

Xavier Parent
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EDUCATION

- 2002** Doctorate of Philosophy, University of Aix-Marseille I, France.
Supervised by Pr. Dr. P. Livet.
Title: “Non-monotonic logic and modes of argumentation: the case of conditional obligation”. Obtained with the highest distinction. Chairman: Pr. Paul Gochet.
Best thesis award (see below).
- 1998** DEA (post-graduate degree granted 5 years after the Baccalauréat) in Philosophy, University of Aix-Marseille I, France.
Title: “Possible-worlds semantics for temporal deontic logic”.
- 1992** Master’s degree in Philosophy, University of Aix-Marseilles I, France.
- 1991** *Licence* (three-year university degree) in Philosophy, University of Aix-Marseille I, France.

PROFESSIONAL EXPERIENCE

- 2021-** Universitätsassistent (senior postdoc), Institute of Logic and Computation, Vienna University of Technology (TU Wien), Austria. Working with Prof. Dr. A. Ciabattoni.
- 2009-2019** Postdoc researcher, Department of Computer Science, University of Luxembourg. Working with Prof. Dr. L. Van der Torre.
- 2006-2008** Guest Researcher at the *CEPERC* (Centre for Comparative Epistemology and Ergology) laboratory within the French *CNRS* (National Centre for Scientific Research). Head: Prof. Dr. P. Livet.
- 2002-2005** Research Associate, Department of Computer Science, King’s College, London. Working with Prof. Dr. A.J.I. Jones.
Two posts, each one being part of an EU-funded project.
- 1998-2002** Assistant Lecturer in Philosophy, University of Aix-Marseille I, France.
Preparation and teaching of: An Introduction to Propositional Logic.
Also affiliated with the *CEPERC* laboratory as a PhD student.
- 1995-1997** Diplomatic attaché responsible for the development of links between French and Vietnamese regions, French Embassy of Hanoi, Vietnam.

AREAS OF EXPERTISE

- Artificial intelligence, knowledge representation and reasoning. Special focus on normative reasoning.

AWARDS

- 3 best paper awards: items 36, 39 and 44 in the list of publications.
- Best thesis award 2002 in the Humanities and Social Sciences (price awarded by the Academy of Aix-Marseille).

INVITED TALK/TUTORIAL

- Keynote speaker at the 13th International Conference on Deontic Logic and Normative Systems (DEON'16), Bayreuth, Germany, 8-21 Jul 2016. Talk title: "Preference-based semantics for dyadic deontic logics in Hansson's tradition: a survey of axiomatisation results".
- Invited tutorial "Normative Reasoning" at *KI'19* (42nd German conference on Artificial Intelligence) held in Kassel, 23-26 Sep 19.

GRANTS

2018 Luxembourg Logic for AI Summit (LuxLogAI). Conference support grant (€24K) awarded by the FNR (Luxembourg National Funds for Scientific Research).

2009-11 LogIques for Normative Multi-Agent Systems (LINMAS). Individual research grant awarded by the FNR (and co-funded by the EU under the Marie Curie scheme).

2004-06 EU-funded FP6 Integrated project "TrustCoM" (IST-2002-2.3.1.9). Research grant.

2001 (1-year) EU-funded FP5 project "ALFEBIITE" (IST-1999-10298). Research grant.

1998-01 Non-Monotonic Reasoning for Argumentation (NMRArg). Individual research grant from the French Ministry of Higher Education and Scientific Research.

As (co)-PI: LINMAS, LuxLogAI and NMRArg.

PUBLICATION SUMMARY

Textbook	Co-édition	Keynote	Journal	Chap.	Conf.	Other	Total
1	7	2	16	8	16	2	50

Table 1: Number of publications

COURSES TAUGHT

Python (Fall 2019, MSc level, University of Luxembourg)

- ▷ Intro course to programming in python
- ▷ Part of the master in math, track "Industrial mathematics"
- ▷ The course consisted in frontal lectures, practicals and an individual projet. We covered the basic notions and more specialized topics like cryptography

Normative reasoning

- ▷ Tutorial at *KI'19* (42nd German conference on Artificial Intelligence) held in Kassel, 23-26 Sep 19).

Intelligent Agents 2 (Falls 2010-18, MSc level, University of Luxembourg)

- ▷ Gave rise to a textbook, item 1 in the list of publications
- ▷ Topics covered: formalisms using norms (deontic logic) and topics from literature on normative multi-agent systems and machine ethics (conflicts between obligations, reasoning about norm violation) ; implementation in Isabelle/HOL

Intelligent Agents 1 (Spring 2016, MSc level, University of Luxembourg)

- ▷ Topics covered: knowledge representation, more specifically conditional logics, nonmonotonic logics and belief revision theory

Deontic logic (Spring and Fall 2014, postgraduate level, University of Luxembourg, Computer Science)

- ▷ Guest lectures part of the Ph.D. International Program Erasmus Mundus Law, Science and Technology (<http://www.last-jd.eu>)

Normative Multi-Agent Systems

- ▷ Tutorial at *EASSS'09* (11th European Agent Systems Summer School) held in Torino, 31 Aug - 4 Sep 09). Postgraduate level.

Artificial Intelligence (Spring 2009, undergraduate level, University of Luxembourg, Computer Science)

- ▷ The course presented an overview of core AI topics (planning; Prolog; learning)

Propositional Logic (Spring 1998 - Spring 2002, undergraduate level, University of Aix-Marseille I, Philosophy)

- ▷ Teaching assistant - Prof. in charge: A. Michel, Professor of Philosophy at the University of Aix-Marseille I. (I was in charge of the practicals)
- ▷ During this period, I also followed a pedagogical training programme for university teachers

Logic and Language (Fall 1995, Graduate level, University of Aix-Marseille I)

- ▷ Part of a Master Program in Language Science, University of Aix-Marseille I, France

CO-SUPERVISION OF STUDENTS

Acted as daily supervisor.

Resulted in:

- 7 joint papers: items 10, 12, 13, 35, 36, 39 and 41
- two best paper-awards: 36 and 39
- one best master award (see below).

PhD

2021- Maya Olszewski, TU Wien, Logic and Theory group. Topic: deontic logic. Co-supervised with Prof. Ciabatonni.

2016-20 Ali Farjami, University of Luxembourg, Department of Computer Science. PhD

title: *Discursive Input/output Logic*. Award date: 1 Oct 2020. Co-supervised with Prof. van der Torre.

2013-17 Diego Ambrossio, University of Luxembourg, Department of Computer Science. PhD title: *Non-Monotonic Logics for Access Control: Delegation Revocation and Distributed Policies*. Award date: May 2017. Now in industry (name of the company: LuxAI). Co-supervised with Prof. van der Torre.

2012-16 Xin Sun, University of Luxembourg, Department of Computer Science. PhD title: *Logic and Games of Norms: a Computational Perspective*. Award date: July 2016. Now post-doc at the University of Lublin, Poland. Co-supervised with Prof. van der Torre.

Master

2021- Dominik Pichler, TU Wien, Logic and Theory group. Topic: 1st-order deontic logic. Co-supervised with Prof. Ciabattoni.

2019 Maya Olszewski, University of Luxembourg, Department of Computer Science. Master title: exploring permission in I/O logic. Award date: 26 Aug 2019. Co-supervised with Prof. van der Torre.

**Best master thesis in the Faculty of Science **

2018 Paul Meder, University of Luxembourg, Department of Computer Science. Master title: *Deontic Agency and Moral Luck*. Award date: 3 Sep 2018. Now high-school teacher. Co-supervised with Prof. van der Torre.

2016 Zohreh Baniyasadi, University of Luxembourg, Department of Computer Science. Master title: *STIT Logic for Machine Ethics With IDP Specification*. Award date: 12 May 2016. Now doing a PhD. Co-supervised with Prof. van der Torre.

CO-ORGANISATION OF CONFERENCES AND WORKSHOPS

Luxembourg Logic for AI Summit (LuxLogAI), 17-26 Sep 2018.

<https://luxlogai.uni.lu> Number of attendees: 226. Co-organised with L. van der Torre, C. Benz Müller and M. Theobald. LuxLogAI combined three main events:

- 2nd Joint International Conference on Rules and Reasoning (RuleML+RR 2018)
- 4th Global Conference on Artificial Intelligence (GCAI 2018)
- 14th Reasoning Web Summer School (RW 2018)
- Mirel 2018 (MIning and REasoning with Legal texts)

30th International Conference on Legal Knowledge and Information Systems (JURIX 2017) 13-15 Dec 2017, Luxembourg. Co-organized with G. Casini.

10th de Morgan workshop on deontic logic, 5 & 6 July 10, Firenze

9th de Morgan workshop on deontic logic, 1-4 Dec 09, Luxembourg

Workshop on logic/argumentation, 18 Dec 00, University of Aix-Marseille I

OTHER ACADEMIC RESPONSIBILITIES AND SERVICES

- Co-editor of the textbook series *Texts in Logic and Reasoning*, published by College Publications.
- RuleML+RR 2018 general chair. Website: <http://2018.ruleml-rr.org/>

- PC co-chair
 - 12th International Conference on Deontic Logic and Normative Systems (DEON 2014), 12-15 July 2014, Ghent, Belgium. <http://www.deon2014.ugent.be>
 - Mirel 2017 (Mining and Reasoning with Legal Texts)
- PC member
 - NMR 2021
 - CLAR 2021
 - DEON 2020-21
 - VCLA 2021 Awards for Bachelor and Master thesis
 - AAAI 2019 - 21 (the 33rd - 35th AAAI Conference on Artificial Intelligence)
 - MIREL 2019 (Mining and Reasoning with Legal texts)
 - AiML 2020 (Advances in Modal Logic) 17-21 August 2020, University of Helsinki
 - KI2019 Doctoral consortium (42nd German Conference on AI), 23-26 Sep 2019, Kassel, Germany
 - AAMAS (International Conference on Autonomous Agents and Multiagent Systems) 2019-20
 - IJCAI (International Joint Conference on Artificial Intelligence) 2018-20
 - ECAI (European Conference on Artificial Intelligence) 2018
 - GCAI (Global Conference on Artificial Intelligence) 2017-19
 - Mirel (Mining and Reasoning with Legal Texts) 2017 and 2018
 - CLIMA XV, Prague, 18-19 Aug 2014; CLIMA XIV, Corunna, Spain, 16-18 Sep 2013
 - DEON (International Conference on Deontic Logic in Computer Science) 2010 to 2017
 - RDA2@ECAI'12, Right and duties of Autonomous Agents, ECAI'12 workshop
 - Festschrift of Marek Sergot 2012
 - 23rd Benelux Conference on Artificial Intelligence (BNAIC 2011)
 - Agent Communication 2010, in conjunction with AAMAS 2010
 - ArgMAS (International Workshop on Argumentation in Multi-Agent Systems) 2004 to 2007
 - BNAIC (Benelux Conference on Artificial Intelligence) 2010
 - NorMAS 09 (Normative Multi-Agent Systems 2009)
- Research project evaluation for *The Netherlands Organisation for Scientific Research (NWO)*.
- Regular reviewer for *Zentralblatt für Mathematik* and *Mathematical Reviews*.
- Reviewer for approx. 15 refereed academic journals.

PUBLICATION LISTS

Textbook

1. X. Parent and L. van der Torre. *Introduction to Deontic Logic and Normative Systems*, College Publications, Texts in Logic and Reasoning, UK, London, 2018.

Co-editions

2. D. Gabbay, J. Horty, X. Parent, R. van der Meyden and L. van der Torre (eds). *Handbook of Deontic Logic and Normative Systems*, Volume 2, College Publications, London, 2021.
3. C. Benzmüller, X. Parent and F. Ricca, “Logic rules and reasoning: Selected papers from the 2nd International Joint Conference on Rules and Reasoning (RuleML+RR 2018)”, *Journal of Theory and Practice of Logic Programming*, volume 21, number 1, 2021.
4. X. Parent and J. Meheus (guest editors), “Special issue: deontic modalities in natural language” (selected and revised papers from the 12th International Conference on Deontic Logic and Normative Systems, DEON 2014), *Journal of Logic and Computation*, volume 29, issue 3, July 2019.
5. C. Benzmüller, X. Parent and A. Steen (eds.), “Selected student contributions and workshop papers of LuxLogAI 2018”, *EasyChair*, Kalpa Publications in Computing, volume 10, 2019.
6. C. Benzmüller, F. Ricca, X. Parent, D. Roman (eds). *Rules and Reasoning - Second International Joint Conference, RuleML+RR 2018*, Luxembourg, September 18-21, 2018, Proceedings. Lecture Notes in Computer Science Volume 11092, Springer, 2018.
7. D. Gabbay, J. Horty, X. Parent, R. van der Meyden and L. van der Torre (eds). *Handbook of Deontic Logic and Normative Systems*, Volume 1, College Publications, London, 2013.
8. F. Cariani, D. Grossi, J. Meheus and X. Parent (eds), *Deontic Logic and Normative Systems*, 12th International Conference, 2014, July 12-15, 2014. Proceedings. Lecture Notes in Computer Science Volume 8554, Springer, 2014.

Papers in refereed academic journals

9. “A modal embedding of an intuitionistic I/O operation”. Forthcoming in *The IfCoLog Journal of Logics and their Applications*, V. de Paiva and S. Artemov (Guest eds.), Post-conference proceedings of IMLA 2017 (7th Workshop on Intuitionistic Modal Logic and Applications).
10. C. Benzmüller, X. Parent, L. van der Torre, A. Farjami, D. Fuenmayor, P. Meder, A. Steen, V. Zahoransky, “LogiKEY workbench: deontic logics, logic combinations and expressive ethical and legal reasoning (Isabelle/HOL dataset)”, In *Data in Brief*, Elsevier, volume 33, number 106409, pp. 1-10, 2020. (Note: data publication)
11. C. Benzmüller, X. Parent and L. van der Torre, “ Designing normative theories for ethical and legal reasoning: LogiKEY framework, methodology, and tool support”. To appear in *Artificial Intelligence* (special issue “Ethics for autonomous systems”), 2020, 287, pp. 103348.
12. C. Benzmüller, A. Farjami and X. Parent, “Åqvist’s dyadic deontic logic E in HOL”, *The IfCoLog Journal of Logics and their Applications*, special issue “Mining and Reasoning with LEgal texts (MIREL)”, 2019, 6(5), pp. 733-755.
13. C. Benzmüller, A. Farjami, P. Meder and X. Parent, “I/O Logic in HOL”, *The IfCoLog Journal of Logics and their Applications*, special issue “Mining and Reasoning with LEgal texts (MIREL)”, 2019, (6)5, pp. 715-732.
14. X. Parent and L. van der Torre, “I/O logics for normative reasoning”, *Filosofiska*,

2019, 6(1), pp. 189–208.

15. X. Parent and L. van der Torre, “Detachment in normative systems: examples, inference patterns, properties”, *The IfCoLog Journal of Logics and their Applications*, 2017, 4(9), pp. 2295-3039.
16. X. Parent, “Completeness of Åqvist’s systems E and F”, *Review of Symbolic Logic*, 2015, 8 (1), pp. 164-177.
17. X. Parent, “Optimality vs maximality in dyadic deontic logic - Completeness results for systems in Hansson’s tradition”, *Journal of Philosophical Logic*, 2014, 43(6), pp. 1101-1128.
18. D. Gabbay, M. de Boer, X. Parent and M. Slavkovic, “Two-dimensional standard deontic logic”, *Synthese*, 2012, 187(2), pp. 623-660.
19. X. Parent, “Moral particularism in the light of deontic logic”, *Artificial Intelligence and Law* (DEON’10 special issue), 2011, 19(2-3), pp. 75-98.
20. X. Parent, “A complete axiom set for Hansson’s deontic logic DSDL2”, *Logic Journal of the IGPL (Interest Group in Pure and Applied Logics)*, 2010, 18(3), pp. 422-429.
21. A.J.I. Jones and X. Parent, “Normative-informational positions - A modal-logical approach”, *Artificial Intelligence and Law*, 2008, 16(1), pp. 7-23.
22. A.J.I. Jones and X. Parent, “A convention-based approach to Agent Communication Languages”, *Group Decision and Negotiation*, 2007, 16, pp. 101-141.
23. “Remedial interchange, contrary-to-duty obligation, and commutation”, *Journal of Applied Non-Classical Logics*, 2003, 13(3/4), pp. 345-375.
24. “Cumulativity, identity and time in deontic logic”, *Fundamenta Informaticae*, 2001, 48, pp. 237-252.

Chapters in books

25. “Preference-based semantics for Hansson-type dyadic deontic logics: A survey of results”. In D. Gabbay, J. Horty, X. Parent, R. van der Meyden and L. van der Torre (eds), *Handbook of Deontic Logic and Normative Systems*, Volume 2, College Publications, London, 2021, p. 7-70.
26. X. Parent, D. Gabbay and L. van der Torre, “Intuitionistic basis for input/output logics”. In S. O. Hansson (ed), *David Makinson on Classical Methods for Non-Classical Problems*, Springer, Series Outstanding Contributions to Logic, Vol. 3, 2014, pp. 263-286.
27. X. Parent and L. van der Torre, “Input/output logic”. In D. Gabbay, J. Horty, X. Parent, R. van der Meyden and L. van der Torre, (eds), *Handbook of Deontic Logic and Normative Systems*, Volume 1, College Publications, London, 2013, pp. 499-544.
28. J. Broersen, S. Cranefield, Y. Elrakaiby, D. Gabbay, D. Grossi, E. Lorini, X. Parent, L. van der Torre, L. Tummolini, P. Turrini, and F. Schwarzentruher, “Normative reasoning and consequence”, *Normative Multi-Agent Systems*, Dagstuhl Follow-Ups, 2013, pp. 33-70.
29. J. Broersen, D. Gabbay, A. Herzig, E. Lorini, J.-J. Meyer, X. Parent and L. van der Torre) “Deontic logic” . In S. Ossowski (ed), *Agreement Technologies*, 2013, Springer, Dordrecht Heidelberg, pp. 171-180.
30. X. Parent, “Why be afraid of identity?”. In A. Artikis, R. Craven, N. Kesim, B.

Sadighi and K. Stathis (eds), *Logic Programs, Norms and Action: Essays in Honor of Marek J. Sergot on the Occasion of His 60th Birthday*, 2012, Springer, LNCS, pp. 295-307.

31. X. Parent, P. Turini, L. van der Torre and S. Colombo Tosatto, “Contrary-to-duties in games”. In A. Artikis, R. Craven, N. Kesim, B. Sadighi and K. Stathis (eds), *Logic Programs, Norms and Action: Essays in Honor of Marek J. Sergot on the Occasion of His 60th Birthday*, 2012, Springer, LNCS, pp. 329-348.
32. X. Parent and P. Livet, “Conditional, revision and argumentation” (in French). In P. Livet (ed.) *Révision des Croyances*, 2002, Paris: Hermès Science Publication, pp. 229-258.

Papers in refereed conferences with formal proceedings

33. C. Benzmueller, X. Parent and L. van der Torre, “Designing normative theories of ethical reasoning” (extended abstract, plus poster). In *30th International Joint Conference on Artificial Intelligence, IJCAI 2021*, journal paper track.
34. C. Benzmueller, X. Parent, L. van der Torre, “Designing normative theories for ethical and legal reasoning: LogiKEY framework, methodology, and tool support (extended abstract)”. In *17th Conference on Principles of Knowledge Representation and Reasoning (KR 2020)*, Recently Published Research track, 2020.
35. M. Olszewski, X. Parent and L. van der Torre, “I/O logics with a consistency check—the case of permission”. In F. Liu, A. Marra, P. Portner, and F. Van De Putte (eds.), *Deontic Logic and Normative Systems: 15th International Conference (DEON2020/2021, Munich)*, London: College Publications, 2021.
36. C. Benz Müller, A. Farjami, X. Parent, “A dyadic deontic logic in HOL”. In J. Broersen, C. Condoravdi, S. Nair, G. Pigozzi (eds.), *Deontic Logic and Normative Systems — 14th International Conference, DEON 2018*, Utrecht, The Netherlands, 3-6 July, 2018, College Publications, pp. 33-50, 2018.
*** John-Jules Meyer best paper award ***
37. X. Parent and L. van der Torre, “I/O logics with a consistency check”. In J. Broersen, C. Condoravdi, S. Nair, G. Pigozzi (eds.), *Deontic Logic and Normative Systems — 14th International Conference, DEON 2018*, Utrecht, The Netherlands, 3-6 July, 2018, College Publications, pp. 33-50, 2018.
38. C. Benz Müller, X. Parent, L. van der Torre, “A deontic logic reasoning infrastructure”, In R. Miller, D. Nowotka, F. Manea (eds.), *14th Conference on Computability in Europe, CiE 2018*, Kiel, Germany, July 30-August, 2018, Springer, 2018.
39. Z. Baniasadi, M. Cramer, C. Max and X. Parent, “A model for regulating ethical preferences in machine ethics”. In Kurosu Masaaki (ed.), *Human-Computer Interaction. Theories, Methods, and Human Issues*, 2018, Springer International Publishing, p.481-506.
*** Best paper award ***
40. X. Parent and L. van der Torre, “The pragmatic oddity in a norm-based semantics”. In G. Governatori (Ed.), *16th International Conference on Artificial Intelligence & Law (ICAIL-17)*, ACM, 2017.
41. A. Ambrossio, X. Parent and L. van der Torre, “Cumulative aggregation”. In O. Roy, A. Tamminga and M. Willer (eds), *Deontic Logic and Normative Systems*, 13th Int Conference, DEON 2016, College Publications, UK, 2016, p. 1-15.

42. X. Parent and L. van der Torre, “*Sing and dance!*. Input/output logics without weakening.” In: F. Cariani, D. Grossi, J. Meheus and X. Parent (eds), *Deontic Logic and Normative Systems*, 12th International Conference, DEON 2014, 2014, Springer, LNCS.
43. X. Parent and L. van der Torre, “Aggregative deontic detachment for normative reasoning”. In T. Eiter and C. Baral and G. De Giacomo (eds), *Principles of Knowledge Representation and Reasoning*. Proceedings of the 14th International Conference - KR 2014. AAAI Press, 2014.
44. X. Parent, “Moral particularism and deontic logic”. In G. Sartor et G. Governatori (eds), *Proceedings of the 10th International Conference on Deontic Logic*, Deontic Logic (DEON 2010), Florence, July 2010, LNA, Springer-Verlag, Berlin Heidelberg, 2010, pp. 84-96.
*** Best paper award DEON 2010 ***
45. X. Parent, “On the strong completeness of Åqvist’s dyadic deontic logic G”. In R. van der Meyden and L. van der Torre (eds.), *Deontic Logic in Computer Science*, Proceedings of the 9th International Conference on Deontic Logic (DEON 2008), Luxembourg, July 2008, LNAI 5076, Springer-Verlag, Berlin Heidelberg, 2008, pp. 189-202.
46. F. Vraalsen, M. S. Lund, T. Mahler, X. Parent and K. Stølen. “Specifying legal risk scenarios using the Coras threat modelling language”. In P. Hessmann, V. Issarny and S. Shin (eds), *Trust Management*, Proceedings of the 3rd International Conference on Trust Management, iTrust 2005, Paris, 23-26 May 2005, Springer Verlag, LNCS 3477, 2005, pp. 45-61.
47. A.J.I. Jones and X. Parent, “Signalling conventions and conversation”. In F. Dignum (ed), *Advances in Agent Communication: International Workshop on Agent Communication Languages ACL 2003, Melbourne, Australia, July 14, 2003*, Lecture Notes in Artificial Intelligence, Springer Verlag, 2004, pp. 1-17.
48. X. Parent, “Defeasible conditional obligation: some remarks”. In R. Hilpinen and R. Demolombe (eds.) *Proceedings of the 5th International Workshop on Deontic Logic*, 20-22 January 2000, Toulouse, France, pp. 301-309.

Other archival publications

49. C. Benzmüller, F. Ricca and X. Parent, “Report on the Second International Joint Conference on Rules and Reasoning (RuleML+RR 2018)”, *AI Magazine*, 2019, 40(2), pp. 73-74.
50. X. Parent. Review of *Coherent Systems* by Karl Schlechta. In *Logic Journal of the IGPL (Interest Group in Pure and Applied Logics)*, 13, 2005, pp. 353-359.