

Raffaella Bernardi- Curriculum Vitae

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Scopus h-index: 7, citations 176

Google Scholar: h-index: 15, citations: 1183

Present occupation

December 2010-present **Assistant Professor** (ricercatore di ruolo confermato), Department of Information Engineering and Computer Science (DISI) and Center for Mind/Brain Sciences (CIMEC), University of Trento, Italy.

Previous work experience: October 2002-November 2010

- December 2003-November 2007 and January 2008-November 2010 Assistant Professor (Ricercatore a Tempo Determinato, RTD), Faculty of Science and Information Technologies, Free University of Bozen-Bolzano.
- October-November 2003 Research Assistant (CoCoCo) Faculty of Science and Information Technologies, Free University of Bozen-Bolzano.
- June-September 2003 Research Assistant area 6, Logic and Natural Language Processing, European Project Network of Excellence in Computational Logic (CoLogNet), Utrecht University.
- October 2002-May 2003 Research Assistant (CoCoCo) Faculty of Science and Information Technologies, Free University of Bozen-Bolzano.
- March-September 2002 Research Assistant area 6, *Logic and Natural Language Processing*, European Project Network of Excellence in Computational Logic (CoLogNet), Utrecht University.

Education

- PhD: Utrecht University, June 2002. The PhD thesis was focused on the study and development of a Logic framework for the analysis of natural language structures.
- Laurea (equivalent to Bachelor plus Master): University of Chieti, March 1994. Grade: 110/110 cum laude.

Scholarships

- 2005 Scholarship issued by the New York University with the "International Visiting Program", <http://www.nyu.edu/global/visitors04-05.htm>
- 1999-2002 Scholarship issued by the UiL-OTS Department, Utrecht University to attend the international PhD program at Utrecht University.
- 1997-1998 scholarship issued by the University of Chieti to attend post-graduate courses abroad
- 1996 Prize issued by the Soroptimist Club Chieti Carla Martinotti Di Baldassare', to recognize the activities carried out during the academic years 1994-1995, 1995-1996 at the Faculty of Arts (Facoltà di Lettere e Filosofia), University of Chieti.

RESEARCH PROJECTS

International Projects

- 2011-2016 Co-PI of the EU project COMPOSES (nr. 283554, ERC 2011 Starting Independent Research Grant), University of Trento

- 2008-2009 PI of the EU project "CACAO" (Cross language Access to Catalogues And Online libraries) (CP 2006 DILI 510035 CACAO Program: eContentplus), Free University of Bozen-Bolzano
- 2011-2017 Member of unitn team for the projects: Galateas (CIP-ICT-PSP-2009-3 250430), LiMoSINe (FP7-PEOPLE 214905), CogNET (ICT-14-2014 RIA)
- 2002-2003 Member of Utrecht team of the EU project Network of Excellence in Computational Logic (CoLogNet)

National Projects

- 2017-2020 TREIL (Technologies for Research and Education in Linguistics) PRIN 2015.
- 2004-2006 Young researcher within the FIRB project "I corpora elettronici come strumenti e metodi per la diffusione e l'analisi dell'italiano in una società globale e multietnica". CILTA, Centro Interfacoltà di Linguistica Teorica e Applicata, Università degli Studi di Bologna

MEMBER OF SCIENTIFIC COMMITTEES

International Committees

- 2017- present Member of the Management Board Special Interest Group on Computational Semantics (SIGSem) of the Association of Computational Linguistics (ACL).
- 2016-2018 Member of the Core Management Board The European Network on Integrating Vision and Language iV&L Net ICT COST ACTION (IC1307).
- 2014-2017 Member of the Selection Committee of the Beth Dissertation Prize.
- 2005-2011 Member of the editorial board "Series of Books in Logic, Language and Information". Lecture Notes in Artificial Intelligence. Springer-Verlag.
- 2004-2006 Member of the Management Board "European Association in Logic, Language and Information" (FoLLI).
- 1999-2003 Public Relation officer of the "European Association in Logic, Language and Information" (FoLLI).

Chair of program committee of international and national conferences

- 2016 *SEM (The fifth joint conference on lexical and computational semantics), Berlin
- 2016 Area chair (Semantics and Knowledge Acquisition) of CLiC-it 2016 (Italian Conference on Computational Linguistics)
- 2009 Co-chair del workshop Advanced Technologies for Digital Libraries (AT4DL)
- 2001 Co-chair Logic and Language ESSLLI Student Session

Chair or member of the selection committee of courses for international summer schools

- 2020 Chair of the Program Committee ESSLLI 2020 (European Summer School in Language, Logic and Information), Utrecht, 2020.
- 2019 Co-chair of the Program Committee of CLiC-it (Computational Linguistics Italian Conference), Bari, 2019
- 2018 Member of the Selection Committee NASSLLI 2018 (North America Summer School in Logic, Language and Information) Carnegie Mellon University in Pittsburgh, PA, June 25–29, 2018
- 2015 Co-chair of the Program Committee ESSLLI 2016 (European Summer School in Language, Logic and Information), Bolzano, 2016.
- 2010 Member of the Program Committee ESSLLI 2010 (European Summer School in Logic, Language and Information), Copenhagen, 9--20 August

Member of Program Committees

ACL, NAACL-HLT, EACL, IWCS, *SEM, LACL, WoLLIC, Formal Grammar, LonDial, DECALOG, ICoS,

INSTITUTIONAL DUTIES

- 2011-2018. Local PI of the EMMC LCT (Erasmus Mundus European in Language and Communication Technologies), Cognitive Science degree, CIMeC, University of Trento.
- 2011-2012. PI in charge of the Cooperation agreement between the Free University of Bozen-Bolzano and the University of Trento within the EMMC LCT (F.A. nr. 2007-60, Erasmus Mundus European in Language and Communication Technologies.)
- 2007-2011. Local PI of the EMMC LCT (Erasmus Mundus European in Language and Communication Technologies), Computer Science degree, Free University of Bozen-Bolzano
- 2015- Coordinator of the Language and Multimodal Interaction (LMI) track, MSc degree in Cognitive Science, University of Trento.
- 2018 Member of the "Gruppo di Riesame" of the Cognitive Science MSc Program, University of Trento.
- 2003 Member of the working group to establish the "Ordinamento Didattico" of the Computer Science MSc Programme, Faculty of Science and Information Technologies, Free University of Bozen-Bolzano.
- 2006 Member of the working group to establish the "Ordinamento Didattico" BA in "Scienze della comunicazione plurilingue", Faculty of Education, Free University of Bozen-Bolzano.

ACTIVITIES WITHIN DOCTORAL SCHOOLS

PhD project supervisor: University of Trento: currently 3 PhD students, past: 1 student (PhD defence in 2014); Free University of Bozen-Bolzano: 2 students, PhD defence in 2009.

PhD Schools

- 2014-present Member of the PhD School in Cognitive and Brain Sciences, University of Trento
- 2010-2014. Member of the PhD School in ICT (Information and Communication Technologies) DISI, University of Trento.
- 2005—2010 Member of the PhD School, Faculty of Science and Information Technologies, Free University of Bozen-Bolzano.

Teaching activities within international school

- 2017. Lecture (2 hrs) within the seminar series "Lezioni di Linguistica Computazionale" PhD School in Linguistics Sciences Scienze University of Pavia co-organized with the Fondazione Bruno Kessler (FBK), and endorsed by AILC
- 2011. (10 ore) Lectures on "Logic and Natural Language Semantics", Logic Summer School, The Australia University. (Canberra)
- 2007 Lectures (with Michael Moortgat) on "Symmetric Categorical Grammar", parte dell' "European Summer School in Logic, Language and Information" ESSLLI '07, Dublin, August, 2007.
- 2005 Lectures on "Non-Classical Logic", Logic Summer School, The Australia National University, Canberra, December 2005.
- 2005 Seminars on "Categorical Type Logic", PhD School at the New York University, Linguistics Department.
- 2004 Lectures (with Rajeev Gore) on "Display Logic meets Categorical Type Logic", "European Summer School in Logic, Language and Information" (ESSLLI), Nancy, 2004.
- 2003 Lectures (6 weeks, with Michael Moortgat and Richard Moot) on Categorical Type Logic at CILTA. University of Bologna, Centro Interfacoltà di Linguistica Teorica e Applicata "L. Heilmann". September-October 2003.
- 2001 Seminar on "Polarity Items in Type Logical Grammar" within the course "Polarity Phenomena and Temporal Aspects" thought by Anastasia Giannikidou, at the "LOT Summer School", Utrecht, 2001.

- 2001 Introduction to Categorical Grammar. Seminar within the course *Natural Language Semantics*. ILLC, University of Amsterdam.

PUBLICATIONS:

Author of 80 papers: 54 papers in international conferences, 12 papers in international journals, 7 chapters in books, 1 book and editor of 6 books/journal issues. The most relevant ones are reported below.

Journals:

- Pezzelle, S., Bernardi, R., Piazza, M. **Probing the Mental Representation of Quantifiers**. *Cognition*, volume 181, December 2018, Pages 117-126 DOI: <https://doi.org/10.1016/j.cognition.2018.08.009>
- Ionut Sorodoc, Sandro Pezzelle, Aurélie Herbelot, Mariella Dimiccoli, Raffaella Bernardi. **Learning quantification from images: A structured neural architecture** Accepted for publication in *Journal of Natural Language Engineering (JNLE) Special Issue on Closing the Gap between Language and Vision*, Vol. 24.3, May 2018. DOI:10.1017/S1351324918000128
- G. Kruszewski, D. Paperno, R. Bernardi and M. Baroni. **There is no logical negation here, but there are alternatives: modeling conversational negation with distributional semantics**, In *Computational Linguistics*, Vol 42, N. 4 December 2016. ISSN: 8912017, DOI: 10.1162/COLI_a_00262
- Raffaella Bernardi, Ruket Cakici, Desmond Elliott, Aykut Erdem, Erkut Erdem, Nazli Ikizler-Cinbis, Frank Keller, Adrian Muscat and Barbara Plank **Automatic Description Generation from Images: A Survey of Models, Datasets, and Evaluation Measures** *JAIR (Journal of Artificial Intelligence Research)*. Vol. 55, 2016. DOI:10.1613/jair.4900
- L. Bentivogli, R. Bernardi, M. Marelli, S. Menini, M. Baroni, R. Zamparelli **SICK Through the SemEval Glasses. Lesson learned from the evaluation of compositional distributional semantic models on full sentences through semantic relatedness and textual entailment** In *Language Resources and Evaluation*. Vol 50, Nr. 1, 95--124, 2016. ISSN: 1574020X, DOI: [10.1007/s10579-015-9332-5](https://doi.org/10.1007/s10579-015-9332-5)
- Marco Baroni, Raffaella Bernardi and Roberto Zamparelli. **Frege in space: A program for compositional distributional semantics**. In the special issue on Perspectives on Semantic Representations for Textual Inference of *LilT*. Volume 9, pp 241-346, (2014). ISSN: 1945-3604.
- Raffaella Bernardi and Michael Moortgat **Continuation semantics for the Lambek-Grishin calculus** In *Information and Computation*, Volume 208, Issue 5, May 2010, Pages 397-416 Special Issue: 14th Workshop on Logic, Language, Information and Computation (WoLLIC 2007). Published Online at DOI: [10.1016/j.ic.2009.11.005](https://doi.org/10.1016/j.ic.2009.11.005)
- Raffaella Bernardi and Anna Szabolcsi **Optionality, Scope, and Licensing: An Application of Partially Ordered Categories**. *JoLLI ("Journal of Logic, Language and Information")*. Available at [Springer's web site](https://www.springer.com/journal/10992), Vol. 17, nr. 3, Summer 2008
- R. Bernardi, P. Dongilli, M. Girardi, D. Gobbetti **Mivas Project. Inferential Methods for the Evaluation of the School System** In *CADMO. Giornale Italiano di Pedagogia sperimentale. An International Journal of Educational Research*. Tempus Trast. Soluzioni in rete per la formazione degli insegnanti. (ed) Gabriella Agrusti. Franco Angeli. Anno XV, 1, 2007
- C. Areces and R. Bernardi, **Analyzing the Core of Categorical Grammar**. *Journal of Logic, Language and Information (JoLLI)*.13 (2): 121-137, Spring 2004.
- R. Bernardi and R. Moot, **Generalized Quantifiers in declarative and interrogative sentences**. In J. Bos and M. Kohlhasse (eds.) *Logic Journal of IGPL* Vol. 11, N. 4, 2003.
- C. Areces, R. Bernardi, M. Moortgat, **Galois Connections in Categorical Type Logic**. In *Electronic Notes in Theoretical Computer Science* 53 (2003).

International Conferences

- Ravi Shekhar, Tim Baumgärtner, Aashish Venkatesh, Elia Bruni, Raffaella Bernardi and Raquel Fernandez **Ask No More: Deciding when to guess in referential visual dialogue** In Proceedings of [COLING 2018](#), 20-26 August, Santa Fe, New Mexico, USA
- Hoa Vu, Claudio Greco, Aliia Erofeeva, Somayeh Jafaritazehjan, Guido Linders, Marc Tanti, Alberto Testoni, Raffaella Bernardi and Albert Gatt **Grounded Textual Entailment** In Proceedings of [COLING 2018](#), 20-26 August, Santa Fe, New Mexico, USA
- Pezzelle, S., Steinert-Threlkeld, S., Bernardi, R., Szymanik, J. **Some of them can Be Guessed! Exploring the Effect of Linguistic Context in Predicting Quantifiers**, ACL 2018
- Sandro Pezzelle, Ionut-Teodor Sorodoc and Raffaella Bernardi **Comparative, Quantifiers, Propositions: A Multi-Task Model for the Learning of Quantities from Vision** NAACL 2018
- Ravi Shekhar, Sandro Pezzelle, Aurelie Herbelot, Moin Nabi, Enver Sangineto and Raffaella Bernardi. **Vision and Language Integration: Moving beyond Objects**. Short paper at IWCS 2017
- D. Addison Smith, Sandro Pezzelle, Francesca Franzon, Chiara Zanini and Raffaella Bernardi. **Can You See the (Linguistic) Difference? Exploring Mass/Count Distinction in Vision** Short paper at IWCS 2017
- Shekhar, Ravi; Pezzelle, Sandro; Klimovich, Yauhen; Herbelot, Aurelie; Nabi, Moin; Sangineto, Enver; Bernardi, Raffaella **FOIL it! Find One mismatch between Image and Language caption**. Long Paper at ACL 2017. ISSN: 978-194562675-3, DOI: 10.18653/v1/P17-1024
- Sandro Pezzelle, Marco Marelli and Raffaella Bernardi, **Be Precise or Fuzzy: Learning the Meaning of Cardinals and Quantifiers from Vision**. Short Paper at EACL 2017. ISSN: 978-151083860-4
- D. Paperno, G. Kruszewski, A. Lazaridou, Q Pham, R. Bernardi, S. Pezzelle, M. Baroni, G. Boleda and R. Fernandez. **The LAMBADA dataset: Word prediction requiring a broad discourse context**. Proceedings of ACL 2016 (54th Annual Meeting of the Association for Computational Linguistics), East Stroudsburg PA: ACL. ISSN: 978-151082758-5
- Ionut Sorodoc, Angeliki Lazaridou, Gemma Boleda, Aurélie Herbelot, Sandro Pezzelle and Raffaella Bernardi, **Look, some green circles!": Learning to quantify from images** In Proceedings of the 5th Workshop on Vision and Language, pages 75–79, Berlin, Germany, August 12 2016. Association for Computational Linguistics.
- Sandro Pezzelle, Ravi Shekhar and Raffaella Bernardi **Building a bagpipe with a bag and a pipe: Exploring Conceptual Combination in Vision** In Proceedings of the 5th Workshop on Vision and Language, pages 60–64, Berlin, Germany, August 12 2016. Association for Computational Linguistics.
- A. Lazaridou, D. Tien Nguyen, R. Bernardi, M. Baroni **Unveiling the Dreams of Word Embeddings: Towards Language-Driven Image Generation** Multimodal Machine Learning NIPS 2015 Workshop
- R. Bernardi, G. Boleda, R. Fernandez and D. Paperno. **Distributional semantics in use**. Proceedings of LSD 2015 (First Workshop on Linking Computational Models of Lexical, Sentential and Discourse-level Semantics), East Stroudsburg PA: ACL, 95-101, 2015.
- M. Hurlimann, R. Bernardi, D. Paperno **Nominal Coercion in Space: Mass/Count Nouns and Distributional Semantics** CLIC-IT, 2014
- Dieu-Thu Le, Jasper Uijlings, Raffaella Bernardi **TUHOI: Trento Universal Human Object Interaction Dataset** Proceedings of the Third Workshop on Vision and Language. Publisher: Dublin City University and the Association for Computational Linguistics. pp. 17-24, Dublin, 2014
- D. T. Nguyen, A. Lazaridou, R. Bernardi **Coloring Objects: Adjective-Noun Visual Semantic Compositionality** VL 2014, co-located with COLING 2014, Dublin, Publisher: Dublin City University and the Association for Computational Linguistics. pp.112-114 ISBN 978-1-873769-28-1
- M. Marelli, L. Bentivogli, M. Baroni, R. Bernardi, S. Menini, R. Zamparelli **SemEval-2014 Task 1: Evaluation of Compositional Distributional Semantic Models on Full Sentences through Semantic Relatedness and Textual Entailment**. In *Proceedings of the 8th International Workshop on Semantic Evaluation* Publisher: Association for Computational Linguistics and Dublin City University. pp: 1--8. August 2014, Dublin (Ireland).

- M. Marelli, S. Menini, M. Baroni, L. Bentivogli, R. Bernardi and R. Zamparelli. **A SICK cure for the evaluation of compositional distributional semantic models**. Proceedings of LREC 2014, Reykjavik (Iceland): ELRA. ISSN: 978-295174088-4
- Dieu-Thu Le, Jasper Uijlings and Raffaella Bernardi **Exploiting language models for visual recognition** EMNLP 2013.
- Paramita Mirza and Raffaella Bernardi **CCG categories for Distributional Semantics Models**. In Proceedings of the International Conference Recent Advances in Natural Language Processing RANLP 2013. September, 2013, Hissar, Bulgaria. Publisher: NCOMA Ltd. Shoumen, BULGARIA, pp. 467--474,
- Raffaella Bernardi, Georgiana Dinu, Marco Marelli and Marco Baroni. **A relatedness benchmark to test the role of determiners in compositional distributional semantics**. Proceedings of ACL 2013 (51st Annual Meeting of the Association for Computational Linguistics), East Stroudsburg PA: ACL. pp 53-57.
- Dieu-Thu Le, Raffaella Bernardi, Jasper Uijlings, **Exploiting language models to recognize actions in still images**, ACM International Conference on Multimedia Retrieval, Dallas, Texas, USA, 2013.
- Nghia Pham, Raffaella Bernardi, Yao Zhong Zhang, Marco Baroni **Sentence paraphrase detection: When determiners and word order make the difference**. IWCS-TFDS 2013 Workshop, March 19th 2013, Potsdam.
- D.T. Le and R. Bernardi **Query classification using topic models and support vector machine**. Student Research Workshop ACL 2012.
- M. Baroni, R. Bernardi, N. Do and C. Shan. **Entailment above the word level in distributional semantics**. Proceedings of EACL 2012 (13th Conference of the European Chapter of the Association for Computational Linguistics), East Stroudsburg PA: Association for Computational Linguistics (ACL). pp: 23-32.

Chapters in Books

- Raffaella Bernardi, **Distributional Semantics: A Montagovian view**. In *Categories and Types in Logic, Language, and Physics*, Casadio, C., Coecke, B., Moortgat, M., Scott, P. (Eds.). Volume 8222 of the Lecture Notes in Computer Science series. ISBN 978-3-642-54788-1
- Camilo Thorne, Raffaella Bernardi, Diego Calvanese **Designing Efficient Controlled Languages for Ontologies**. In "Computing Meaning", H. Bunt and J. Bos and S. Pulman (eds). Vol 47. 2014.
- Raffaella Bernardi and D-T. Le **Metadata Enrichment via Topic Models for Author Name Disambiguation** In "Advanced Language Technologies for Digital Libraries". R. Bernardi, S. Chambers, B. Gottfried, F. Segond, I. Zaihrayeu (eds.) LNCS 6699, 2011
- Raffaella Bernardi **Scope Ambiguities through the mirror** In M. Everaert, T. Lentz, De Mulder, H., Ø. Nilsen and A. Zondervan (eds.) *The Linguistics Enterprise: from knowledge of language to knowledge in linguistics*. John Benjamins Publishing Company. vol 150, 2010.; lingBuzz/000890
- Tamburini F., Seidenari C., Bolognesi A., Bernardi R. (2008). **Italian Lexical-Classes Definition Using Automatic Methods**. In Rossini Favretti R. (ed.), *Frames, Corpora and Knowledge Representation*, Bologna: Bononia University Press, 95-120.
- Bernardi R., Bolognesi A., Seidenari C., Tamburini F. (2008). **Learning an Italian Categorical Grammar**. In Rossini Favretti R. (ed.), *Frames, Corpora and Knowledge Representation*, Bologna: Bononia University Press, 185-200.

Edited books/journal special issues/proceedings

- R. Bernardi, S. Chambers, B. Gottfried, F. Segond, I. Zaihrayeu (eds.) *Advanced Language Technologies for Digital Libraries*. LNCS 6699, 2011
- R. Bernardi, S. Chambers, B. Gottfried, ``Proceedings of the Workshop on Advanced Technologies for Digital Libraries 2009" (AT4DL 2009). Bozen-Bolzano University Press, ISBN 978-88-6046-030-1
- R. Bernardi and B. Webber (eds) **Questions and Answers: Theoretical and Applied Perspectives** Special issue of the *Journal of Applied Logic*. Vol. 5, Issue 1, pp. 1-192. March 2007

- R. Bernardi and M. Moortgat (eds.) [Questions and Answers: Theoretical and Applied Perspectives.](#)
CoLogNET Delivery 2003.
- R. Bernardi and M. Moortgat (eds.) [Linguistic Corpora and Logic Based Grammar Formalisms.](#)
CoLogNET Delivery 2002.
- S. Alt, R. Bernardi, M. Nissim and K. Striegnitz (eds.) Special Issue of [The European Student Journal on Language and Speech](#) (Language Session). 2001. Papers selected from the **ESSLLI'01 Student Session.**