# Dr. Stefan Ellmauthaler
## Curriculum Vitae

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Dr. rer. nat. | AI Researcher | Tech & AI Consultant | NixOS Enthusiast | Speaker

## Employment History

**01/2021 - 09/2024**    **Postdoctoral Research Associate**, TU Dresden, Faculty for Computer Science / Center for Advanced Electronics Dresden (cfaed) / International Center for Computational Logic (ICCL), Knowledge-Based Systems Group, Research on qualitative AI, rule-based reasoning, ontology-based data access and argumentation theory. Rust software development, system administration, various organisational tasks, and teaching. Project management responsibilities as InnoSale's work package lead.
Organiser of SAFA 2024, technical chair of JELIA 2023, and various reviewing activities.
**Funded by** the Federal Ministry of Education and Research (BMBF) in ScaDS.AI (Center for Scalable Data Analytics and Artificial Intelligence) and additionally in the BMBF funded industry-oriented ITEA4 project "Innovating Sales and Planning of Complex Industrial Products Exploiting Artificial Intelligence (InnoSale)" since 01/2023.

**10/2018 - 12/2020**    **Postdoctoral Research Associate**, Leipzig University, Computer Science Institute, Intelligent Systems Group, State-funded position with obligatory teaching duties. Handling of COVID-19 related administrative and organisational tasks. Guest-Editor for TLPL. Various reviewing tasks.

**10/2012 - 09/2018**    **Research associate**, Leipzig University, Computer Science Institute, Intelligent Systems Group, Research on artificial intelligence and knowledge representation in distributed and stream-based reasoning, argumentation theory, and rule-based logic programming. Teaching, the organisation of multiple peer-reviewed workshops (RactKnow 2014, IULP 2015 and 2017) and various reviewing activities. Administrative and project management tasks for the Hybris-research group. Working at the following projects of the german research group (DFG) as **project employee**:

- 10/2017-09/2018: *"Advanced tools for graph-based formal argumentation"* (Project BR-1817/7-2)

As **project employee** and **administrative officer** for Leipzig:

- 10/2012-09/2017 *"Hybris-A2: Advanced Solving Technology for Dynamic and Reactive Applications"* (Researchgroup Hybrid Reasoning for Intelligent Systems - "Hybris" - FOR 1513)
- 10/2012-09/2015 *"Hybris-B2: From Correlation to Causality: Hybrid Reasoning over Dynamic Protein Interaction Networks"* (FOR 1513)

**03/2011**    **Project employee**, Vienna University of Technology

## Education

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|---|---|
| 10/2012 – 06/2018 | **Doctoral study (Dr. rer. nat.)**, *Computer Science*, Leipzig University, "magna cum laude". *"Multi-Context Reasoning in Continuous Data-Flow Environments"* <br>• Prof. Dr. Gerhard Brewka (supervisor and first reviewer) <br>• Prof. Dr. Torsten Schaub (second reviewer) |
| 10/2009 - 09/2012 | **Master's study (Dipl.-Ing.)**, *Computational Intelligence*, Vienna University of Technology, with distinction. *"Abstract Dialectical Frameworks: Properties, Complexity, and Implementation"* <br>• Privatdox. Dr. techn. Dipl.-Ing. Stefan Woltran (supervisor) <br>• Proj. Ass. Dipl.-Ing. Johannes Peter Wallner, BSc (assistance) |
| 10/2005 - 07-2009 | **Bachelor's study (BSc)**, *Medicine and Computer Science*, Vienna University of Technology |
| 09/2000 - 06/2005 | **"Matura" Higher School Certificate**, *Department EDVO*, HTBLuVA Wiener Neustadt, School to gain matriculation standard in conjunction with expertise in the field of informatics and business management (graduation at the 13th school year) |

## Further Education

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| 06/2024 | **Business administration for young researcher**, Graduate Academy TU Dresden, Workshop of 16 teaching units on business administration, Lecturer: Prof. Dr. Torsten Forberg |
| 05/2024 | **Negotiating in Science & Academia**, Graduate Academy TU Dresden, Workshop of 9 teaching units on negotiations during business deals and academia, Lecturer: Dr. Silvia Scheinert |
| 10/2023 | **First Aid Training including Sports Emergencies**, Deutsches Rotes Kreuz Dresden, Course comprising 9 teaching units |
| 03/2023 | **Managing Projects and Leading Teams for Postdocs**, Graduate Academy TU Dresden, Workshop of 13 working units, Lecturer: Dr. Markus Schmittberger |
| 05/2022 | **Leadership Skills for Postdocs**, Graduate Academy TU Dresden, Workshop of 18 working units, Lecturer: Hiu Pun Chong |
| 01/2022 | **Agile Projectmanagement - Methods and Processes to Cooperation in Teams**, Center for continuing education - TU Dresden, Workshop of 18 working units, Lecturer: Roberto Riehle (SCRUM-Master and Agile-Coach) |
| 10/2018 - 06/2020 | **Saxon Higher Education Didactics Certificate**, Center for Didactics and Higher Education Saxony (HDS), 240 working units |
| 07/2014 | **Doctoral Consortium**, Fourteenth Conference on Principles of Knowledge Representation and Reasoning (KR), Wien, Topic: Argumentation for Reactive Reasoning |
| 06/2013 | **Summer School**, Advanced Course on AI (ACAI), London |

## Skills

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| Expert | Knowledge Representation, qualitative AI, Argumentation Theory, Complexity Theory, Discrete Planning and Optimisation, LaTeX, typst, Higher Education Teaching, Scientific working methods, Research organisation, Declarative Programming (Answer Set Programming) |
| Further Competencies | (Agile) Projectmanagement, NixOs, bash/zsh, python, C(++), Rust, SQL, datalog, git, Basic Machine Learning (BDT, Deep Learning) knowledge, Basic Data Science knowledge |
| Softskills | team player, adapable, conflict and problem discussion experience, leadership skills, presentation skills, MBTI: ESTJ |
| Languages | German  native tongue |
| | English  fluent |

## Awards

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| 07/2017 | **7. Answer Set Programming Competition Modelling Competition**, International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR) 2017, Espoo, Finland: *first place* |
| 07/2014 | **ASP Modelling Contest**, International Conference on Logic Programming (ICLP) 2014 during the Vienna Summer of Logic 2014 Olympics, Vienna, Austria: *third place* |
| 08/2013 | **20. PROLOG Programming Contest**, International Conference on Logic Programming (ICLP) 2013, Istanbul, Turkey: *first place* |

## Volunteering Work

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| 11/2023 - 09/2024 | **Company First Aider**, TU Dresden |
| 10/2023 - 09/2024 | **DHSZ Course/Coach**, Dresden University Sports Center, TU Dresden *Planning and conducting a weekly table tennis meeting lasting 90 minutes for employees of the Faculty of Computer Science.* |

## Academic Working Experience

### Reviewing

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| Journal Reviewing | Theory and Practice of Logic Programming (TPLP), ACM Transactions on Database Systems (TODS), Artificial Intelligence Review (AIRE), IfCoLog Journal of Logics and their Applications, Journal of Artificial Intelligence Research (JAIR), International Journal of Approximate Reasoning (IJA) |
| Program Committee | AAAI 2024, ASPOCP 2024, ECAI 2024, AAAI 2023, ASPOCP 2023, ECAI 2023, ASPOCP 2022, SAFA 2022, ASPOCP 2020, COMMA 2020, SAFA 2020, ASPOCP 2019, AAAI 2018, SAFA 2018, COMMA 2016, SAFA 2016, IJCAI 2015 (KR Track) |
| Reviewing Conferences & Workshops | COMMA 2018, IJCAI 2018, IJCAI 2017, IJCAI 2016, ICLP 2016, SAFA 2016, IJCAI 2015, IULP 2015, AAAI 2014, ECAI 2014, ReactKnow 2014, ICCSW 2014, ICLP 2013, ICCSW 2013 |

## Scientific Working Experience

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| SAFA Organiser | 5. Inernational Workshop on Systems and Algorithms for Formal Argmentation (SAFA2024), co-located with the 10. International Conference on Computational Models of Argument (COMMA 2024) at Hagen, Germany |
| JELIA Technical Chair | 18. Edition of the European Conference on Logics in Artificial Intelligence (JELIA 2023) at Dresden, Germany |
| KI Tutorial Speaker | Tutorial on "Multi-Context Stream Reasoning" at the 43. German Conference on Artificial Intelligence (remote, 2020) |
| Guest-Editor | Theory and Practice on Logic Programming (TPLP), Special issue on User-Oriented Logic Programming and Reasoning Paradigms |
| IULP Organiser | 2. International Workshop on User-Oriented Logic Paradigms (IULP 2017), co-located with the 4. International Conference on Logic Programming and Nonmonotonic Reasoning (LP-NMR 2017) at Espoo, Finland |
| IULP Organiser | International Workshop on User-Oriented Logic Programming (IULP2015), co-located with the International Conference on Logic Programming (ICLP 2015)at Cork, Ireland |
| ReactKnow Organiser | International Workshop on Reactive Concepts in Knowledge Representation (ReactKnow 2014), co-located with the European Conference on Artificial Intelligence (ECAI 2014) at Prague, Czech |

## Teaching Experience

### Teaching Responsibilities

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| WT 2021, ST 2022 | Transfer of teaching responsibilities on knowledge based systems at TU Dresden |

### Lectures/Courses

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| ST 2023, WT 2023 | **CMS Team Project**, *Software Team Project*, 8.0h per week, 300 hours workload, Advanced MSc module course in computer science with software engineering and teamwork focus |
| WT 2021 | **Rule-Based Paradigms in Knowledge Representation**, *Seminar*, 2.0h per week, Advanced MSc module course in computer science |
| ST 2015 - 2020 | **Knowledge Based Systems**, *Exercise*, 1.0 h per week, BSc course in computer science, Lecture held by Prof. G. Brewka |
| SS 2015 - 2020 | **Knowledge Based Systems**, *Lecture*, 2.0 h per week, Represented Prof. G. Brewka at Topic "ASP", BSc course in computer science |
| WT 2019 | **Knowledge Representation**, *Lecture*, 2.0 h per week, Presented the topic "Multi-Context Systems", MSc course in computer science |
| WT 2013, WT 2019 | **Knowledge Representation**, *Seminar*, 2.0 h per week, MSc course in computer science |
| WT 2017 - 2020 | **Knowledge Repesentation**, *Practical course*, 2.0h per week, Learn on how to model knowledge with answer set programming, MSc course in computer science |
| WT 2014 | **Intelligent systems**, *Seminar*, 2.0 h per week, MSc course in computer science |
| WT 2014 | **Logic in Computer Science**, *Seminar*, 2.0 h per week, MSc course in computer science |
| ST 2013 | **Semantic Web Technologies**, *Seminar*, 2.0h per week, MSc course in computer science |

## Co-supervised Bachelor's Thesis

2022    *Justus Möller*: Construction of Human-solvable Sudoku Puzzles

2020    *Tobias Krawetzke*: Dialectical Models Encoding in C++ neu betrachtet: Analyse, Benutzbarkeit und Modifikation, Grade: "good"

2017    *Kevin Kubsch*: Application and implementation of splitting procedures to Abstract Dialectical Frameworks, Grade: "very good"

2014    *Jakob Runge*: CARBON - a Web application and a RESTful API for argumentation

## Teaching Assistance

2006 - 2009    **Tutor**, Vienna University of Technology, Institute of Computer Aided Automation, Tutor for the BSc course "EProg" (Introduction to Programming)"

Dr. Stefan Ellmauthaler
October, 09 2024