

Tim Rocktäschel

Curriculum Vitae

Education

- 09/2013 – 04/2017 **Ph.D.**, *Dept. of Computer Science, University College London, UK.*
Topic: Combining Representation Learning with Logic for Language Processing
Advisors: Sebastian Riedel, Daniel Tarlow, Thore Graepel
Examiners: Charles Sutton, Luke Dickens
- 09/2006 – 06/2012 **Diplom Informatik (equivalent to M.Sc. Computer Science)**, *Humboldt-Universität zu Berlin, Germany, Grade: 1.2 (equivalent to first-class honors).*
Subsidiary field: Psychology
- 09/1999 – 07/2006 **Abitur**, *Heinrich-Hertz Oberschule Berlin, Germany, Grade: 1.5.*
Advanced courses: Mathematics, Computer Science

Employment

Industry

- 04/2021 – present **Senior Staff Research Scientist**, *DeepMind, UK.*
Open-endedness Team Lead.
- 09/2021 – 04/2022 **Manager, Research Scientist**, *Facebook AI Research (FAIR) London, UK.*
Reinforcement Learning Area Lead.
- 08/2018 – 08/2021 **Research Scientist**, *Facebook AI Research (FAIR) London, UK.*
- 05 – 09/2015 **Research Intern**, *DeepMind, London, UK.*

Academic Appointments

- 10/2021 – present **Associate Professor**, *Centre for Artificial Intelligence, Dept. of Computer Science, University College London, UK.*
- 12/2020 – present **Scholar**, *European Laboratory for Learning and Intelligent Systems (ELLIS).*
- 08/2018 – 09/2021 **Assistant Professor (Lecturer)**, *Centre for Artificial Intelligence, Dept. of Computer Science, University College London, UK.*
- 10/2017 – 08/2018 **Junior Research Fellow**, *Jesus College, University of Oxford, UK.*
- 10/2017 – 08/2018 **Stipendiary Lecturer**, *Hertford College, University of Oxford, UK.*
College tutor in functional and imperative programming.
- 05/2017 – 08/2018 **Postdoctoral Researcher**, *Dept. of Computer Science, University of Oxford, UK.*
Researcher on reinforcement learning.
- 09/2012 – 07/2013 **Research Assistant**, *Humboldt-Universität zu Berlin, Berlin, Germany.*
- 05/2010 – 06/2012 **Student Research Assistant**, *Humboldt-Universität zu Berlin, Berlin, Germany.*

Achievements

Fellowships

- 2017 Junior Research Fellow in Computer Science at Jesus College, University of Oxford
- 2017 Google Ph.D. Fellowship in Natural Language Processing
- 2013 Microsoft Research Ph.D. Scholarship

Awards and Competitions

- 2021 ICLR 2021 Outstanding Area Chair Award
- 2020 Best Paper Award at AKBC for "How Context Affects Language Models' Factual Predictions"
- 2016 Best Paper Award at EMNLP Workshop on "Natural Language Processing for Social Media (SocialNLP)" for "emoji2vec: Learning Emoji Representations from their Description"
- 2016 Best Poster Award for "Reasoning about Entailment with Neural Attention" at UCL's Launch of the GPU Developers Forum sponsored by NVIDIA
- 2014 Google Exceptional Submission Award at ACL Workshop on "Semantic Parsing (SP14)" for paper on "Low-Dimensional Embeddings of Logic"
- 2013 Humboldt-Universität zu Berlin Computer Science faculty award for exceptional diploma thesis "Joint Extraction of Proteins and Bio-Molecular Events using Imperatively Defined Factor Graphs"
- 2013 Third place in the BioCreative IV CHEMDNER CDI task
- 2013 First place in the SemEval DDIEExtraction 2013 Task 9.1, and second place in Task 9.2

Professional Service

Editor

- 2021 – present Topic Editor for *Frontiers in Artificial Intelligence: "Learning for Structured Knowledge, Reasoning, and Planning"*

Area Chair

- 2021 – present International Conference on Learning Representations (ICLR), Highlighted Area Chair (2022)
- 2021 – present International Conference on Machine Learning (ICML)
- 2020 – present Conference on Neural Information Processing Systems (NeurIPS)
 - 2019 Annual Conference of the Association for Computational Linguistics (ACL), *Machine Learning*
 - 2019 Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL), *Question Answering*
 - 2019 Conference on Automated Knowledge Base Construction (AKBC), *Machine Learning*
 - 2018 The SIGNLL Conference on Computational Natural Language Learning (CoNLL)

Workshop Organization

- 2022 Co-organizer of the ICLR workshop on "Agent Learning in Open-Endedness (ALOE)"
- 2020 Co-organizer of the ICML workshop on "Language in Reinforcement Learning (LaReL)"
- 2018 Co-organizer of the ICML workshop on "Neural Abstract Machines & Program Induction (NAMPI)"
- 2017 Co-organizer of the NeurIPS workshop on "Automated Knowledge Base Construction (AKBC)"
- 2017 Co-organizer of the UAI workshop on "Statistical Relational AI (StarAI)"
- 2016 Co-organizer of the NeurIPS workshop on "Neural Abstract Machines & Program Induction (NAMPI)"
- 2016 Co-organizer of the NAACL workshop on "Automated Knowledge Base Construction (AKBC)"

Program Committee

- journals Transactions of the ACL (2019–2021), Journal for AI Research (2017, 2018), Journal for ML Research (2017), Neural Networks (2017), BMC Bioinformatics (2017), Journal of Cheminformatics (2014)
- conferences NeurIPS (2016–2019, top 50% reviewer in 2019), ICML (2018–2020, top 33% reviewer in 2020), ICLR (2018–2020), AAAI 2019, IJCAI 2019, EMNLP (2015–2018), WWW 2018, ACL (2017, 2016), EACL 2017, COLING 2016, ISWC 2016, *SEM (2016, 2015)
- workshops MRQA 2019, FEVER 2019, RepL4NLP (2018, 2017), Ethics in NLP 2017, StarAI 2016, NAACL-HLT SRC 2016, LD4IE 2016, KRR 2015, AKBC 2014, AHA! 2014

Grant Review Panels

- 2020 EPSRC Turing AI Acceleration Fellowship
- 2019 – 2021 The Royal Society International Exchange Committee
- 2019 The Leverhulme Trust

Examinations

- 2022 **External Examiner**, *Ph.D. of Nuri Cingillioglu*, Advised by Alessandra Russo, Imperial College London.
- 2022 **External Examiner**, *Ph.D. of Harrison Edwards*, Advised by Amos Storkey, University of Edinburgh.
- 2022 **External Examiner**, *Ph.D. of Rémy Portelas*, Advised by Pierre-Yves Oudeyer, Inria Bordeaux.
- 2021 **External Examiner**, *Ph.D. of Roberta Raileanu*, Advised by Rob Fergus, New York University.
- 2021 **External Examiner**, *Ph.D. of Ivana Balazevic*, Advised by Timothy Hospedales, University of Edinburgh.
- 2021 **External Examiner**, *Ph.D. of Nina Poerner*, Advised by Hinrich Schuetze, Ludwig-Maximilians-Universität.
- 2021 **External Examiner**, *Ph.D. of Marcel Hildebrandt*, Advised by Volker Tresp, Ludwig-Maximilians-Universität.
- 2020 **External Examiner**, *Ph.D. of Marta Garnelo Abellanas*, Advised by Murray Shanahan, Imperial College London.
- 2020 **External Examiner**, *Ph.D. of Paweł Budzianowski*, Advised by Richard Turner and Anna Korhonen, University of Cambridge.
- 2019 **External Examiner**, *Ph.D. of Ioannis Alexandros Assael*, Advised by Shimon Whiteson, University of Oxford.

Other

- 2019 Mentor at the Workshop for Women in Machine Learning (WiML), NeurIPS in Vancouver, Canada
- 2019 Panel Chair at the EurNLP 2019 Summit
- 2017 Mentor for in2scienceUK High School research interns Sam Branney and Kieran O'Donovan, University of Oxford

Invited Talks

Academic Events

- 2020 **A Shot at Bridging the Knowledge Gap in Reinforcement Learning**.
Invited speaker at the NeurIPS 2020 Workshop on Knowledge Representation & Reasoning Meets Machine Learning (KR2ML).
- The NetHack Learning Environment**.
Invited speaker at the ICML 2020 Workshop on Learning in Artificial Open Worlds (LAOW).
- 2019 **Learning with Explanations**, *Brussels*, Belgium.
Invited speaker at the first workshop on Fact Extraction and Verification (FEVER).
- 2018 **End-to-End Differentiable Proving**, *Alan Turing Institute*, UK.
Invited speaker at the Logic and Learning workshop.
- 2017 **Deep Prolog: End-to-End Differentiable Proving in Knowledge Bases**.
Invited speaker at the 2nd Conference on Artificial Intelligence and Theorem Proving (AITP 2017).

Universities

- 2022 **Open-ended Learning**, *University College London*, UK.
Invited talk at the Seminar in Emerging Topics in Integrated Machine Learning Systems.
- 2021 **The NetHack Learning Environment**, *Queen Mary University*, UK.
Invited talk at the Queen Mary Game AI Seminar Series.

- Knowledge Intensive Reinforcement Learning**, *Stanford University*, US.
Invited talk at the Stanford NLP Seminar Series.
- 2019 **Learning with Explanations**, *University of Edinburgh*, UK.
Invited talk at the the Institute for Language, Cognition and Computation (ILCC) Seminar.
- 2018 **Learning with Explanations**, *University of Cambridge*, Cambridge, UK.
Invited talk at the Language Technology Lab (LTT) Seminars.
- AI – The Good, the Bad & the Ugly**, *University of Oxford*, UK.
Invited talk at the Saïd Business School's Oxford Disruptive Tech Week.
- Deep Learning with Explanations**, *TU Darmstadt*, Germany.
Invited talk at the Adaptive Preparation of Information from Heterogeneous Sources (AIPHES) research training group.
- Deep Learning with Explanations**, *Imperial College London*, UK.
Invited talk at the Structured and Probabilistic Intelligent Knowledge Engineering (SPIKE) group.
- 2017 **End-to-End Differentiable Proving**, *University of Oxford*, UK.
Invited talk at the Future of Humanity Institute.
- 2016 **What Can Deep Learning Learn from Symbolic Inference?**, *Imperial College London*, UK.
Invited talk at the Biologically Inspired Computer Vision Group.
- Strong Structural Priors for Neural Network Architectures**, *University of Cambridge*, UK.
Invited talk at the Natural Language and Information Processing Seminar Series.
- Reasoning about Entailment with Neural Attention**, *University of Sheffield*, UK.
Invited talk at the Natural Language Processing Group Seminar.
- 2015 **Reasoning about Entailment with Neural Attention**, *German Research Centre for Artificial Intelligence Berlin*, Germany.
Invited talk.
- Injecting Logical Background Knowledge into Embeddings for Relation Extraction**, *University of Cambridge*, UK.
Invited talk at the Natural Language and Information Processing Seminar Series.
- 2014 **Relation Extraction with Low-rank Logic**, *Humboldt-Universität zu Berlin*, Germany.
Invited talk at the Knowledge Management for Bioinformatics research seminar.
- 2012 **Joint Extraction of Proteins and Bio-Molecular Events using Imperatively Defined Factor Graphs**, *University of Mannheim*, Germany.
- [Non-academic](#)
- 2021 **Advancing Deep Reinforcement Learning with NetHack**.
Invited interview at the TWIML AI Podcast.
- 2020 **The NetHack Learning Environment**.
Invited interview at the weights&biases Podcast.
- Deep reinforcement learning, symbolic learning and the road to AGI**.
Invited interview at the Towards Data Science Podcast.
- The NetHack Learning Environment**.
Invited talk at the FiveAI Seminar Series.
- 2019 **Learning with Explanations**, *London*, UK.
Invited talk at the London Machine Learning Meetup.
- 2017 **GPU-accelerated Deep Neural Networks for End-to-End Differentiable Planning and Reasoning**, *Munich*, Germany.
Invited speaker at the GPU Technology Conference Europe (GTC Europe 2017).
- End-to-End Differentiable Proving**, *Google Mountain View*, USA.
Invited talk at Google Research.
- End-to-End Differentiable Proving**, *DeepMind*, UK.
Invited talk at DeepMind.

End-to-End Differentiable Proving, *London, UK.*

Invited talk at the South England Natural Language Processing Meetup.

End-to-End Differentiable Proving, *Allen Institute for AI, USA.*

Interview at the NLP Highlights Podcast.

End-to-End Differentiable Proving, *London, UK.*

Invited talk at the London Machine Learning Meetup.

Teaching

- 2019 – present **Lecturer, Course Organizer**, University College London, UK.
Statistical Natural Language Processing. Co-designed and taught new course with focus on Deep Learning for Natural Language Processing.
Average student course rating (1 very good – 5 very bad) in 2019: 1.62 (lecturer), 1.98 (overall course); 2021: 1.56 (lecturer), 2.12 (overall course).
- 2019 **Lecturer**, *First Summer School on Deep Learning in NLP at RANLP, Varna, Bulgaria.*
Deep Learning for Natural Language Processing.
- 2018 **Stipendiary Lecturer**, *Computer Science*, Hertford College, University of Oxford, UK.
College Tutor in Imperative Programming.
- 2017 **Stipendiary Lecturer**, *Computer Science*, Hertford College, University of Oxford, UK.
College Tutor in Functional Programming.
Lecturer, *Second International Summer School on Data Science (SSDS 2017)*, Split, Croatia.
Deep Learning for Natural Language Processing.
- 2016 **Guest Lecturer**, *University College London, UK.*
Statistical Natural Language Processing.
Guest Lecturer, *General Assembly Data Science Course*, UK.
A Primer on Deep Learning for Natural Language Processing.
Teaching Assistant, *University College London, UK.*
Statistical Natural Language Processing.
- 2015 **Tutor**, *Association for Computational Linguistics (ACL)*, Beijing, China.
Matrix and Tensor Factorization for Natural Language Processing.
Guest Lecturer, *General Assembly Data Science Course*, UK.
A Primer on Deep Learning for Natural Language Processing.
Teaching Assistant, *University College London, UK.*
Statistical Natural Language Processing.
- 2014 **Guest Lecturer**, *University College London, UK.*
Statistical Natural Language Processing.
Teaching Assistant, *University College London, UK.*
Statistical Natural Language Processing.
- 2013 **Teaching Assistant**, *University College London, UK.*
Object-Oriented Programming.
- 2012 **Teaching Assistant**, *Humboldt-Universität zu Berlin, Germany.*
Seminar Applied Text Mining.
- 2009 **Tutor**, *Humboldt-Universität zu Berlin, Germany.*

Supervision

- 2021 – present **Supervisor**, *University College London, UK.*
Laura Ruis, Ph.D. Student
- 2021 – present **Co-supervisor**, *University College London, UK.*
Yingchen Xu, Ph.D. Student
- 2021 – present **Supervisor**, *University College London, UK.*
Akbar Khan, Ph.D. Student

- 2020 – present **Supervisor**, *University College London*, UK.
Mikayel Samvelyan, Ph.D. Student
- 2020 – present **Supervisor**, *University College London*, UK.
Robert Kirk, Ph.D. Student, CDT in Foundational AI
- 2020 – present **Supervisor**, *University College London*, UK.
Zhengyao Jiang, Ph.D. Student
- 2019 – present **Supervisor**, *University College London*, UK.
Minqi Jiang, Ph.D. Student

Publications

Theses

- T1 **Rocktäschel, T.**, “Combining Representation Learning with Logic for Language Processing”, PhD thesis, University College London, UK, 2018.

Book Chapters

- B1 Minervini, P., Bosnjak, M., **Rocktäschel, T.**, Riedel, S., Grefenstette, E., “Differentiable reasoning on large knowledge bases and natural language”, in *Knowledge Graphs for eXplainable Artificial Intelligence: Foundations, Applications and Challenges*, ser. Studies on the Semantic Web, I. Tiddi, F. Lécué, and P. Hitzler, Eds., vol. 47, IOS Press, 2020, pp. 125–142.

Journal Publications

- J5 Massarelli, L., Petroni, F., Piktus, A., Ott, M., **Rocktäschel, T.**, Plachouras, V., Silvestri, F., Riedel, S., “How Decoding Strategies Affect the Verifiability of Generated Text”, *Findings of ACL: EMNLP*, 2020.
- J4 Weber, L., Münchmeyer, J., **Rocktäschel, T.**, Habibi, M., Leser, U., “HUNER: Improving Biomedical NER with Pretraining”, *Bioinformatics*, 2019.
- J3 Thomas, P., **Rocktäschel, T.**, Hakenberg, J., Lichtblau, Y., Leser, U., “SETH detects and normalizes genetic variants in text”, *Bioinformatics*, 2016.
- J2 Krallinger, M., Rabal, O., Leitner, F., Vazquez, M., Salgado, D., Lu, Z., Leaman, R., Lu, Y., Ji, D., Lowe, D. M., Sayle, R. A., Batista-Navarro, R. T., Rak, R., Huber, T., **Rocktäschel, T.**, Matos, S., Campos, D., Tang, B., Xu, H., Munkhdalai, T., Ryu, K. H., Ramanan, S. V., Nathan, P. S., Zitnik, S., Bajec, M., Weber, L., Irmer, M., Akhondi, S. A., Kors, J. A., Xu, S., An, X., Sikdar, U. K., Ekbal, A., Yoshioka, M., Dieb, T. M., Choi, M., Verspoor, K., Khabsa, M., Giles, C. L., Liu, H., Elayavilli, R. K., Lamurias, A., Couto, F. M., Dai, H., Tsai, R. T., Ata, C., Can, T., Usie, A., Alves, R., Segura-Bedmar, I., Martinez, P., Oyarzabal, J., Valencia, A., “The ChEMDNER corpus of chemicals and drugs and its annotation principles”, *Journal of Cheminformatics*, 2015.
- J1 **Rocktäschel, T.**, Weidlich, M., Leser, U., “Chemspot: A hybrid system for chemical named entity recognition”, *Bioinformatics*, 2012.

Peer-Reviewed Conference Papers

- C36 Ammanabrolu, P., Urbanek, J., Li, M., Szlam, A., **Rocktäschel, T.**, Weston, J., “How to motivate your dragon: Teaching goal-driven agents to speak and act in fantasy worlds”, in *Proceedings of the Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT)*, 2021.
- C35 Campero, A., Raileanu, R., Küttler, H., Tenenbaum, J. B., **Rocktäschel, T.**, Grefenstette, E., “Learning with amigo: Adversarially motivated intrinsic goals”, in *Proceedings of the International Conference on Learning Representations (ICLR)*, 2021.
- C34 Jiang, M., Dennis, M., Parker-Holder, J., Foerster, J., Grefenstette, E., **Rocktäschel, T.**, “Replay-guided adversarial environment design”, in *Proceedings of the Conference on Neural Information Processing Systems (NeurIPS)*, 2021.

- C33 Jiang, M., Grefenstette, E., **Rocktäschel, T.**, “Prioritized level replay”, in *Proceedings of International Conference on Machine Learning, (ICML)*, 2021.
- C32 Jiang, Z., Minervini, P., Jiang, M., **Rocktäschel, T.**, “Grid-to-graph: Flexible spatial relational inductive biases for reinforcement learning”, in *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, 2021.
- C31 Kurin, V., Igl, M., **Rocktäschel, T.**, Boehmer, W., Whiteson, S., “My Body is a Cage: the Role of Morphology in Graph-Based Incompatible Control”, in *Proceedings of the International Conference on Learning Representations, (ICLR)*, 2021.
- C30 Petroni, F., Piktus, A., Fan, A., Lewis, P. S. H., Yazdani, M., Cao, N. D., Thorne, J., Jernite, Y., Karpukhin, V., Maillard, J., Plachouras, V., **Rocktäschel, T.**, Riedel, S., “KILT: a benchmark for knowledge intensive language tasks”, in *Proceedings of the Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT)*, 2021.
- C29 Samvelyan, M., Kirk, R., Kurin, V., Parker-Holder, J., Jiang, M., Hambro, E., Petroni, F., Küttler, H., Grefenstette, E., **Rocktäschel, T.**, “Minihack the planet: A sandbox for open-ended reinforcement learning research”, in *Proceedings of the Conference on Neural Information Processing Systems (NeurIPS)*, 2021.
- C28 Fan, A., Urbanek, J., Ringshia, P., Dinan, E., Qian, E., Karamcheti, S., Prabhumoye, S., Kiela, D., **Rocktäschel, T.**, Szlam, A., Weston, J., “Generating Interactive Worlds with Text”, in *Proceedings of the Association for the Advancement of Artificial Intelligence Conference on AI (AAAI)*, 2020.
- C27 Küttler, H., Nardelli, N., Miller, A. H., Raileanu, R., Selvatici, M., Grefenstette, E., **Rocktäschel, T.**, “The NetHack Learning Environment”, in *Proceedings of the Conference on Neural Information Processing Systems (NeurIPS)*, 2020.
- C26 Lewis, P. S. H., Perez, E., Piktus, A., Petroni, F., Karpukhin, V., Goyal, N., Küttler, H., Lewis, M., Yih, W., **Rocktäschel, T.**, Riedel, S., Kiela, D., “Retrieval-Augmented Generation for Knowledge-Intensive NLP Tasks”, in *Proceedings of the Conference on Neural Information Processing Systems (NeurIPS)*, 2020.
- C25 Minervini, P., Bosnjak, M., **Rocktäschel, T.**, Riedel, S., Grefenstette, E., “Differentiable Reasoning on Large Knowledge Bases and Natural Language”, in *Proceedings of the Association for the Advancement of Artificial Intelligence Conference on AI (AAAI)*, 2020.
- C24 Minervini, P., Riedel, S., Stenetorp, P., Grefenstette, E., **Rocktäschel, T.**, “Learning Reasoning Strategies in End-to-End Differentiable Proving”, in *Proceedings of the International Conference on Machine Learning (ICML)*, 2020.
- C23 Petroni, F., Lewis, P. S. H., Piktus, A., **Rocktäschel, T.**, Wu, Y., Miller, A. H., Riedel, S., “How Context Affects Language Models’ Factual Predictions”, in *Proceedings of the Conference on Automated Knowledge Base Construction (AKBC)*, 2020.
- C22 Raileanu, R., **Rocktäschel, T.**, “RIDE: Rewarding Impact-Driven Exploration for Procedurally-Generated Environments”, in *Proceedings of the International Conference on Learning Representations (ICLR)*, 2020.
- C21 Stacey, J., Minervini, P., Dubossarsky, H., Riedel, S., **Rocktäschel, T.**, “Avoiding the Hypothesis-Only Bias in Natural Language Inference via Ensemble Adversarial Training”, in *Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2020.
- C20 Zhong, V., **Rocktäschel, T.**, Grefenstette, E., “RTFM: Generalising to New Environment Dynamics via Reading”, in *Proceedings of the International Conference on Learning Representations (ICLR)*, 2020.

- C19 Letcher, A., Foerster, J. N., Balduzzi, D., **Rocktäschel, T.**, Whiteson, S., “Stable Opponent Shaping in Differentiable Games”, in *Proceedings of the International Conference on Learning Representations (ICLR)*, 2019.
- C18 Luketina, J., Nardelli, N., Farquhar, G., Foerster, J., Andreas, J., Grefenstette, E., Whiteson, S., **Rocktäschel, T.**, “A Survey of Reinforcement Learning Informed by Natural Language”, in *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, 2019.
- C17 Mao, J., Foerster, J., **Rocktäschel, T.**, Al-Shedivat, M., Farquhar, G., Whiteson, S., “A Baseline for Any Order Gradient Estimation in Stochastic Computation Graphs”, in *Proceedings of the International Conference on Machine Learning (ICML)*, 2019.
- C16 Petroni, F., **Rocktäschel, T.**, Lewis, P., Bakhtin, A., Wu, Y., Miller, A., Riedel, S., “Language models as knowledge bases?”, in *Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2019.
- C15 Urbanek, J., Fan, A., Karamcheti, S., Jain, S., Humeau, S., Dinan, E., **Rocktäschel, T.**, Kiela, D., Szlam, A., Weston, J., “Learning to speak and act in a fantasy text adventure game”, in *Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2019.
- C14 Weber, L., Minervini, P., Münchmeyer, J., Leser, U., **Rocktäschel, T.**, “NLProlog: Reasoning with Weak Unification for Question Answering in Natural Language”, in *Proceedings of the Annual Meeting of the Association for Computational Linguistics (ACL)*, 2019.
- C13 Camburu, O., **Rocktäschel, T.**, Lukasiwicz, T., Blunsom, P., “e-SNLI: Natural language inference with natural language explanations”, in *Proceedings of the Conference on Neural Information Processing Systems (NeurIPS)*, 2018.
- C12 Farquhar, G., **Rocktäschel, T.**, Igl, M., Whiteson, S., “TreeQN and ATreeC: Differentiable Tree-Structured Models for Deep Reinforcement Learning”, in *Proceedings of the International Conference on Learning Representations (ICLR)*, 2018.
- C11 Foerster, J., Farquhar, G., Al-Shedivat, M., **Rocktäschel, T.**, Xing, E. P., Whiteson, S., “DiCE: The Infinitely Differentiable Monte-Carlo Estimator”, in *Proceedings of the International Conference on Machine Learning (ICML)*, 2018.
- C10 Saeidi, M., Bartolo, M., Lewis, P., Singh, S., **Rocktäschel, T.**, Sheldon, M., Bouchard, G., Riedel, S., “Interpretation of Natural Language Rules in Conversational Machine Reading”, in *Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2018.
- C9 Bosnjak, M., **Rocktäschel, T.**, Naradowsky, J., Riedel, S., “Programming with a Differentiable Forth Interpreter”, in *Proceedings of the International Conference on Machine Learning (ICML)*, 2017.
- C8 Daniluk, M., **Rocktäschel, T.**, Welbl, J., Riedel, S., “Frustratingly Short Attention Spans in Neural Language Modeling”, in *Proceedings of the International Conference on Learning Representations (ICLR)*, 2017.
- C7 Minervini, P., Demeester, T., **Rocktäschel, T.**, Riedel, S., “Adversarial Sets for Regularised Neural Link Predictors”, in *Proceedings of the Conference on Uncertainty in Artificial Intelligence (UAI)*, 2017.
- C6 **Rocktäschel, T.**, Riedel, S., “End-to-end Differentiable Proving”, in *Proceedings of the Conference on Neural Information Processing Systems (NeurIPS)*, 2017.
- C5 Augenstein, I., **Rocktäschel, T.**, Vlachos, A., Bontcheva, K., “Stance Detection with Bidirectional Conditional Encoding”, in *Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2016.

- C4 Demeester, T., **Rocktäschel, T.**, Riedel, S., “Lifted Rule Injection for Relation Embeddings”, in *Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2016, pp. 1389–1399.
- C3 **Rocktäschel, T.**, Grefenstette, E., Hermann, K. M., Kocisky, T., Blunsom, P., “Reasoning about Entailment with Neural Attention”, in *Proceedings of the International Conference on Learning Representations (ICLR)*, 2016.
- C2 Riedel, S., Singh, S., Bouchard, G., **Rocktäschel, T.**, Sanchez, I., “Towards Two-Way Interaction with Reading Machines”, in *Proceedings of the Conference on Statistical Language and Speech Processing (SLPS)*, 2015.
- C1 **Rocktäschel, T.**, Singh, S., Riedel, S., “Injecting Logical Background Knowledge into Embeddings for Relation Extraction”, in *Proceedings of the Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT)*, 2015.
- [Peer-reviewed Workshops, Demonstrations, and Symposia](#)
- W22 Jiang, M., Dennis, M. D., Parker-Holder, J., Lupu, A., Kuttler, H., Grefenstette, E., **Rocktäschel, T.**, Foerster, J. N., “Grounding aleatoric uncertainty in unsupervised environment design”, in *Deep RL Workshop NeurIPS*, 2021.
- W21 Jiang, Z., Zhang, T., Kirk, R., **Rocktäschel, T.**, Grefenstette, E., “Graph backup: Data efficient backup exploiting markovian data”, in *Deep RL Workshop NeurIPS*, 2021.
- W20 Korshunova, I., Jiang, M., Parker-Holder, J., **Rocktäschel, T.**, Grefenstette, E., “Return dispersion as an estimator of learning potential for prioritized level replay”, in *Deep RL Workshop NeurIPS*, 2021.
- W19 Parker-Holder, J., Jiang, M., Dennis, M. D., Samvelyan, M., Foerster, J. N., Grefenstette, E., **Rocktäschel, T.**, “That escalated quickly: Compounding complexity by editing levels at the frontier of agent capabilities”, in *Deep RL Workshop NeurIPS*, 2021.
- W18 Rothermel, D., Li, M., **Rocktäschel, T.**, Foerster, J. N., “Don’t sweep your learning rate under the rug: A closer look at cross-modal transfer of pretrained transformers”, in *ICML 2021 Workshop: Self-Supervised Learning for Reasoning and Perception (ICMLSSL)*, 2021.
- W17 Jiang, M., Luketina, J., Nardelli, N., Minervini, P., Torr, P., Whiteson, S., **Rocktäschel, T.**, “WordCraft: An Environment for Benchmarking Commonsense Agents”, in *ICML Workshop on Language in Reinforcement Learning (LaReL)*, 2020.
- W16 Cowen-Rivers, A., Minervini, P., Riedel, S., **Rocktäschel, T.**, Wang, J., Bosnjak, M., “Neural Variational Inference For Estimating Knowledge Graph Embedding Uncertainty”, in *IJCAI Workshop on Neural-Symbolic Learning and Reasoning (NeSy)*, 2019.
- W15 Sivakumar, V., **Rocktäschel, T.**, Miller, A. H., Küttler, H., Nardelli, N., Rabbat, M., Pineau, J., Riedel, S., “mvfst-rl: An Asynchronous RL Framework for Congestion Control with Delayed Actions”, in *NeurIPS Workshop on Machine Learning for Systems*, 2019.
- W14 Minervini, P., Bosnjak, M., **Rocktäschel, T.**, Riedel, S., “Towards Neural Theorem Proving at Scale”, in *ICML Workshop on Neural Abstract Machines and Program Induction (NAMPI)*, 2018.
- W13 Weissenborn, D., Minervini, P., Augenstein, I., Welbl, J., **Rocktäschel, T.**, Bosnjak, M., Mitchell, J., Demeester, T., Dettmers, T., Stenetorp, P., Riedel, S., “Jack the Reader - A Machine Reading Framework”, in *Demo at the Annual Meeting of the Association for Computational Linguistics (ACL)*, 2018, pp. 25–30.
- W12 Demeester, T., **Rocktäschel, T.**, Riedel, S., “Regularizing Relation Representations by First-order Implications”, in *NAACL-HLT Workshop on Automated Knowledge Base Construction (AKBC)*, 2016.

- W11 Eisner, B., **Rocktäschel, T.**, Augenstein, I., Bosnjak, M., Riedel, S., “emoji2vec: Learning Emoji Representations from their Description”, in *EMNLP Workshop on Natural Language Processing for Social Media (SocialNLP)*, 2016.
- W10 **Rocktäschel, T.**, Riedel, S., “Learning Knowledge Base Inference with Neural Theorem Provers”, in *NAACL-HLT Workshop on Automated Knowledge Base (AKBC)*, 2016.
- W9 Weissenborn, D., **Rocktäschel, T.**, “MuFuRU: The Multi-Function Recurrent Unit”, in *ACL Workshop on Representation Learning for NLP (RepL4NLP)*, 2016.
- W8 Sanchez, I., **Rocktäschel, T.**, Riedel, S., Singh, S., “Towards Extracting Faithful and Descriptive Representations of Latent Variable Models”, in *AAAI Spring Symposium on Knowledge Representation and Reasoning (KRR)*, 2015.
- W7 Singh, S., **Rocktäschel, T.**, Riedel, S., “Towards Combined Matrix and Tensor Factorization for Universal Schema Relation Extraction”, in *NAACL Workshop on Vector Space Modeling for NLP (VSM)*, 2015.
- W6 Riedel, S., Singh, S., Srikumar, V., **Rocktäschel, T.**, Visengeriyeva, L., Noessner, J., “WOLFE: Strength Reduction and Approximate Programming for Probabilistic Programming”, in *AAAI Workshop on Statistical Relational AI (StarAI)*, 2014.
- W5 **Rocktäschel, T.**, Bosnjak, M., Singh, S., Riedel, S., “Low-Dimensional Embeddings of Logic”, in *ACL Workshop on Semantic Parsing (SP’14)*, 2014.
- W4 Singh, S., Riedel, S., Hewitt, L., **Rocktäschel, T.**, “Designing an IDE for Probabilistic Programming: Challenges and a Prototype”, in *NeurIPS Workshop on Probabilistic Programming*, 2014.
- W3 Huber, T., **Rocktäschel, T.**, Weidlich, M., Thomas, P., Leser, U., “Extended Feature Set for Chemical Named Entity Recognition and Indexing”, in *BioCreative Challenge Evaluation Workshop*, 2013.
- W2 **Rocktäschel, T.**, Huber, T., Weidlich, M., Leser, U., “WBI-NER: The impact of domain-specific features on the performance of identifying and classifying mentions of drugs”, in **SEM Workshop on Semantic Evaluation (SemEval 2013)*, 2013.
- W1 Thomas, P., Neves, M., **Rocktäschel, T.**, Leser, U., “WBI-DDI: Drug-Drug Interaction Extraction using Majority Voting”, in **SEM Workshop on Semantic Evaluation (SemEval 2013)*, 2013.
- [Invited Papers, Preprints, and Unrefereed Publications](#)
- U5 Mahajan, A., Samvelyan, M., Gupta, T., Ellis, B., Sun, M., **Rocktäschel, T.**, Whiteson, S., *Generalization in cooperative multi-agent systems*, 2022.
- U4 Kirk, R., Zhang, A., Grefenstette, E., **Rocktäschel, T.**, *A survey of generalisation in deep reinforcement learning*, 2021.
- U3 Küttler, H., Nardelli, N., Lavril, T., Selvatici, M., Sivakumar, V., **Rocktäschel, T.**, Grefenstette, E., *TorchBeast: A PyTorch Platform for Distributed RL*, 2019. Technical Report arXiv: 1910.03552.
- U2 Bhoopchand, A., **Rocktäschel, T.**, Barr, E. T., Riedel, S., *Learning Python Code Suggestion with a Sparse Pointer Network*, 2016. Technical Report arXiv: 1611.08307.
- U1 Kolesnyk, V., **Rocktäschel, T.**, Riedel, S., *Generating Natural Language Inference Chains*, 2016. Technical Report arXiv: 1606.01404.

References

Available upon request.