

Luis Kaiser

Google X, The Moonshot Factory
University of Texas at Austin
lkaiser@utexas.edu
luiskaiser.com

EDUCATION

University of Texas at Austin

Ph.D. in Computational Science, Engineering, and Mathematics (CSEM)
Advisor: Richard Tsai

Austin, TX
Expected Dec 2027

University of Wurzburg

MS in Mathematics and Artificial Intelligence
Advisors: Richard Tsai (Austin), Christian Klingenberg (Wurzburg)
Study Abroad at University of Texas at Austin

Wurzburg, Germany
Awarded Feb 2023

Technical University of Munich (TUM) and University of Wurzburg

BS in Mathematics and Computer Science
Advisor: Andreas Hotho
Study Abroad at Norwegian School of Economics, Data Science Program

Munich, Germany
Awarded May 2021

RESEARCH POSITIONS

Google X

PhD AI Resident, [stealth moonshot]

Mountain View, CA
Dec 2025-Present

- Designed multi-agent AI systems that continually adapt to improve decision-making given physical simulations
- Built physics-guided evolutionary search for scientific models, improving generalization to unseen task settings
- Self-distilled models from prior roll-outs to select ML setups before costly evaluation, using 20x less compute

University of Texas at Austin

PhD Researcher, Oden Institute; Advisor: Richard Tsai

Austin, TX
Feb 2024-Present

- Developed a multi-agent test-time neural memory with cross-agent attention for long-horizon coordination
- Designed a transformer-based PDE solver with in-context learning and robust test-time retrieval
- Created finite-difference methods enhanced by a scalable transformer U-Net for high-resolution corrections

University of Wurzburg

ML Researcher, Data Science Lab; Advisors: Andreas Hotho, Julian Tritscher

Wurzburg, Germany
Dec 2020-Aug 2021

- Developed RL multi-objective reward shaping, outperforming profit-only reward formulations by 6%
- Evaluated when curriculum learning stabilizes actor-critic training under sparse, conflicting rewards

EXPERIENCE

Bloomberg Software Engineer, Full-Time, Applied Machine Learning and Forecasting	London, UK Feb 2023-Feb 2024
Max-Con Data (acquired) Machine Learning Research Intern	Wurzburg, Germany Jun 2019-Nov 2020

PUBLICATIONS

Research Focus: I build multi-agent intelligent systems that continually learn. My recent work focuses on efficient multi-agent neural memory and scalable robust test-time retrieval for scientific domains. My broader background spans reinforcement learning, scientific ML and applied mathematics.

Multi-Agent Learning with Individual and Shared Neural Memories. <i>in preparation</i>	Oct 2026
Robust Test-Time Memory: When Should Surprise Become Learning? <i>in preparation</i>	Aug 2026
Luis Kaiser , Richard Tsai, Christian Klingenberg. “Efficient Numerical Wave Propagation Enhanced by an End-to-End Deep Learning Model.” <i>ENUMATH 2023, Springer</i> .	April 2025

TEACHING

CS 378: Computational Systems Senior Design – Teaching Assistant Co-led student engineering teams with Prof. Raghav Mahalingam, University of Texas at Austin	Fall 2025
Algorithms and Data Structures – Teaching Assistant Designed and co-taught CS curriculum led by Prof. Andreas Hotho, University of Wurzburg	2020

SELECTED TALKS

“Self-Improving Systems for Machine Learning.” <i>Google X, Internal Speaker Series</i> .	June 2026
“Playing Games using Monte Carlo Tree Search Grounded by Partial Differential Equations.” <i>UT Austin, Center for Autonomy</i> .	Oct 2024
“Deep Reinforcement Learning and Monte Carlo Tree Search in Game Theory.” <i>University of Wurzburg, Department of Mathematics</i> .	Sept 2024
“Learning a Differentiable Foundation Model of Wave Dynamics for Fast, Scalable Forecasting.” <i>University of Wurzburg, Department of Mathematics</i> .	Apr 2024
“Fast, Accurate, and Scalable Numerical Algorithms: Enhancement by Deep Learning.” <i>Texas Advanced Computing Center (TACC) - AI Consortium</i> .	Apr 2024
“Deep Learning for Wave Propagation - Neural Operators and Surrogate Models.” <i>University of Wurzburg, Department of Mathematics</i> .	Jan 2023

LEADERSHIP AND AWARDS

Member of CS PhD Approval Committee, University of Texas at Austin	2025
E-fellows Scholarship based on career potential and research (awarded to <5% of applicants)	2017-2024
UT Austin Graduate Scholarship (\$47,000 total, awarded to <2% of applicants)	2022
Autonomous Multi-Agent Reinforcement Learning Competition at UT Austin, 2nd Place [details]	2022
UT Austin A-League Men's Soccer Champion as the team captain	2022