

**DANIELE PORELLO**  
CURRICULUM VITAE

First name: Daniele  
Surname: Porello  
Date of birth: 23/12/1977

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**Area of Specialization:** mathematical logic, proof-theory, substructural logics, philosophical logic, judgment aggregation, social choice theory, philosophy of economics, ontology.

**Area of Competence:** logic, modal logics, philosophy of language, formal semantics, epistemology, history of logic, history of analytical philosophy, social ontology, distributive justice, political philosophy, game theory, decision theory.

**Employments**

(2016 – ) **Assistant professor**, Free University of Bolzano-Bozen.

(2012 – 2016) **Research fellow**: Laboratory for Applied Ontology, Institute for Cognitive Science and Technology (ISTC), Italian National Research council (CNR), Trento.

(2009 – 2012) **Fixed-term researcher**: ILLC (Institute for Logic, Language & Computation), Universiteit van Amsterdam.  
Project: European Science Foundation (ESF) LogICCC: “Computational Foundation of Social Choice”.

(2007 – 2008) **Postdoc**: INRIA (Institute National de Recherche en Informatique et en Automatique), Bordeaux. LaBRI (Laboratoire Bordelaise de Recherche en Informatique).

**Sholarships  
and awards**

March 2011: Visiting Scholar, Université Paris Dauphine, LAMSADE (Laboratoire d’Analyse et Modélisation de Systèmes pour l’Aide à la DEcision) Nicolas Maudet. Grant: Algorithmic Decision Theory, Cost Action.

November 2010: Visiting Scholar, Equipe SIGNES (LaBRI, Laboratoire Bordelaise de Recherche en Informatique), Bordeaux. Grant: INRIA, SIGNES.

Best paper *AISC 2008* Associazione Italiana di Scienze Cognitive, Torino, November 2008.

Shortlisted for best paper *AISC 2015* Associazione Italiana di Scienze Cognitive, Torino, November 2015.

<b>Qualifications</b>	<p>French national qualification: <i>Maître de Conférence</i> in:  <i>Section 27 - Informatique.</i>  <i>Section 72 - Epistémologie, histoire des sciences et des techniques.</i></p> <p>Italian national qualification Associate Professor in “Logica, storia e filosofia della scienza” (11/C2), seconda fascia.</p>
<b>Education</b>	<p>(2003 – 2006) <b>PhD in Philosophy</b>, Università di Genova.          PhD Thesis: “Linguistic Applications of Non-commutative logics”.</p> <p>(1997 – 2002) <b>Msc in Philosophy</b> (<i>Laurea Magistrale in Filosofia</i>), Università di Genova (110/110 <i>cum laude</i>).          Master Thesis: “Logica e Teoria delle Categorie: Aspetti Fondazionali”.</p>

## PUBLICATIONS

### Journal papers:

1. (201x) C. Masolo and D. Porello. Una semantica cognitiva per i linguaggi predicativi. *Sistemi Intelligenti*. (In corso di stampa).
2. (2016) D. Porello. Single-peakedness and semantic dimensions of preferences. *Logic Journal of IGPL*, 24(4): 570-583
3. (2015) D. Porello and N. Troquard. Non-normal Modalities in Variants of Linear Logic. *Journal of Applied Non-Classical Logics*, 25(3): 229-255.
4. (2014) D. Porello and U. Endriss. Ontology Merging as Social Choice: Judgment Aggregation under the Open World Assumption. *Journal of Logic and Computation*, 24 (6): 1229-1249.
5. (2013) V. Ottonelli and D. Porello. On the Elusive Notion of Meta-Agreement. *Politics, Philosophy & Economics*, 12 (1): 68-92.
6. (2012) D. Porello. Logic in Social Choices. *Cognitive Systems*, 7 (3): 305-315.
7. (2012) U. Endriss, U. Grandi, and D. Porello. Complexity of Judgment Aggregation. *Journal of Artificial Intelligence Research*, 45:481-514.
8. (2012) D. Porello. Incompatibility Semantics from Agreement. *Philosophia*, 40 (1):99-119.
9. (2010) D. Porello. Ranking Judgments in Arrow’s Settings, *Synthese*, 173: 199-210.
10. (2010) D. Porello. Logica, preferenze e deliberazione. Un modello logico dei processi deliberativi. *Sistemi Intelligenti*, Anno XXII, n.1, Aprile 2010, 49-64.
11. (2009) D. Porello. La necessità di un’isola, *Philosophical Readings*, I,1 pp. 5-45 (invited paper). <http://philosophicalreadings.files.wordpress.com/2011/12/pr12009.pdf>
12. (2007) D. Porello. Deductive and Grammatical Competence: Type Logical Remarks on Nesting Phenomena. *Epistemologia. Rivista Italiana di Filosofia della Scienza*, 30, (2), 281-306.

### Proceedings:

13. (2016) C. Masolo and D. Porello. Understanding predication in conceptual spaces. In *FOIS 2016, 9th International Conference on Formal Ontology in Information Systems, 6th-9th July 2016*. IOS Press. pp. 139–152.
14. (2016) E. Sanfilippo, S. Borgo, C. Masolo, D. Porello. Features and Components in Product Structure Models. In *FOIS 2016, 9th International Conference on Formal Ontology in Information Systems, 6th-9th July 2016*. IOS Press. 227–240.
15. (2015) C. Masolo and D. Porello. A note on the representation of relations in conceptual spaces. In *Proceedings of AISC 2015 (Italian Society for Cognitive Science. 10-12 December 2015)*, NeaScience Anno 2 Volume 9, 117-121.
16. (2015) D. Porello. Majoritarian Group Actions. In *Principles and Practice of Multi-Agent Systems - 18th International Conference, Bertinoro, Italy, October 26-30, 2015. Lecture Notes in Computer Science*. Vol. 9387. Springer. pp. 416-432.
17. (2015) R. Ferrario and D. Porello. Towards a conceptualization of socio-material entanglement. In *The Ninth International and Interdisciplinary Conference on Modeling and Using Context, CONTEXT 2015* November. 32–46.
18. (2015) D. Porello. Modelling equivalent definitions of concepts. In *The Ninth International and Interdisciplinary Conference on Modeling and Using Context, CONTEXT 2015*, November. 506–512.
19. (2015) C. Masolo and D. Porello. A cognitive view of relevant implication. In *Proceedings of the 3rd International Workshop on Artificial Intelligence and Cognition, Turin, Italy, September 28-29, 2015. CEUR Workshop Proceeding 1510*. pp. 40-53.
20. (2015) D. Porello, M. Cristani, and R. Ferrario. Integrating Ontologies and Computer Vision for Classification of Objects in Images. In *Workshop on Neural-Cognitive Integration. KI 2015, the 38th German Conference on Artificial Intelligence*.
21. (2015) E. Sanfilippo, C. Masolo, and D. Porello. Design Knowledge Representation. In *Proceedings of the 1st Workshop on Artificial Intelligence and Design. A workshop of the XIV International Conference of the Italian Association for Artificial Intelligence (AI\*IA 2015). September 2015. CEUR Workshop Proceedings*. pp. 41-54.
22. (2014) D. Porello. Logics for Collective Reasoning. In *Proceedings of the European Conference on Social Intelligence (ECSI 2014)*. November. pp. 148-159.
23. (2014) E. Bottazzi, C. Masolo, e D. Porello. Old and New Riddles about Concept Sharing. In *Proceedings of the European Conference on Social Intelligence (ECSI 2014)*. November. pp. 16-27.
24. (2014) D. Porello, E. Bottazzi, e R. Ferrario. The Ontology of Group Agency. In *8th International Conference on Formal Ontology in Information Systems (FOIS 2014)*. IOS Press. pp. 183-196.
25. (2014) S. Borgo, D. Porello, e N. Troquard. Logical Operators for Ontological Modeling. In *8th International Conference on Formal Ontology in Information Systems (FOIS 2014)*. IOS Press. pp. 23-36.
26. (2014) D. Porello e N. Troquard. A resource-sensitive logic of agency. In *Proceedings of the 21st European Conference on Artificial Intelligence (ECAI-2014), August 2014*. pp. 723-728.
27. (2014) D. Porello and N. Troquard. A resource-sensitive account of the use of artifacts. In *Proceedings of the 13th International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS'14), May 2014*. IFAAMAS, 2014.1549-1550.

28. (2013) D. Porello, F. Setti, R. Ferrario, and M. Cristani. Multiagent Socio-Technical Systems. An Ontological Approach. In *Proceedings of the 15th International Workshop on Coordination, Organisations, Institutions and Norms (COIN 2013), AAMAS 2013*, LNCS Proceedings. 42-62.
29. (2013) D. Porello. A Proof-Theoretical View of Collective Rationality. In *Proceedings of the 23rd International Joint Conference of Artificial Intelligence (IJCAI 2013)*. August 2013.
30. (2013) F. Setti, D. Porello, R. Ferrario, S. A. Abdulkhak, and M. Cristani. “Tell me more”: how semantic technologies can help refining internet image search. In *Proceedings of the International Workshop on Video and Image Ground Truth in Computer Vision Applications (VIGTA '13)*. July 2013.
31. (2013) D. Porello, R. Ferrario, C. Giorgetta. Ontological modeling of emotion-based decisions. In *Proceedings the 1st Workshop of Formalizing Mechanisms for Artificial General Intelligence and Cognition (FormalMAGIC 2013)*. August 2013.
32. (2013) D. Porello. Deliberating About Voting Dimensions. In *Proceedings of the 12th International Conference on Autonomous Agents and Multiagent Systems (AAMAS-2013)*, May 2013. 1265-1266.
33. (2012) D. Porello. The Consistency of Majority Rule. In *Proceedings of the 20th European Conference on Artificial Intelligence (ECAI-2012)*, Montpellier, August 2012. 921-922.
34. (2011) D. Porello. Giustificazioni pubbliche e modelli di giustizia distributiva. *Proceedings of AISC (Associazione Italiana Scienze Cognitive)*, Milan, December 2011.
35. (2011) D. Porello and U. Endriss. Ontology Merging as Social Choice. In *Proceedings of the 12th International Workshop on Computational Logic in Multiagent Systems (CLIMA-2011)*, July 2011. 157-170.
36. (2011) S. Airiau, U. Endriss, U. Grandi, D. Porello and J. Uckelman. Aggregating Dependency Graphs into Voting Agendas in Multi-Issue Elections. In *Proceedings of the 22nd International Joint Conference on Artificial Intelligence (IJCAI-2011)*, July 2011. 18-23.
37. (2010) U. Endriss, U. Grandi and D. Porello. Complexity of Winner Determination and Strategic Manipulation in Judgment Aggregation. In *Proceedings of the 3rd International Workshop on Computational Social Choice (COMSOC-2010)*, University of Düsseldorf, September 2010.
38. (2010) D. Porello and U. Endriss. Modelling Multilateral Negotiation in Linear Logic. In *Proceedings of the 19th European Conference on Artificial Intelligence (ECAI-2010)*, August 2010. 381-386.
39. (2010) D. Porello and U. Endriss. Modelling Combinatorial Auctions in Linear Logic. In *Proceedings of the Twelfth International Conference on the Principles of Knowledge Representation and Reasoning, Toronto, Canada, May 9-13, 2010 (KR-2010)*, May 2010.
40. (2010) U. Endriss, U. Grandi and D. Porello. Complexity of Judgment Aggregation: Safety of the Agenda. In *Proceedings of the 9th International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS-2010)*, May 2010. 359-366.
41. (2009) D. Porello. Logic and Pragmatics. In *Proceedings of TAP-2009 (Towards an Analytic Pragmatism)*, C. Amoretti, C. Penco, F. Pitto (eds), CEUR-Workshop Proceedings, Vol-444.
42. (2009) D. Porello. Dimensioni di Voto e Coerenza. In *Proceedings of AISC 2009 (Italian Society of Cognitive Science)*, Napoli.
43. (2007) D. Porello. Aggregation of Ranking Judgements and Arrow’s Theorem. In *A Meeting of the Minds. Proceedings of Workshop on Logic, Rationality and Interaction, Beijing, 2007*, J. van

Benthem, Shier Ju and F. Veltman, (eds.), Text in Computer Science 8, College Publication, London, 2007. 201-212.

#### **Book chapters:**

44. (2016) D. Porello. On the Quality of Collective Decisions in Sociotechnical Systems: Transparency, Fairness, and Efficiency. In *New Frontiers in the Study of Social Phenomena*. Springer International Publishing, 2016. 153-167.
45. (2015) D. Porello, E. Bottazzi, e R. Ferrario. Group Conflict as Social Contradiction. In *Conflict and Multimodal Communication Social Research and Machine Intelligence. Series: Computational Social Sciences*. D'Errico, F., Vinciarelli, A., Poggi, I., Vincze, L. (Ed.). Springer 2015, XIV. In corso di stampa.
46. (2012) D. Porello. Reasoning about Multiagent Resource Allocation in Linear Logic. In *Logic and Interactive Rationality (LIRA) Yearbook 2011*, Amsterdam.
47. (2010) C. Penco and D. Porello. Sense and Proofs. In *New Essays in Logic and Philosophy of Science*, Marcello D'Agostino, Giulio Giorello, Federico Laudisa, Telmo Pievani and Corrado Sinigaglia (eds), College Publications, London.
48. (2010) D. Porello. Logic in Social Choices. In M. Cruciani (ed) *Practices of Cognition. Recent Researches in Cognitive Sciences*. Trento: Università degli Studi di Trento.
49. (2008) D. Porello. Linguistic Applications of Non-Commutative Logic. In C. Casadio, J. Lambek (eds), *Computational Algebraic Approaches to Natural Language*, Polimetrica, 2008. 213-232.

#### **Other:**

50. (2012) E. Biale e D. Porello. Decisioni democratiche tra deliberazione e negoziazione. *Laboratorio di Politica Comparata e Filosofia Pubblica (LPF)*, Working Paper WP-LPF 6/12.
51. (2008) D. Porello. A Translation of Discursive Dilemma into Condorcet's Paradox. In *Volume of Abstracts 6th European Congress of Analytic Philosophy*, Jagiellonian University, Institute of Philosophy, 21-26 August, Krakow, Poland. (Abstract)
52. (2007) D. Porello. Categorical Basis of Metaphysics. In *Handbook of Universal Logic*, Xi An. (Abstract)

#### **Editorship:**

53. (2015) Odile Papini, Salem Benferhat, Laurent Garcia, Marie-Laure Mugnier, Eduardo L. Ferm, Thomas Meyer, Renata Wassermann, Torsten Hahmann, Ken Baclawski, Adila Krisnadhi, Pavel Klinov, Stefano Borgo, Oliver Kutz, Daniele Porello: *Proceedings of the Joint Ontology Workshops 2015 Episode 1: The Argentine Winter of Ontology* co-located with the 24th International Joint Conference on Artificial Intelligence (IJCAI 2015), Buenos Aires, Argentina, July 25-27, 2015. CEUR Workshop Proceedings 1517.

#### **Reviews:**

54. (2006) C. Penco (ed), *La svolta contestuale*, McGraw-Hill, Milano 2002. *Epistemologia. Rivista Italiana di Filosofia della Scienza*, 29 (2). (con D. Palladino)

55. (2006) A. Varzi, J. Nolt, D. Rohatyn, *Logica*, Mc Graw-Hill Italia, Milano, 2004. *Epistemologia (ibidem)*. (con D. Palladino)
56. (2006) M. Carrara e P. Giaretta (ed), *Filosofia e Logica*, Rubbettino, Catanzaro, 2004. *Epistemologia (ibidem)*. (con D. Palladino)
57. (2006) P. Casalegno e M. Mariani, *Teoria degli insiemi. Un'introduzione*, Carocci, Roma, 2004. *Epistemologia (ibidem)*. (con D. Palladino)

#### **Didactics and popularization:**

58. (2009) Encyclopedia *Le parole della filosofia contemporanea*, Luciano Floridi, Gian Paolo Teravecchia (eds), Carocci, Roma. Entries: Algebra della logica, Argomento Ontologico, Autoreferenzialità, Categorematico/Sincategorematico, Comprensione ed Estensione, dimostrazione, Doppia Negazione, Estensione, Forma Logica, Formalismo, Induzione Matematica, Logica Lineare, Logica Paraconsistente, Metateoria, Metodo Assiomatico, Operatori Estensionali-Intensionali, Sinn-Bedeutung, Teorema di Church.

#### **TEACHING ACTIVITY**

##### **Courses:**

- 2016: “Introduction to Multiagent Systems for Robotics” (con S. Borgo), Doctoral School on Information and Communication Technology, Università di Trento.
- 2016: “Introduction to Game Theory” Doctoral School on Computer Science, Università di Bolzano.
- 2016: “Introduction to Game Theory” Doctoral School on Information and Communication Technology, Università di Trento.
- 2015: “Introduzione alla Logica Modale” Università di Genova, Autumn 2015.
- 2015: “Ontologies for Computer Vision” (con M. Cristani e R. Ferrario). Doctoral School on Information and Communication Technology, Università di Trento.
- 2013: “Tutorial on Social Choice Theory in Computer Science” , ISTC, Trento, July, 2013.
- 2012: “Preferenze, giudizi e deliberazione: modelli di scelta sociale”. PhD in Philosophy, Università di Padova.
- 2011: “Logic programming and search techniques” Bachelor in Artificial Intelligence (BSc) (University of Amsterdam).
- 2011: “Normative Foundations and Mathematical Modelling of Egalitarian and Utilitarian Welfare”. Master of Logic (MSc), ILLC, University of Amsterdam.
- 2010: Tutorial “Logical Themes in Welfare Economics”. Introduction to the research topics of the Institute for Logic, Language and Computation, *LoLaCo*, University of Amsterdam, November.
- 2010: Tutorial “Proofs, Games and Dialogues”, Workshop: *Dialogues and Games: Historical Roots and Contemporary Models*, Lille, February

- 2009: “Modern Classics in Social Choice”. Master of Logic (MSc), ILLC, University of Amsterdam,
- 2006-2007: Exercise class (Teaching assistant ) for “Logica” and “Logica Matematica” Prof. D. Palladino, Università di Genova.
- 2005: “Elementi di Logica”, Master in Scienze Cognitive, Università di Genova.
- 2004-2005: Exercise class (Teaching assistant ) for “Logica” and “Logica Matematica” Prof. D. Palladino, Università di Genova.
- 2003-2004: Exercise class (Teaching assistant ) for “Logica” and “Logica Matematica” Prof. D. Palladino, Università di Genova.

**Student supervision:**

- 2016: Master Thesis (Co-relatore), Laurea magistrale in Filosofia, Università di Genova. Luca Bobbio “Ragionamento e complessità computazionale. Un approccio informazionale al ragionamento sillogistico”.
- 2011: Bachelor Thesis in Mathematics (BSc), University of Amsterdam, Sanne Kosterman “Bargaining solutions in multi-agents resource allocation problems”.
- 2011: Individual project, Master of Logic (MSc), ILLC, University of Amsterdam: “Counterfactual Analysis of Newcomb Paradox” (6 ECTS), Student: Bruno Jacinto.
- 2011: Individual project, Master of Logic (MSc), ILLC, University of Amsterdam: “On the Meaning of Logical Rules” (6 ECTS). Student: Leo Dubois.
- 2010: Master Thesis: Master of Logic (MSc) (with Ulle Endriss), ILLC, University of Amsterdam: Kian Mintz Woo “Independence in Judgment Aggregation”.
- 2009: Master Thesis (Co-relatore), Laurea magistrale in Filosofia, Università di Genova. Samuele Dellepiane: “Il teorema di Arrow e le teorie normative della democrazia”.

## SELECTED TALKS:

- Reason-based preferences and deliberation. Dutch Social Choice Colloquium. Amsterdam, April 2016.
- A linear logic of agency. *Logic Colloquium*. Helsinki, August 2015.
- Logical methods in Social Choice Theory and Economics. *Model-based Reasoning in Science and Technology*, Sestri Levante, June 2015.
- Knowledge Representation and Reasoning in Substructural Logics. Workshop *RiCeRcA, Associazione italiana di intelligenza artificiale (AI\*IA 2014)*, Pisa, December 2014.
- A dialogical view of analytical pragmatism. *Ludics and Philosophy*, Roma, June 2014. (Invited).
- Notes on Dialectical Pragmatism. École Normale Supérieure. *LOCI: Locativité et Interaction en Logique, Linguistique et Informatique*. Paris, January, 2012. (Invited)
- Ontology Merging as Social Choice. *Ontologies and Lexical Semantics*, Roma 2011. (Invited)
- Verbalizing Voting Dimensions. *International Meeting of The Society of Social Choice and Welfare*, Moscow, July, 2010.

## Research projects

- (2012 – 2015) VISCOSO: “Detection of crisis in socio-material systems via visual-cognitive-social processes” (R. Ferrario). <http://www.loa.istc.cnr.it/projects/viscoso>.
- (2012 – 2015): COST action: Computational Social Choice.
- (2009 – 2012) LogICCC, Eurocores, “Computational foundations of social choice” (U. Endriss).
- (2007 – 2008) Equipe SIGNES (INRIA Sud Ouest) (C. Retoré).
- (2005 – 2007) PRIN “Architecture of theoretical and practical knowledge. A critical inquiry on the concepts of belief, truth and rational justification” (R. Egidi).



**Service to the  
community**

**PC member of** KR (Principle of Knowledge Representation and Reasoning), AAAI (Conference of the Association for the Advancement of Artificial Intelligence) IJCAI (International Joint Conference of Artificial Intelligence), AAMAS (Autonomous Agents and Multi-agents Systems), LAAMAS (Workshop on Logical Aspects of Multi-Agent Systems) LOFT (Logic and foundation of Game Theory) ESSLLI Workshop on Logical Models of Group Decision Making 2013, AISC (Italian Association of Cognitive Science), AGPC (Amsterdam Graduate Philosophy Conference).

**Referee for conferences:** Principles of Knowledge Representation and Reasoning (KR), Non-Monotonic Reasoning (NMR), European Conference on Artificial Intelligence (ECAI), European Conference on Logics in Artificial Intelligence (JELIA), Conference on Artificial Intelligence (AAAI), Algorithmic Decision Theory (ADT).

**Referee for journals:** Artificial Intelligence; Journal of Logic and Computation; Journal of Logic, Language and Information; Journal of Applied Non-Classical Logics; Neurocomputing; Sistemi Intelligenti; Mathématiques et Sciences Humaines; Transaction of Edutainment; Argumenta – Journal of Analytical Philosophy; Applied Ontology.

**Referee for ESF** (European Science Foundation) 2010-2012.

**Member of the PhD committess** Giacomo Turbanti: “Explicit Normativity. The Logic of Brandom’s Scorekeeping”. Università di Pisa, Scuola Normale Superiore. 2011.

**PhD student delegate**, Università di Genova (2003-2006).

**Organiser of**

- 2015, Workshop “Formal Ontology for Artificial Intelligence” at IJCAI 2015 (International Joint Conference of Artificial Intelligence).
- 2014, Workshop “Ragionamento collettivo e modelli di democrazia”. Torino, November.
- 2011, Amsterdam Graduate Philosophy Conference, December.
- 2010, Workshop “Dialogue and Games: Historical Roots and Contemporary Model”. Lille, January.

**Affiliations** | SIFA (Società Italiana di Filosofia Analitica), SILFS (Società Italiana di Logica e Filosofia della Scienza), ESAP (European Society of Analytic Philosophy), AIIA (Associazione Italiana per l'Intelligenza Artificiale), AILA (Associazione Italiana di Logica e Applicazioni), SCW (Society for Social Choice and Welfare), ASL (Association for Symbolic Logic).

**Languages** | Italian, English (excellent), French (basic), German (basic).