

Tobias Schimanski

Doctoral Researcher at the University of Zurich
Affiliated Researcher at the University of Oxford
M.Sc. International Information Systems

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Languages: English, German, French

(Last update: 01/10/2024)

Research objective

My research objective is the development and application of Natural Language Processing methods to identify companies that are really sustainable and those who are rather greenwashing. I want to advance the knowledge about sustainability activities of firms and contribute to effective control mechanisms.

Education

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|-----------------|---|
| 02/2023-date | PhD Student, Institute for Banking and Finance
University of Zurich <ul style="list-style-type: none">- Focus on the NLP for Sustainable Finance |
| 10/2020-12/2022 | Master of Science, International Information Systems
Friedrich-Alexander-University Nuremberg-Erlangen (FAU) <ul style="list-style-type: none">- Focus on Data Science and Machine Learning- Master Thesis: Deep Learning and ESG: Analysing the link between a firms' ESG communication in annual reports and its ESG ratings- Final grade: 1.22 (top 1%) |
| 10/2016-09/2020 | Bachelor of Science, Industrial Engineering
Friedrich-Alexander-University Nuremberg-Erlangen (FAU) <ul style="list-style-type: none">- Focus on Technical Mechanics, Statistics and Finance- Bachelor Thesis: Digitalization of enterprises: advantageousness and measurement from an investor perspective- Final grade: 1.4 (top 2%) |

Research Experience

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| 06/2023-date | University of Oxford, NLP for Sustainable Finance Programme
Affiliated Researcher |
| 02/2022-01/2023 | FAU Nuremberg-Erlangen, Chair for Data Analytics
Research Assistant |

Teaching

09/2024	University of Zurich, Master's Education Guest Lecturer in the research seminar "NLP for finance"
04/2024	University of Zurich, Master's Education Guest Lecturer in the research seminar "Strategic Communication of Net Zero: Company Reports, Sustainability Claims and Greenwashing"
08/2024	Climate Change AI, Summer School Lecturer for "NLP Policy Analysis"
09/2023-date	University of Zurich, Executive Education Teaching in the "FinTech & Sustainability" course
04/2021-04/2022	FAU Nuremberg-Erlangen, Bachelor's Education Creating Exercise Teaching "Data Management & Analysis" Exercise
11/2020-10/2021	FAU Nuremberg-Erlangen, Bachelor's Education Teaching "Statistics" Exercise
10/2019-03/2020	FAU Nuremberg-Erlangen, Bachelor's Education Teaching "Statics and Strength of Materials" Exercise

Invited Talks

2024:

- Speaker at the "**NLP Expert Group Meeting**" (Zurich, Switzerland), organised by SwissNLP and the Data Innovation Alliance
- Speaker at the "**BIS Innovation Hub meeting on: Use of Technology to Evaluate Transition Plans**" (Madrid, Spain/hybrid), organised by Banco de España, and Bank of International Settlements (BIS)
- Speaker at the "**NGFS Subgroup for Technology meeting**" (London, UK/hybrid), organized by the Network for Greening the Financial System
- Keynote speaker at the "**BARC ESG Reporting 2024**" conference (Frankfurt, Germany), organised by the BARC GmbH
- Speaker at the "**CBRT-IFC Workshop on: Addressing Climate Change Data Needs: The Global Debate and Central Banks' Contribution**" (Izmir, Turkey), organised by the Central Bank of Türkiye, Irving Fisher Committee on Central Bank Statistics, and BIS

2023:

- Speaker at the "**Red Flag Greenwashing Indicators – Understanding the Algorithms Behind It**" workshop (Kuala Lumpur, Malaysia), organised by Bursa Malaysia
- Speaker at the "**Employing Natural Language Processing for Sustainable Finance**" meeting (Singapore, Singapore), organised by the Center for Sustainable Finance and Private Wealth Singapore
- Speaker at the "**Oxford Symposium on Natural Language Processing for Sustainable Finance**" (Oxford, UK), organized by the University of Oxford

Workshops & Additional Work

2024:

- **Co-organizer** of the “ClimateNLP” workshop at the **Association for Computational Linguistics (ACL)** conference in Bangkok, 11-16 August 2024
- **Co-organizer and panel discussant** in the workshop “Accelerating Climate Change Action Through Machine Learning” at the **Applied Machine Learning Days (AMLDD)** in Lausanne, 23-26 March 2024

2023:

- **Contributor** to the open-source tool platform chatclimate.ai for the [ChatClimate](#), [ChatReport](#) and [AskNature](#) tools
- **Contributor** to the WWF concept note on greenwashing indicators:

Julia Bingler, Chiara Colesanti Senni, Desiree Fixler, **Tobias Schimanski**: [Net Zero Transition Plans: Red Flag Indicators to Assess Inconsistencies and Greenwashing](#).

- Co-organizer of the Birds-of-a-Feather session on “NLP for Climate Change” at the **Empirical Methods in Natural Language Processing (EMNLP)** conference, Singapore, 6-10 December 2023

Reviewing Activities

- Reviewer for **Finance Research Letters**
- Reviewer for the **Journal of Banking and Finance**
- Reviewer for **Nature Communications**

Publications

2024:

Tobias Schimanski, Jingwei Ni, Mathias Kraus, Elliott Ash, Markus Leippold (2024): [Towards Faithful and Robust LLM Specialists for Evidence-Based Question-Answering](#). In: main conference of **Association for Computational Linguistics (ACL)**.

Tobias Schimanski, Jingwei Ni, Roberto Spacey, Nicola Ranger, Markus Leippold: [ClimRetrieve: A Benchmarking Dataset for Information Retrieval from Corporate Climate Disclosures](#). In: main conference of **Empirical Methods in Natural Language Processing (EMNLP)**. Forthcoming.

Tobias Schimanski, Andrin Reding, Nico Reding, Julia Bingler, Mathias Kraus, Markus Leippold (2024): [Bridging the Gap in ESG Measurement: Using NLP to Quantify Environmental, Social, and Governance Communication](#). **Finance Research Letters**.

Tobias Schimanski, Chiara Colesanti Senni, Glen Gostlow, Jingwei Ni, Tingyu Yu, Markus Leippold (2024): [Exploring Nature: Datasets and Models for Analyzing Nature-Related Disclosures](#). In: Workshop on AI in Finance for Social Impact of **Association for Advancement of Artificial Intelligence (AAAI)**.

Veruska Muccione, Saeid Ashraf Vaghefi, Julia Bingler, Simon K Allen, Mathias Kraus, Glen Gostlow, Tobias Wekhof, Chiara Colesanti-Senni, Dominik Stammach, Jingwei Ni, **Tobias Schimanski**, Tingyu Yu, Qian Wang, Christian Huggel, Juerg Luterbacher, Robbert Biesbroek, Markus Leippold (2024): [Integrating artificial intelligence with expert knowledge in global environmental assessments: opportunities, challenges and the way ahead](#). **Regional Environmental Change**.

2023:

Tobias Schimanski, Julia Bingler, Camilla Hyslop, Mathias Kraus, Markus Leippold (2023): [ClimateBERT-NetZero: Detecting and Assessing Net Zero and Reduction Targets](#). In: main conference of **Empirical Methods in Natural Language Processing (EMNLP)**.

Jingwei Ni, Julia Bingler, Chiara Colesanti Senni, Mathias Kraus, Glen Gostlow, **Tobias Schimanski**, Dominik Stammach, Saeid Vaghefi, Qian Wang, Nicolas Webersinke, Tobias Wekhof, Tingyu Yu, Markus Leippold (2023): [chatReport: Democratizing Sustainability Disclosure Analysis through LLM-based Tools](#). In: System Demonstration Track of **Empirical Methods in Natural Language Processing (EMNLP)**.

Saeid Vaghefi, Qian Wang, Veruska Muccione, Jingwei Ni, Mathias Kraus, Julia Bingler, **Tobias Schimanski**, Chiara Colesanti Senni, Nicolas Webersinke, Christian Huggel, Markus Leippold (2023): [ChatClimate: Grounding Conversational AI in Climate Science](#). **Nature Communications Earth & Environment**.