Curriculum Vitae of Hendrik Prakken

Personal Information

Name:	Hendrik (Henry) Prakken
Date of birth:	26–02–1960
Nationality:	Dutch
Marital status:	married
Home address:	Zenderstraat 3, 1223 DR Hilversum, The Netherlands
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Languages:	Nethersaxon (native), Dutch (fluent), English (fluent), German (good), French (basic), Chinese Mandarin (introductory).

Higher Education and Appointments

Since 15-09-2023: Full professor Artificial Intelligence and Law, Department of Information and Computing Sciences, Utrecht University, The Netherlands.

1–6 2004 till 1-10-2023: Full professor Legal Informatics and Legal Argumentation, Faculty of Law, University of Groningen, The Netherlands (20%).

01–01 2018 till 15-09-2023: 'Universitair Hoofddocent' (≈ senior lecturer (UK), associate professor (US)), Department of Information and Computing Sciences, Faculty of Science, Utrecht University, The Netherlands (80%).

1–5 2021 to 1–5–2023: Part-time professor European University Institute, Fiesole, Florence, Italy (10%).

1–10 1998 to 01–01 2018: 'Universitair Docent' (≈ lecturer (UK), assistant professor (US)), Department of Information and Computing Sciences, Faculty of Science, Utrecht University, The Netherlands (since 1–6–2004 80%).

1–1 to 1–10 1998: Postdoctoral Researcher, Artificial Intelligence Section, Department of Computer Science, Free University Amsterdam, The Netherlands.

1–8 to 31–12 1997: Researcher, Institute for Applied Information Technology, GMD - Research Institute for Information Technology, Bonn, Germany.

15–10–1996 to 1–8–1997: Guest researcher, Computer/Law Institute, Free University Amsterdam, The Netherlands.

15-10–1993 to 15–10–1996: Research Fellow of the Royal Netherlands Academy of Arts and Sciences, at the Computer/Law Institute, Free University of Amsterdam, The Netherlands.
Project: Formal models of metalevel reasoning in law.

7–2 to 1–10–1993: Postdoctoral Research Assistant, Department of Computing, Imperial College of Science, Technology and Medicine, London.

1993: Doctorate (Dr.) at Faculty of Law, Free University Amsterdam, The Netherlands (*Cum Laude*).
Title of Dissertation: Logical Tools for Modelling Legal Argument.

1988: Master's degree in philosophy, University of Groningen, The Netherlands.

1985: Master's degree in law, University of Groningen, The Netherlands.

Awarded research fellowships

- 2009: By SICSA (Scottish Informatics & Computer Science Alliance): Distinguished Visiting Fellowship.
- 1993: By Royal Dutch Academy of Arts and Sciences (KNAW): Three-year research fellowship
- 1993: By Dutch Organization for Scientific Research (NWO): One-year 'Talent' research fellowship, for stay at Department of Computing, Imperial College London (not used because of appointment in London as research assistant and subsequent awarding of KNAW research fellowship).

Research funding

- 2019-2028: NWO Gravity Programme Project *Hybrid Intelligence (HI): augmenting human intellect* (participant, co-author of grant application). 19.000.000 euros.
- 2019-2020: contract research *Bias en fairness in datagedreven werken* (Bias and fariness in data-driven work) for the Dutch Tax Office. Co-applicant, 20.000 euros.
- 2012-2016: NWO 'Forensic Science Meets Justice' programme: 'Designing and Understanding Forensic Bayesian Networks with Arguments and Scenarios' (co-applicant) (2 Phd projects). Utrecht University and University of Groningen. 479.000 euros.
- 2011: Short Term Scientific Mission within the COST scientific programme on Agreement Technologies, for visit to Department of Informatics, King's College London. 1250 euro.

- 2010-2012: Marie Curie Fellowship for Dr. Elizabeth Black (Argumentation Strategies), Utrecht University. 153.549 euro.
- 2009-2012: Project 'Free Competition' NWO-EW 'Agents Interacting in Dialogues with Argumentation' (one PhD project) 200.424 euro (principal investigater). Utrecht University.
- 2007-2011: ICIS-project 'Argumentation formation for decision support' (one PhD project), 277.000 euro. (co-applicant). Utrecht University.
- 2005–2009: TOKEN-project 'Software support for crime investigation' (two PhD projects), 350,000 euro (principal investigater). Utrecht University and University of Groningen.
- Partner *ASPIC* (Argumentation Service Platform with Integrated Components), an EC 6th Framework Specific Targeted Research Project (226,800 euro; three-year postdoc appointed). Utrecht University.

Media

- 17 March 2021: interview in Dutch newspaper NRC about IBM's Debater project:
https://www.nrc.nl/nieuws/2021/03/17/computer-legt-het-in-een-debat-nog-af-tegen-de-mens-a4036081
- May 2020: Interview in Chinese about AI & Law:
https://mp.weixin.qq.com/s/ke5LMBbNfqUhaNCB5BHktA
- 25 November 2017: Interview in Dutch newspaper *Trouw* about the 'robot judge':
https://www.trouw.nl/home/de-robotrechter-dit-is-mijn-berekening-en-daar-moet-u-het-mee-doen a25e188e/

Awards

- 2023 CodeX Prize of CodeX - The Stanford Center of Legal Informatics, Stanford University. Received jointly with Trevor Bench-Capon and Giovanni Sartor, in acknowledgement of our work on argumentation theory and its application to the law.

Further information

My main research interests concern artificial intelligence & law and computational models of (legal and other kinds of) argumentation. Much of my research is theoretical but I have recently also addressed more practical research issues

concerning the use of big-data and machine-learning algorithms in legal decision making.

I was promotor of 13 PhD students and was a member 19 PhD thesis committees (10 in the Netherlands, 9 in Belgium, Luxemburg, the UK, Spain and Italy). I have obtained research funding for 7 PhD projects (3 as principal applicant and 4 as co-applicant) and 2 postdocs (1 as principal applicant and 1 as co-applicant). Currently I am the coordinator of the Special Interest Group on AI, ethics and law of the Utrecht University focus area Human-Centered Artificial Intelligence.

The great majority of my publications are in international fora. I have published one book and co-edited six books and five special issues of international journals. I have published more than 230 papers: 26 book chapters, 69 journal articles and 141 papers in conference and workshop proceedings. My current Google h-index (verified 2 April 2024) is 60.

I am a past president of the International Association for Artificial Intelligence and Law (IAAIL) and of the steering committees of the International Conferences on Computational Models of Argument (COMMA) and the International Conferences on Legal Knowledge and Information Systems (JURIX). I was a co-organiser of 9 international conferences and workshops.

I was the program chair of five international conferences and workshops, including the 8th International Conference on Artificial Intelligence and Law, St. Louis (USA) 2001 and the 8th International Conference on Computational Models of Argument, Perugia (Italy), 2020. I was a member of the (senior) program committee or area chair of almost 200 international conferences and workshops, including many editions of the main AI & law conferences ICAIL (International Conferences on AI & Law) and JURIX (International Conferences on Legal Knowledge and Information Systems) and of the main artificial intelligence conferences IJCAI (International Joint Conference on AI), ECAI (European Conference on AI), AAMAS (International Conference on Autonomous Agents and Multi-Agent Systems) and KR (International Conference on Knowledge Representation and Reasoning).

From 2011-2018 I was a co-organiser of the annual Law and Logic summer school at the European University Institute in Florence, Italy, and since 2019 I am a co-organiser of the Artificial Intelligence and Law summer school, also at the European University Institute.

I was key note speaker at 25 international conferences and workshops and invited speaker at more than 30 international events and at many universities and institutes around the world. Moreover, I was invited as visiting researcher or lecturer at Sun Yat-sen University, Guanghzou, China (2010, 2018), the University of Lugano, Switserland (2012), Southwest University, Chongqing, China (2010), University of Dundee, Scotland (2009), Universidad Nacional del Sur, Bahia Blanca, Argentina (1998 and 2009), National Institute of Informatics and Tokyo Institute of Technology, Tokyo, Japan (2008), University of Bologna, Italy (2006) and University of Liverpool, England (2006).

From 2015-2022 I was an editorial-board member of *Artificial Intelligence*, the world's premier forum for AI research (since 2017 as an associate editor).

Currently, I am an editorial-board member of three international journals, including *Artificial Intelligence and Law*, and two international book series. I have been a reviewer for 50 international journals and for funding agencies in The Netherlands, the UK (EPRC, ESRC), the USA (NSF), Austria, Belgium, Germany, Ireland, Israel, Poland, Portugal and Switserland, and for the European Commission (ERC advanced grants, Future and Emerging Technologies).

I regularly consult to Dutch legal and government institutions, including the Dutch Council of the Judiciary, The Netherlands Register of Court Experts, the Dutch Social Security Service, the Dutch Police Academy and the Dutch Tax Office. Since 2017 I give an annual course on rational models of legal proof for the training centre of the Dutch Council of the Judiciary. In October 2020 I gave an online tutorial on AI & law for Brazilian judges, together with Prof. Giovanni Sartor. I have recently twice been called as an expert witness in court on the use of Bayesian probability theory in criminal proof.

My full CV is available on request.

Publications since 2018

Journals

[1] H. Prakken, When is argumentation deductive? *Journal of Applied Non-Classical Logics* 33 (2023): 212-223. Contribution to a special issue in honour of Philippe Besnard.

[2] G. Sartor and M. Araszkiewicz and K.D. Atkinson and F.J. Bex and T. van Engers and E. Francesconi and H. Prakken and Giovanni Sileno and F. Schilder and A.Z. Wyner and T.J.M. Bench-Capon, Thirty years of *Artificial Intelligence and Law*: the second decade. *Artificial Intelligence and Law* 30 (2022): 521-557.

[3] H. Prakken & R. Ratsma, A top-level model of case-based argumentation for explanation: formalisation and experiments. *Argument and Computation* 13 (2022), 159-194.

[4] R. Wieten, F.J. Bex, H. Prakken & S. Renooij, Deductive and abductive argumentation based on information graphs. *Argument and Computation* 13 (2022): 49-91.

[5] R. Wieten, F.J. Bex, H. Prakken & S. Renooij, Information Graphs and Their Use for Bayesian Network Graph Construction. *International Journal of Approximate Reasoning* 136 (2021): 249–280.

[6] H. Prakken, A formal analysis of some factor- and precedent-based accounts of precedential constraint. *Artificial Intelligence and Law* 29 (2021): 559–585.

[7] H. Prakken, F.J. Bex & A.R. Mackor, Editors' Review and Introduction: Models of Rational Proof in Criminal Law. *Topics in Cognitive Science* 12:4 (2020), 1053–1067.

[8] H. Prakken, An argumentation-based analysis of the Simonshaven case. *Topics in Cognitive Science* 12:4 (2020), 1068-1091. (Special issue on Models of Rational Proof in Criminal Law). First online 14 March 2019, https://doi.org/10.1111/tops.12418.

[9] Z. Akata, D. Balliet, M. de Rijke, F. Dignum, V. Dignum, G. Eiben, A. Fokkens, D. Grossi, K. Hindriks, H. Hoos, H. Hung, C. Jonker, Ch. Monz, M. Neerincx, F. Oliehoek, H. Prakken, S. Schlobach, L. van der Gaag, F. van Harmelen, H. van Hoof, B. van Riemsdijk, A. van Wynsberghe, R. Verbrugge, B. Verheij, P. Vossen & M. Welling, A Research Agenda for Hybrid Intelligence: Augmenting Human Intellect With Collaborative, Adaptive, Responsible, and Explainable Artificial Intelligence. *IEEE Computer* vol. 53, issue 8 (2020): 18–28.

[10] K.D. Atkinson, T.J.M. Bench-Capon, F.J. Bex, T.F. Gordon, H. Prakken, G. Sartor & B. Verheij, In Memoriam Doug Walton: The influence of Doug Walton on AI and Law. *Artificial Intelligence and Law* 28 (2020): 281–326.

[11] A.J. Garcia, H. Prakken & G.R. Simari, A comparative study of some central notions of ASPIC+ and DeLP. *Theory and Practice of Logic Programming* 20 (2020): 358–390.

[12] F.J. Bex & H. Prakken, De Juridische Voorspelindustrie: onzinnige hype of nuttige ontwikkeling? *Ars Aequi* 69 (2020): 255–259 (in Dutch).

[13] H. Prakken, A new use case for argumentation support tools: supporting discussions of Bayesian analyses of complex criminal cases. *Artificial Intelligence and Law* 28 (2020): 27-49. First online 09 October 2018. doi.org/10.1007/s10506-018-9235-z.

[14] H. Prakken, Kansoordelen door deskundigen: over 'logisch' rapporteren en wat daarbij mis kan gaan *Ars Aequi* 67 (2018): 740–747 (in Dutch).

[15] S.J. Modgil & H. Prakken, Corrigendum for: A general account of argumentation with preferences [Artif. Intell. 195 (2013): 361–397]. *Artificial Intelligence* 263 (2018): 107-110.

[16] R. Meester & H. Prakken, Reactie op Alkemades weerwoord. *Expertise en Recht* 2018-1, 41-43 (in Dutch).

[17] H. Prakken, Komt de robotrechter er aan? *Nederlands Juristenblad* 2018/207, issue 4, pp. 269-274 (in Dutch).

Books edited

[18] H. Prakken, S. Bistarelli, F. Santini & C. Taticchi (eds): *Computational Models of Argument. Proceedings of COMMA 2020*. Amsterdam etc, IOS Press 2020.

Special Journal issues edited

[19] F.J. Bex, A.R. Mackor & H. Prakken, *Topics in Cognitive Science* 12:4 (2020), special issue on 'Models of Rational Proof in Criminal Law'.

Contributions to edited volumes

[20] H. Prakken, Rechters en raadsheren over Bayes. In R. Horselenberg, V. van Koppen & J. de Keijser (eds.) Bakens in de Rechtspsychologie. Liber Amoricum voor Peter van Koppen, pp. 287–300. Den Haag: Boom Criminologie 2020. (In Dutch. English title: *Courts about Bayes.*)

[21] H. Prakken, Logical models of legal argumentation. In M. Knauff & W. Spohn (eds.): *The Handbook of Rationality*, pp. 669-677. Cambridge, MA: MIT Press 2021.

[22] H. Prakken, Modelling support relations between arguments in debates. In C.I. Chesñevar et al. (eds.): *Argumentation-based Proofs of Endearment. Essays in Honor of Guillermo R. Simari on the Occasion of his 70th Birthday*, pp. 349–365. London: College Publications 2018.

Refereed papers in international conferences and workshops

[23] T. van den Belt & H. Prakken, Measuring the complexity of Dutch legislation (extended version). In M. Palmirani et al. (eds.), *AI Approaches to the Complexity of Legal Systems*. Springer Lecture Notes in Computer science, to appear.

[24] D. Odekerken, F.J. Bex & H. Prakken, Precedent-based reasoning with incomplete cases. In G. Sileno, J. Spanakis & G. van Dijck (eds.), *Legal Knowledge and Information Systems. JURIX 20213 The Thirty-Sixth Annual Conference*, 33-42. Amsterdam etc, IOS Press (2023).

[25] W. van Woerkom, D. Grossi, H. Prakken & B. Verheij, Hierarchical a fortiori reasoning with dimensions. In G. Sileno, J. Spanakis & G. van Dijck (eds.), *Legal Knowledge and Information Systems. JURIX 20213 The Thirty-Sixth Annual Conference*, 43-52. Amsterdam etc, IOS Press (2023).

[26] H. Prakken, Relating abstract and structured accounts of argumentation dynamics: the case of expansions. In *Proceedings of the 20th International Conference on Principles of Knowledge Representation and Reasoning (KR 2023)*, 562–571.

[27] M. Robeer, F.J. Bex, A. Feelders & H. Prakken, Explaining model behavior with global causal analysis. In: Longo, L. (ed.) *Explainable Artificial Intelligence. xAI 2023*. Communications in Computer and Information Science, vol 1901, pp. 299-323. Springer, Cham.

[28] D. Schuster, H. Prakken & J. Broersen, On floating conclusions. *Proceedings of the 16th International Conference on Deontic Logic and Normative Systems (DEON 2023)*, 199-215. London: College Publications.

[29] H. Prakken & G. Sartor, A formal Framework for combining legal reasoning methods. *Proceedings of the Nineteenth International Conference on Artificial Intelligence and Law*, Braga, Portugal, 2023. New York: ACM Press, to appear.

[30] D. Odekerken, F.J. Bex & H. Prakken, Justification, stability and relevance for case-based reasoning with incomplete focus cases. *Proceedings of the Nineteenth International Conference on Artificial Intelligence and Law*, Braga, Portugal, 2023. New York: ACM Press, to appear.

[31] J. Peters, F.J. Bex & H. Prakken, Model- and data-agnostic justifications with a fortiori case-based argumentation. *Proceedings of the Nineteenth International Conference on Artificial Intelligence and Law*, Braga, Portugal, 2023. New York: ACM Press, to appear.

[32] W. van Woerkom, D. Grossi, H. Prakken & B. Verheij, Hierarchical Precedential Constraint. *Proceedings of the Nineteenth International Conference on Artificial Intelligence and Law*, Braga, Portugal, 2023. New York: ACM Press, to appear.

[33] T. van den Belt & H. Prakken, Measuring the complexity of Dutch legislation. In E. Francesconi, G. Borges & C. Sorge (eds.), *Legal Knowledge and Information Systems. JURIX 20212 The Thirty-Fifth Annual Conference*. Amsterdam etc, IOS Press (2022), 243–248.

[34] J. Peters, F.J. Bex & H. Prakken, Justifications derived from inconsistent case bases using authoritativeness. In *Proceedings of the 1st International Workshop on Argumentation for eXplainable AI*. CEUR-WS, Vol. 3209.

[35] W. van Woerkom, D. Grossi, H. Prakken & B. Verheij, Justification in case-based reasoning. In *Proceedings of the 1st International Workshop on Argumentation for eXplainable AI*. CEUR-WS, Vol. 3209.

[36] H. Prakken, Formalising an aspect of argument strength: degrees of attackability. In F. Toni et al. (eds.): *Computational Models of Argument. Proceedings of COMMA 2022*. Amsterdam etc, IOS Press 2022, 296–307.

[37] G. Pisano, R. Calegari, H. Prakken & G. Sartor, Arguing about the existence of conflicts. In F. Toni et al. (eds.): *Computational Models of Argument. Proceedings of COMMA 2022*. Amsterdam etc, IOS Press 2022, 284–295.

[38] W. van Woerkom, D. Grossi, H. Prakken & B. Verheij, Landmarks in case-based reasoning: from theory to data. In S. Schlobach, M. Perez-Ortiz & M. Tielman (eds.), *HHAI2022: Augmenting Human Intellect. Proceedings of the First International Conference on Hybrid Human-Machine Intelligence*. Amsterdam etc, IOS Press (2022), 212-224.

[39] F.J. Bex & H. Prakken, Can predictive justice improve the predictability and consistency of judicial decision-making? In E. Schweighofer (ed.), *Legal Knowledge and Information Systems. JURIX 2021: The Thirty-Fourth Annual Conference*. Amsterdam etc, IOS Press (2021), 207–214.

[40] E. Bezou Vrakatseli, H. Prakken & Ch. P. Janssen, New experiments on reinstatement and gradual acceptability of arguments. In *Proceedings of the 19th International Workshop on Nonmonotonic Reasoning*, Hanoi (Vietnam), 2021.

[41] H. Prakken, Philosophical reflections on argument strength and gradual acceptability. In J. Vejnarova & N. Wilson (eds.): *Proceedings of the Sixteenth European Conference on Symbolic and Quantitative Approaches to Reasoning with Uncertainty (ECSQARU 2021)*. Springer Lecture Notes in AI 12897, Springer Verlag, Berlin, 2021, 144–158.

[42] F.J. Bex & H. Prakken, On the relevance of algorithmic decision predictors for judicial decision making. *Proceedings of the Eighteenth International Conference on Artificial Intelligence and Law*, Sao Paolo, Brazil, 2021. New York: ACM Press, 175–179.

[43] R. Wieten, F.J. Bex, H. Prakken & S. Renooij, Deductive and abductive reasoning with causal and evidential information. In H. Prakken et al. (eds.): *Computational Models of Argument. Proceedings of COMMA 2020*. Amsterdam etc, IOS Press 2020, pp. 383–394.

[44] H. Prakken, On validating theories of abstract argumentation frameworks: the case of bipolar argumentation frameworks. *Proceedings of the 20th Workshop on Computational Models of Natural Argument*, Perugia, 2020, 21–30.

[45] H. Prakken, A top-level model of case-based argumentation for explanation. In Proceedings of the ECAI 2020 Workshop on *Dialogue, Explanation and Argumentation for Human-Agent Interaction (DEXA HAI 2020)*.

[46] H. Prakken, Comparing alternative factor- and precedent-based accounts of precedential constraint. In M. Araszkiewicz & V. Rodriguez-Doncel (eds.), *Legal Knowledge and Information Systems. JURIX 2019: The Thirty-Second Annual Conference*. Amsterdam etc, IOS Press (2019), 73–82.

[47] R. Wieten, F.J. Bex, H. Prakken & S. Renooij, Constructing Bayesian network graphs from labelled arguments. In In G. Kern-Isberner and Z. Ognjanović (Eds.:) *Proceedings of the Fifteenth European Conference on Symbolic and Quantitative Approaches to Reasoning with Uncertainty (ECSQARU 2019*), Springer LNAI 11726, pp. 99–110, 2019.

[48] H. Prakken, Modelling accrual of arguments in ASPIC+. *Proceedings of the Seventeenth International Conference on Artificial Intelligence and Law*, Montreal, Canada, 2019. New York: ACM Press, 103–112.

[49] R. Wieten, F.J. Bex, H. Prakken & S. Renooij, Supporting discussions about forensic Bayesian networks using argumentation. *Proceedings of the Seventeenth International Conference on Artificial Intelligence and Law*, Montreal, Canada, 2019. New York: ACM Press, 143–152.

[50] R. Wieten, F.J. Bex, H. Prakken & S. Renooij, Exploiting causality in constructing Bayesian network graphs from legal arguments. In M. Palmirani (ed.), *Legal Knowledge and Information Systems. JURIX 2018: The Thirty-First Annual Conference*. Amsterdam etc, IOS Press (2018), 151–160.

[51] H. Prakken, Probabilistic strength of arguments with structure. In *Proceedings of the 16th International Conference on Principles of Knowledge Representation and Reasoning (KR 2018)*, 158-167.

[52] H. Prakken & M. de Winter, Abstraction in argumentation: necessary but dangerous. In S.J. Modgil et al. (eds.): *Computational Models of Argument. Proceedings of COMMA 2018*. Amsterdam etc, IOS Press 2018, 85-96.

In F. Bex, F. Grasso, N. Green, F. Paglieri & Chris Reed (eds.) *Argument Technologies: Theory, Analysis, and Applications*, pp. 1–22. College Publications London, 2017.

Other publications

[53] M. Brinkhuis, H. Prakken & P. van der Heijden, Bias en fairness in datagedreven werken (Bias and fairness in data-driven work). Report comissioned by the Dutch Tax Office (Belastingdienst), section Datafundamenten & Analytics.