policy as experts: An epistemic community for (transformative) AI governance?*
- Fall 2019: Masters Thesis. Mayra Futema: Discrimination in the rise of automated decisions A critical appraisal of the GDPR legal responses to protect rights and freedoms. Grade 12/12.
- Spring 2019: Masters Thesis. Rahman Nayil: From Darkness to Light: An Analysis of Privacy Issues Relating to Algorithmic Black Box Medicine. Grade 12/12.
- Spring 2019: Masters Thesis. Laura Emily Christiansen: *The Patentability of AI-made Inventions*. Grade 12/12.
- Spring 2019: Masters Thesis. Edward St. John Maurice Treacy: *International Law Regulation of Cyber Activities Below the Threshold of 'Force'*. Grade 12/12.

Selected Presentations & Speaking Engagements

Between December 2016 – June 2020, Matthijs has presented his research at 18 international conferences, workshops, or public events. This includes invitation-only events organized by UNIDIR and the Centre for the Study of Existential Risk; prestigious subject area conferences such as the AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society, TILTing Perspectives, or the Cambridge International Law Journal Conference; and accessible public events such as the Copenhagen TechFestival. A detailed list of presentations & speaking engagements is available upon request.

- **June 7th, 2021:** CHAI Virtual Workshop 'Capability-Scalable AI Governance? Precedent or Adaptability?'
- **June 7th, 2021:** Gothenburg University Chalmers AI Research Centre event on 'Quo Vadis, AI Ethics?'. Presentation title: '*Bridging the gap: the case for an 'Incompletely Theorized Agreement' on AI Policy'*.
- **April 9th, 2021:** Paper discussion at International Studies Association (ISA 2021) FC12: Theoretical Perspectives on International Law. Title: '*Rebooting International Law? Artificial Intelligence and the (De)Fragmentation of the Liberal International Order*'.
- March 20th, 2021: presentation at Law, Technology and Disruption Conference, City University of Hong Kong. Title: "'Solving for X?' Towards a problem-finding framework to ground long-term governance strategies for artificial intelligence'
- **February 19th, 2021:** lecture to the Asser Institute Winter Academy on Artificial Intelligence and Law 2021. Title: *International Governance of Artificial Intelligence: Charting a Regime Architecture*
- **December 4, 2020**: keynote at the Effective Altruism Netherlands event on Longtermism. Title: "The Long-Term, Up-Close: Developments, Debates, Directions"
- November 25th, 2020: participated in Mclaughlin College Debate: 'AI as an Existential Risk'
- **February 7, 2020:** Lightning talk and poster presentation at AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society 2020. New York, USA. Title: "Should Artificial Intelligence Governance be Centralised? Design Lessons from History"
- October 4, 2019: Presentation at University of Southern Denmark, Centre for War Studies Annual Conference on 'Technology & Digitalization as Forces of Change'. Title: "...A Crack in Everything? Facing 'Normal Accidents' in Military AI Systems".
- August 28, 2019: Presentation and panel discussion at University of Gothenburg event on AI for Health and Healthy AI. Title: 'Governing for safe AI systems in the near- and long-term'. Invited by Olle Häggström.
- **July 15-16, 2019**: CIFAR/UNIDIR workshop: *Regulating Defense and Security AI Technologies: Options Beyond Traditional Arms Control*. Toronto. By invitation.
- May 16th, 2019: panel presentation at the TILTing Perspectives conference: A General Framework for Identifying Technology-Driven Legal Disruption: the Case of Artificial Intelligence.
- March 21, 2019: panel presentation at 8th Cambridge International Law Journal Conference 2019: 'International Law Does Not Compute? Artificial Intelligence and the Development, Displacement, or Destruction of the Global Legal Order.' www.youtube.com/watch?v=a1gREVAQP58
- **February 6, 2019:** talk at 'Tech&Law Breakfast' at the Digitalisation Hub (Faculty of Law, University of Copenhagen). Title 'AI as threat and opportunity for the global legal order'
- November 16, 2018: paper presentation at Beyond Killer Robots conference (Copenhagen). Title 'Innovation-Proof Governance for Military Artificial Intelligence? How I learned to stop worrying, and love the bot'.

- October 16, 2018: opening keynote at Copenhagen Common Session Conference on Critical Criminology. Title: 'AI, Crime, and Policing: Now That We're In The Future, What Does That Look Like?'
- **September 21-22, 2018**: remote participation in interdisciplinary workshop organized by Centre for the Study of Existential Risk (CSER), on '*Plutonium*, *Silicon & Carbon: cybersecurity risks of nuclear weapons systems*'.
- **September 8, 2018:** Workshop 'AI and Legal Disruption' at Copenhagen TechFestival 2018.
- **June 4-7, 2018**: selected to represent Denmark in the Holberg Prize Masterclass 2018 with Prof. Cass Sunstein. Title of talk: "*Human Error about-, in-, and with- AI*". Attended Holberg Prize Week. Bergen, Norway. www.holbergprisen.no/en/news/holberg-prize/meet-2018-masterclass-panellists; Video at: www.youtube.com/watch?v=YjhY6mVG2_0&t=3392s
- April 17-18, 2018: participant in CCCR (Cambridge Conference on Catastrophic Risk) 2018. Organized by Centre for the Study of Existential Risk (CSER). Cambridge, UK.
- **February 14-17 2018**: presented at International Research Conference Robophilosophy 2018 / TRANSOR 2018. Vienna, Austria. conferences.au.dk/robo-philosophy-2018-at-the-university-of-vienna/session-talks/lessons-from-nuclear-arms-control-for-the-responsible-governance-of-ai-development/
- **January 31-February 3rd 2018**: presented at AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society 2018. New Orleans, USA. Paper available at www.aies-conference.com/wp-content/papers/main/AIES_2018_paper_118.pdf
- **September 2017**: attendee, University of Gothenburg *Workshop on Existential Risk to Humanity*.
- May 2017: Presenter, Lorentz Center Workshop Multilateral Governance of Technological Risk
- **December 2016**: Presenter, Cambridge Conference on Catastrophic Risk 2016 (<u>CCCR 2016</u>) "Insights from Nuclear Weapons Policy for the Governance of Artificial Intelligence Development". Described by one organizer as "one of the best-received contributed talks"

Work Experience:

10 / 2016 – 08 / 2017 | Analyst, NewForesight consultancy (Utrecht, The Netherlands)

• Worked with diverse industry, civil society and government stakeholders on modelling of agricultural yields and supply chains, ensuring resilience, sustainability, and profitability for farmers.

05 / 2015 – 10 / 2016 | Freelance Analyst, The Hague Centre for Strategic Studies (HCSS)

• Invited to contribute to major projects, e.g. (1) evaluation of urban security strategies; (2) scenario analysis of future trends & shocks in global food systems; (3) comparative sentiment analysis of national security & strategy foresight literatures; (4) report on non-kinetic military applications of AI systems.

06 / 2015 – 12 / 2015 | Trainee (Political and Security Affairs), The Netherlands Embassy in Beirut 12 / 2013 – 08 / 2014 | Assistant Strategic Analyst, The Hague Centre for Strategic Studies (HCSS)