

Roland Mühlenbernd

Department of Management · Ca'Foscari University
Cannaregio 873 · 30121 Venice · Italy
+39 349-62-47986
muehlenbernd@web.de
www.muehlenbernd.net

January 2019

Education

- | | |
|-------|--|
| Ph.D. | General Linguistics, Department of Linguistics, Eberhard Karls University Tübingen, Germany, 2013
Dissertation: <i>Signals and the Structure of Societies</i>
Date of Defense: July 23rd, 2013 |
| M.Sc. | Interdisciplinary Media Science, University of Bielefeld, Germany, 2009 |
| B.Sc. | Computer Science/Psychology, University of Paderborn, Germany, 2006 |

Professional Appointments

- | | |
|------------|--|
| since 2017 | Postdoctoral Researcher, European Union's Horizon 2020 Project 'Opinion Dynamics and Cultural Conflicts in European Spaces' (ODYCCEUS), Department of Management, Università Ca'Foscari Venezia. |
| 2013-17 | Postdoctoral Researcher, ERC Advanced Grant Project 'Language Evolution - the Empirical Turn' (EVOLAEMP), Department of Linguistics, UTübingen. |

Research areas

- | | |
|-------------------------|--|
| areas of specialization | Game and Decision Theory, Evolutionary Game Theory, Artificial Intelligence, Economic Behavior, Language Change, Network Theory. |
| areas of competence | Human Evolution, General Linguistics, Sociolinguistics, Philosophy of Language, Logic, Computer Science, Models of Evolution |

Publications

Refereed Journal Articles

- 2019 LiCalzi, Marco & **Roland Mühlenbernd**. Categorization and cooperation across games. *Games* 10(1), article 5.
- 2018 Lorini, Emiliano & **Roland Mühlenbernd**. The long-term benefits of following fairness norms under dynamics of learning and evolution. *Fundamenta Informaticae* 158(1-3), 121-148.
- 2017 **Mühlenbernd, Roland**. The change of signaling conventions in social networks. *AI & Society*, doi: 10.1007/s00146-017-0786-4.
- 2017 **Mühlenbernd, Roland** & Dankmar Enke. The grammaticalization cycle of the progressive – A game-theoretic analysis. *Morphology* 27(4), 497-526.
- 2017 **Mühlenbernd, Roland** & Taraka Rama. What phoneme networks tell us about the age of language families. *Journal of Language Evolution* 2(1), 67-76.
- 2017 **Mühlenbernd, Roland** & Jason Quinley. Language change and network games. *Language and Linguistics Compass* 11(2): e12235.
- 2014 **Mühlenbernd, Roland** & Simon Schulz. The game of life, decision and communication. *Natural Science* 6: 1093-1102.
- 2011 **Mühlenbernd, Roland**. Learning with neighbors: Emergence of convention in a society of learning agents. *Synthese* 183 (S1): 87-109.
- 2007 Danne, Klaus, **Roland Mühlenbernd** & Marco Platzner. Server-based execution of periodic tasks on dynamically reconfigurable hardware. *IET Computers & Digital Techniques* 1(4): 295-301.

Chapters in Edited Collections

- 2016 Enke, Dankmar, Natalie Gavrilov, **Roland Mühlenbernd**, Jonas David Nick & Matthias Villing. Emergenz menschlicher Sprache: Simulation von Evolution. In: N. Weidtmann (ed.), *Sprache und Kognition. Interdisziplinäre Forschungsarbeiten am FORUM SCIENTIARUM* 7. Berlin: LIT Verlag, 61-110.
- 2015 Lorini, Emiliano & **Roland Mühlenbernd**. The long-term benefits of following fairness norms: A game-theoretic analysis. In: Q. Chen, P. Torrioni, S. Villata, J. Hsu & A. Omicini (eds.), *PRIMA 2015: Principles and Practice of Multi-Agent Systems*, Lecture Notes in Artificial Intelligence (LNAI) series 9387. Heidelberg/New York: Springer, 301-318.

- 2014 **Mühlenbernd, Roland** & Jonas D. Nick. Language change and the force of innovation. In: M. Colinet, S. Katrenko & R. K. Rendsvig (eds.), *Pristine Perspectives on Logic, Language, and Computation*, Lecture Notes in Computer Science (LNCS) series 8607. Heidelberg/New York: Springer, 194-213.
- 2013 **Mühlenbernd, Roland** & Jason Quinley. Signaling and simulations in sociolinguistics. In: K. Shwayder (ed.), *Proceedings of the 36th Annual Penn Linguistics Colloquium*, University of Pennsylvania Working Papers in Linguistics 19(1), Article 16.

Refereed Conference Papers

- 2018 **Mühlenbernd, Roland**, Przemysław Żywiczyński & Sławomir Wacewicz. Evolutionary stability of linguistic politeness and the Politeness Equilibrium Principle. In: C. Cuskley, M. Flaherty, H. Little, L. McCrohon, A. Ravignani & T. Verhoef (eds.), *The Evolution of Language: Proceedings of the 12th International Conference*.
- 2016 **Mühlenbernd, Roland** & Johannes Wahle. Self-organization in sound systems: A model of sound strings processing agents. In: S.G. Roberts, C. Cuskley, L. McCrohon, L. Barceló-Coblijn, O. Feher & T. Verhoef (eds.), *The Evolution of Language: Proceedings of the 11th International Conference*.
- 2016 Enke, Dankmar, **Roland Mühlenbernd** & Igor Yanovich. The emergence of the progressive to imperfective diachronic cycle in reinforcement-learning agents. In: S.G. Roberts, C. Cuskley, L. McCrohon, L. Barceló-Coblijn, O. Feher & T. Verhoef (eds.), *The Evolution of Language: Proceedings of the 11th International Conference*.
- 2014 **Mühlenbernd, Roland** & Michael Franke. Meaning, evolution and the structure of society. In: A. Herzig & E. Lorini (eds.), *Proceedings of the European Conference on Social Intelligence*, CEUR Workshop Proceedings 1283, 28-39.
- 2014 **Mühlenbernd, Roland**. Convention and innovation in social networks. In: A. Herzig & E. Lorini (eds.), *Proceedings of the European Conference on Social Intelligence*, CEUR Workshop Proceedings 1283, 317-328.
- 2014 **Mühlenbernd, Roland**. Structure & variation of signaling conventions in scale-free networks. In: A. Herzig & E. Lorini (eds.), *Proceedings of the European Conference on Social Intelligence*, CEUR Workshop Proceedings 1283, 347-358.

- 2014 **Mühlenbernd, Roland**, Dankmar Enke, Matthias Villing, Natalie Gavrilov & Jonas D. Nick. Modality switch in human language evolution. In: E.A. Cartmill, S. Roberts, H. Lyn & H. Cornish (eds.), *Proceedings of the 10th International Conference on the Evolution of Language*, 161-168.
- 2012 **Mühlenbernd, Roland**, Jonas D. Nick & Christian Adam. The force of innovation: Emergence and extinction of messages in signaling games. In: R. K. Rendsvig & S. Katrenko (eds.), *Proceedings of the ESSLLI 2012 Student Session*, 93-103.
- 2012 **Mühlenbernd, Roland** & Michael Franke. Simulating the emergence of conventions in small-world networks. *Proceedings of the 21st International Conference on Behavior Representation in Modeling & Simulation*, 37-42.
- 2012 Quinley, Jasnon & **Roland Mühlenbernd**. Conquest, contact, and convention: simulating the Norman invasion's impact on linguistic usage. *Proceedings of the 21st International Conference on Behavior Representation in Modeling & Simulation*, 110-115.
- 2012 **Mühlenbernd, Roland** & Michael Franke. Signaling conventions: Who learns what where and when in a social network? In: T. Scott-Phillips, M. Tamariz, E. A. Cartmill & J. Hurford (eds.), *Proceedings of the 9th International Conference on the Evolution of Language*, 242-249.
- 2006 Danne, Klaus, **Roland Mühlenbernd** & Marco Platzner. Executing hardware tasks on dynamically reconfigurable devices under real-time conditions. In: A. Koch, P. Leong & E. Boemo (eds.), *Proceedings of the 2006 International Conference on Field Programmable Logic and Applications (FPL)*, 541-546.

Fellowships & Grants

- 2017–now Postdoctoral Researcher Grant. EU's Horizon 2020 Project 'Opinion Dynamics and Cultural Conflicts in European Spaces' (ODYCCEUS), Department of Management, Università Ca'Foscari Venezia (€ 88,200).
- 2018 Visiting Scholar Grant. Department of Linguistics, The Ohio State University, Columbus (\$ 1,725).
- 2017 Human Behavior and Evolution Society (HBES) Subsidy, 12th International Conference on the Evolution of Language (Evolang 12). Center for Language Evolution Studies, Nicolaus Copernicus University, Toruń (\$ 5,250).
- 2017 Visiting Scholar Grant. Department of Logic and Philosophy of Science, University of California, Irvine (\$ 4,000).

- 2015 Visiting Scholar Grant. International Centre for Mathematics and Computer Science (CIMI). Paul Sabatier University, Toulouse.
- 2010-13 Departmental Travel Grant. Department of Linguistics, UTübingen.
- 2011-12 Forum Scientiarum Mention, Udo Keller Foundation Fellowship. Forum Scientiarum, UTübingen and Klett Publishers.

Invited Talks

- 2018 On the Evolutionary Foundations of Polite Requests - A Game-Theoretic Perspective. Pragmatics Working Group Meeting. Department of Linguistics. The Ohio State University, Columbus, OH, Mar. 9.
- 2018 Applications of Game Theory in Linguistics - A Tutorial. Department of Linguistics. The Ohio State University, Columbus, OH, Mar. 5.
- 2017 How to Share Cultural Frames: Approximation Dynamics within Game Spaces under Coarse Cognition. Workshop on ‘Game Theory and Partial Representations’. Chalmers Tekniska Högskola, Gothenburg, Sweden, Sep. 11.
- 2017 Population Dynamics within Cultural Frames: A Game-Theoretic Study of Conflict and Cooperation. Departmental Colloquium. Department of Logic and Philosophy of Science, University of California, Irvine, CA, Sep. 5.
- 2017 Grammaticalization and the Loss of Optimal Grammars. Workshop on ‘Language Change for the Worse’. Ludwig-Maximilian-University Munich, Germany, May 28.
- 2017 Pragmatics and Language Evolution - A Game-Theoretic Perspective. Workshop on ‘Evolutionary Inspirations in Language Studies’. Center for Language Evolution Studies, Nicolaus Copernicus University, Toruń, Poland Apr. 6.
- 2017 The Evolution of Coordination, Cooperation, and Communication - A Game-Theoretic Approach. Center for Language Evolution Studies, Nicolaus Copernicus University, Toruń, Poland Feb. 7.
- 2016 Competition and Optimization in Language Change – An Evolutionary Perspective. Meaning, Optimization and Interaction Workshop. Université de Paris 7 – Denis Diderot, France, Sep 9.
- 2016 The HOW and WHY in Language Change - A new Perspective in Historical Semantics. Department of Linguistics. Stanford University, CA, Mar. 29.

- 2015 Unidirectional Language Change - A Game-Theoretic Analysis. Department for German Philology, Comparative Linguistics, Nordic Studies, and German as Foreign Language. Ludwig-Maximilian-University Munich, Germany, Nov. 25.
- 2015 Signaling Games: Dynamics of Evolution and Learning. International Centre for Mathematics and Computer Science (CIMI), Paul Sabatier University, Toulouse, France, Apr. 3 and Apr. 19.
- 2012 Interdependencies of Production and Perception in Signaling Games. Workshop on ‘Game Theory and Pragmatics’. Zentrum für Allgemeine Sprachwissenschaft (ZAS), Berlin, Germany, Oct. 5-6.

Conferences

Conferences/Workshops Organized

- 2018 Workshop on ‘Stability and Instability in Grammar’, International Congress of Linguistics - The Dynamics of Language (ICL20). The University of Cape Town, South Africa, July 2-6.
- 2018 Workshop on ‘Evolutionary Theory in the Humanities’, Satellite Event, 12th International Conference on the Evolution of Language (Evolang XII). Nicolaus Copernicus University, Torun, Poland, Apr. 15.
- 2014 26th European Summer School in Logic, Language and Information (ESSLLI 2014). UTübingen, Aug. 11-22.
- 2014 Workshop on ‘Sociolinguistics and Network Games’ (SLANG 2014), ESSLLI 2014. UTübingen, Aug. 18-22.
- 2014 Workshop on ‘Historical and Empirical Evolutionary Linguistics’ (WHEEL 2014). UTübingen, Feb. 15-16..
- 2014 2nd Students Conference ‘KonferenzLE: Linguistic Evidence Lite - Intra-linguistic Interfaces’. UTübingen, Feb. 12.
- 2011 1st Students Conference ‘KonferenzLE: Linguistic Evidence Lite - Linguistic Variation’. UTübingen, Feb. 5.
- 2009 11th Meeting of the Association for Mathematics of Language (MOL 11). University of Bielefeld, Germany, Aug. 20-21.

Papers Presented

- 2018 Polite Requests and the Division of Pragmatic Labor. The 20th International Congress of Linguistics (ICL20): The Dynamics of Language. The University of Cape Town, South Africa, July 2-6.
- 2018 Cognitive Frames and Cooperation over Give-Take-Collect Games. The 1st Conference on Opinion Dynamics and Cultural Conflicts in European Spaces (ODYCCEUS). Max Planck Institute for Mathematics in the Sciences, Leipzig, Germany, June 19-22.
- 2018 Evolutionary Stability of Linguistic Politeness and the Politeness Equilibrium Principle. The 12th International Conference on the Evolution of Language (Evolang XII). Nicolaus Copernicus University, Torun, Poland, Apr. 16-19.
- 2017 Evolutionary Stability of Linguistic Politeness. Inaugural Cultural Evolution Society Conference. University of Jena, Germany, Sep. 13-15.
- 2017 The Utterance Selection Model and Different Types of Replicator Selection. 23rd International Conference on Historical Linguistics (ICHL 23). University of Texas at San Antonio, TX, Jul. 31-Aug. 4.
- 2017 Diachrony of Progressive Grammars. 23rd Germanic Linguistics Annual Conference (GLAC 23). University of Texas, Austin, TX, Apr. 20-22.
- 2016 Diversity and Change of Case Marking Patterns. Formal Diachronic Semantics Workshop (FoDS 2016). University of Konstanz, Germany, Sep. 12-14.
- 2016 Semantics and Pragmatics of Aspectual Markers: A Game-Theoretic Model. The 49th Annual Meeting of the Societas Linguistica Europaea. University of Naples Federico II, Italy, Aug. 31 - Sep. 1.
- 2016 Progressive-Imperfective Morphology (Not Only) in the Germanic Languages. Berkeley Germanic Linguistics Roundtable. UC Berkeley, CA, Apr. 1-2.
- 2016 The Emergence of the Progressive to Imperfective Diachronic Cycle in Reinforcement-learning Agents. The 11th International Conference on the Evolution of Language (Evolang XI). Tulane University, New Orleans, LA, Mar. 21-24.
- 2016 Simulating Language Change in Social Networks through Dynamics of Learning and Innovation. The 11th International Conference on the Evolution of Language (Evolang XI), Workshop on Creativity and Innovation in the Evolution of Language (Creativolang). Tulane University, New Orleans, LA, Mar. 21-24.

- 2016 Diachrony of Aspectual Markers: Exploring Language Change with Game Theory. The 40th Annual Penn Linguistics Colloquium (PLC 40). University of Pennsylvania, PA, Mar. 18-20.
- 2016 Modeling the Grammaticalization Path of Functional Morphemes. A Game-theoretic Analysis. The 17th International Morphology Meeting, Workshop on Computational Methods for Descriptive and Theoretical Morphology. Vienna University of Economics and Business, Vienna, Austria, Feb. 18-21.
- 2015 The Long-term Benefits of Following Fairness Norms: A Game-theoretic Analysis. The 18th International Conference on Principles and Practice of Multi-Agent Systems (PRIMA 2015), Bertinoro, Italy, Oct. 26-30.
- 2014 Meaning, Evolution and the Structure of Society. The 1st European Conference on Social Intelligence (ECSI-2014), Barcelona, Spain, Nov. 3-5.
- 2014 Convention and Innovation in Social Networks. The 1st European Conference on Social Intelligence (ECSI-2014), Barcelona, Spain, Nov. 3-5.
- 2014 Structure and Variation of Signaling Conventions. The 1st European Conference on Social Intelligence (ECSI-2014), Barcelona, Spain, Nov. 3-5.
- 2014 Modality Switch in Human Language Evolution. The 10th International Conference on the Evolution of Language (Evolang X), University of Vienna, Austria, Apr. 14-17.
- 2013 The Game of Life, Decision and Communication. Workshop on Logical Models of Group Decision Making, 25th European Summer School in Logic, Language and Information (ESSLLI 2013). Heinrich-Heine-University Düsseldorf, Germany, Aug. 5-16.
- 2012 The Emergence of Human Language: Simulating Multi-Modal Communication. International Colloquium 'From Grooming to Speaking - Recent Trends in Social Primatology and Human Ethology'. University of Lisbon, Portugal, Sep. 10-12.
- 2012 Where Innovation Meets Evolution: Signaling Game Dynamics and the Vowel Space. Workshop on Formal Models of Communication, 24th European Summer School in Logic, Language and Information (ESSLLI 2012). University of Opole, Poland, Aug. 6-17.
- 2012 Work and Play - Simulating Language Contact. 36th Annual Penn Linguistics Colloquium (PLC 36). University of Pennsylvania, PA, Mar. 23-25.
- 2012 Simulating the Emergence of Conventions in Small-World Networks. The 21st Annual Conference on Behavior Representation in Modeling & Simulation (BRIMS 2012). Amelia Island, FL, Mar. 12-15.

- 2012 | Signaling Conventions in Small-World Networks. The 3rd International Workshop on Complex Networks (CompleNet 2012). Melbourne, FL, Mar. 7-9.
- 2011 | Signaling Conventions: Who Learns What Where and When in a Social Network? Workshop on Theoretical Pragmatics (TPrag 2011). Zentrum für Allgemeine Sprachwissenschaft (ZAS), Berlin, Germany, Oct. 13-15.
- 2011 | Learning Implicatures as Conventions. Conference on Meaning, Context and Cognition (MCC 2011). University of Lodz, Poland, Mar. 24-26.
- 2010 | Learning with Neighbors. Workshop on Theories of Information Dynamics and Interaction and Their Application to Dialogue (TIDIAD), 22nd European Summer School in Logic Language and Information (ESSLLI 2010). University of Copenhagen, Denmark, Aug. 9-20.

Posters Presented

- 2016 | Self-organization In Sound Systems: A Model Of Sound Strings Processing Agents. The 11th International Conference on the Evolution of Language (Evolang XI). Tulane University, New Orleans, LA, Mar. 21-24.
- 2012 | Conquest, Contact, and Convention: Simulating the Norman Invasion's Impact on Linguistic Usage. The 21st Annual Conference in Behavior Representation in Modeling & Simulation (BRIMS 2012). Amelia Island, FL, Mar. 12-15.
- 2012 | Signaling Conventions in Small-World Networks. Conference on Linguistic Evidence 2012 (LingEvid 2012). UTübingen, Germany, Feb. 9-11.

Teaching (W: winter semester, S: summer semester)

Eberhard Karls University Tübingen

- S 2017 | Pragmatics.
- W 2016/17 | Models of Language Evolution.
- S 2016 | Game Theory for Linguists.
- W 2015/16 | Introduction to Python.
- S 2015 | Theories and Models of Language Change.

W 2014/15	Models of Language Evolution.
S 2014	Typology I: Languages of the World.
S 2014	Typology II: Language Evolution.
W 2013/14	Pragmatics and Game Theory.
W 2013/14	Master's Students Colloquium.
S 2013	Sociolinguistics & Network Games.
W 2012/13	Evolutionary Network Games.
S 2012	Sociolinguistics & Network Games.
W 2011/12	Evolutionary Network Games.
S 2011	Sociolinguistics & Network Games.
S 2010	Game-Theoretic Pragmatics.

Ludwig-Maximilian-University Munich

W 2015/16	Models of Language Evolution.
-----------	-------------------------------

Reutlingen University

W 2013/14	Concepts in Object-oriented and Parallel Programming.
S 2013	Concepts in Object-oriented and Parallel Programming.

Advising

2017	<i>Undergraduate Thesis.</i> Richard Arthur Belk (Computational Linguistics). 'Evolution of Two Different Vowel Systems'.
2016	<i>Graduate Thesis.</i> Dankmar Enke (Linguistics). 'The Semantics and Pragmatics of Functional Morphemes. A Game-Theoretical Analysis'.
2015	<i>Undergraduate Thesis.</i> Stefan Wenninger (Cognitive Science). 'Learning to Network: Human Behavior in Social Structures'.

Departmental Service

2015-2016 | *Master's Thesis Award Committee*, Humanities Division, UTübingen.

Professional Service

book review	MIT Press
journal review	Adaptive Behavior (SAGE Publishing), AI & Law (Springer), Erkenntnis (Springer), History and Philosophy of the Life Science (Springer), Journal of General Philosophy of Science (Springer), Journal of Language Evolution (Oxford University Press), Journal of Semantics (Oxford University Press), Language Sciences (Elsevier), Synthese (Springer)
abstract review	Evolang XI, XII, ESSLLI 2013, 2015, 2016, 2018, Workshop on Theoretical Pragmatics (TPrag 2011)
editorial board	Interdisciplinary Evolution Research (book series, Springer)
volumes edited	Laurent Perrussel, Emiliano Lorini & Roland Mühlenbernd (eds). Special Issue: Information Dynamics at ESSLLI 2014, in the series <i>Journal of Logic, Language and Information</i> . Heidelberg/New York: Springer.

Research Stays

2018	<i>Visiting Researcher</i> . Department of Linguistics, The Ohio State University, OH.
2017	<i>Visiting Researcher</i> . Department of Logic and Philosophy of Science, University of California Irvine, CA.
2017	<i>Visiting Researcher</i> . Center for Language Evolution Studies, Nicolaus Copernicus University, Torun, Poland.
2015	<i>Visiting Researcher</i> . International Centre for Mathematics and Computer Science (CIMI), Paul Sabatier University, Toulouse, France

Languages and Skills

languages	German (native), English (business fluent), Dutch, Spanish, Italian (A1)
skills	Python, Java, C++, C#, R, LaTeX, HTML, XML

Professional Affiliations

member	Game Theory Society
--------	---------------------