

Ferdinando FIORETTO

Assistant Professor

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📍 Rice Hall 307, Computer Science, University of Virginia, Charlottesville - VA 22903 - U.S.A.

Research Interests : Artificial Intelligence | Responsible AI | AI for Science and Engineering

Professional Experience

Present	University of Virginia, Computer Science, Charlottesville, VA
Aug. 2023	ASSISTANT PROFESSOR
Jul. 2023	Syracuse University, Electrical Engineering & Computer Science, Syracuse, NY
Jan. 2020	ASSISTANT PROFESSOR

Education and Training

Dec. 2019	Georgia Institute of Technology, School of Industrial and System Engineering, Atlanta, GA
Sep. 2018	POST-DOCTORAL RESEARCHER
Dec. 2018	University of Michigan, Industrial and Operations Engineering, Ann Arbor, MI
Sep. 2016	RESEARCH FELLOW
Aug. 2016	University of Udine ¹ , Computer Science, Udine, IT
Jan. 2012	PH.D. IN COMPUTER SCIENCE
Dec. 2011	New Mexico State University, Computer Science, Las Cruces, NM
Aug. 2010	MS. IN COMPUTER SCIENCE
Nov. 2009	University of Parma, Computer Science & Mathematics, Parma, IT
	BS. IN COMPUTER SCIENCE

Selected Honors and Awards

- 2025 **Academic Grant Program Award**, NVIDIA. [↗ Link](#)
The NVIDIA Academic Grant Program is a competitive program providing world-class computing access and resources to selected researchers.
- 2025 **DARPA Disruptive Idea Award**, Neus 2025. [↗ Link](#)
This award supports bold, high-risk ideas that challenge conventional thinking in AI, even if the methodologies or experimental results are still in early stages.
- 2025 **Fellowship in AI Research**, LaCross Institute. [↗ Link](#)
Project name : “Privacy and Fairness in AI Pipelines : From Data Collection to Decision-Making”.
The LaCross AI Institute was established in 2024 with the mission to make the world a better place through the responsible use of AI in business by developing leaders who can manage AI businesses and solutions, guided by ethics, values, and the advancement of human well-being. The Fellowships in AI Research program, supports scholars engaging in research that has beneficial practical societal outcomes and provides the foundationon for substantive future work.
- 2022 **Caspar Bowden PET Award**, Privacy Enhancing Technologies (PETs). [↗ Link](#)
The Caspar Bowden PET award for Outstanding Research in Privacy Enhancing Technologies is presented annually to researchers whose work makes an outstanding contribution to the theory, design, implementation, or deployment of privacy enhancing technology. The 2022 award was selected among all qualifying papers (published in any venue in the years 2020–2021).
The award letter reads : “Your paper *Decision Making with Differential Privacy under the Fairness Lens* received the award especially for advancing the understanding of DP and fairness trade-offs in decision making, providing a theoretical framework and exploring a highly relevant practical problem.”
- 2022 **NSF CAREER Award**, National Science Foundation. [↗ Press](#)

1. Dual degree with New Mexico State University

- › Project name : “**End-to-end Constrained Optimization Learning**”. The Faculty Early Career Development (CAREER) Program is a Foundation-wide activity that offers the National Science Foundation’s most prestigious awards in support of early-career faculty who have the potential to serve as academic role models in research and education and to lead advances in the mission of their department or organization. Activities pursued by early-career faculty should build a firm foundation for a lifetime of leadership in integrating education and research.
- 2022 **Google Research Scholar Award**, Google (Privacy). [🔗 Link](#)
- › Project name : “**Equity of Differentially Private Decision Processes**”.
- The Research Scholar Program provides unrestricted gifts to support research at institutions around the world, and is focused on funding world-class research conducted by early-career professors.
- 2022 **Amazon Research Award**, Amazon – AWS AI (Responsible AI). [🔗 Press](#)
- › Project name : “**Toward Understanding the Unintended Disparate Impacts of Private ML Systems**”.
- The Amazon Research Awards is a competitive global program which offers unrestricted funds and AWS Promotional Credits to support research at academic institutions and non-profit organizations in areas that align Amazon’s mission to advance science.
- 2022 **Best Paper Award**, IEEE Transaction of Power Systems. [🔗 Link](#)
- › For paper : “**Differentially Private Optimal Power Flow for Distribution Grids**”.
- This highly selective award was assigned to eight out of all IEEE-TPWRS papers published in 2019–2021.
- 2022 **Early Career Spotlight**, International Joint Conference on Artificial Intelligence (IJCAI). [🔗 Link](#)
- › Accompanying paper : “**Integrating Machine Learning and Optimization to Boost Decision Making**”.
- The IJCAI Early Career Spotlight talks are aimed at providing an accessible introduction to the research directions of some of the most active early career researchers in AI. The talks are by invitation, based on nominations from the IJCAI program committee.
- 2021 **Early Career Researcher Award**, Association for Constraint Programming. [🔗 Link](#)
- › The Early Career Research Award is assigned by the Association for Constraint Programming to early career researchers for their contributions to constrained optimization.
- In particular, this *inaugural* award was given “for contribution to constraint programming and, in particular, fundamental advances in distributed constraint satisfaction, constraint-based differential privacy, fairness in artificial intelligence, and their applications in energy, mobility, and census data.”
- 2021 **Mario Gerla Young Investigator Award**, ISSNAF. [🔗 Press](#)
- › Established by the Gerla family in 2019 in memory of Dr. Mario Gerla, professor of Computer Science at UCLA, the Italian Scientists and Scholars in North America Foundation confers the *Young Investigator Awards* every year to outstanding, early-career, Italian researchers working in North America, in recognition of their significant and innovative contributions to computer science. The award is conferred in coordination with the Italian Embassy in US.
- 2021 **Best Paper Award**, IEEE Transaction of Power Systems. [🔗 Link](#)
- › For paper : “**Privacy-Preserving Power System Obfuscation : A Bilevel Optimization Approach**”.
- This highly selective award was assigned to seven out of all IEEE-TPWRS papers published in 2018–2020.
- 2017 **Best AI Dissertation Award**, AI*IA. [🔗 Press](#)
- › For Thesis “**Exploiting the Structure of Distributed Constraint Optimization Problems with Applications in Smart Grids**.”
- The “Marco Cadoli” Best AI dissertation is assigned by the Italian Association for Artificial Intelligence (AI*IA) to a Ph.D. doctor who have obtained the title in an Italian University based on the quality and impact of the thesis work.

OTHER AWARDS

- 2025 **Best Paper Award**, NeurIPS AI4D3 workshop. [🔗 Link](#)
- 2025 **Best Paper Award**, AAAI colorai workshop. [🔗 Link](#)
- 2025 **Outstanding Research Faculty Award (department nomination)**, University of Virginia. [🔗 Link](#)
- 2023 **ICLR Notable Reviewer Award**, International conference on Learning Representations (ICLR). [🔗 Link](#)
- 2023 **NMSU CS Star Award**, New Mexico State University (NMSU). [🔗 Link](#)
- 2022 **Best Paper Award nomination**, Conference on Neural Information Processing Systems (NeurIPS). [🔗 Link](#)
- 2022 **Top Reviewer Award**, Conference on Neural Information Processing Systems (NeurIPS). [🔗 Link](#)
- 2021 **Outstanding Reviewer Award**, Conference on Neural Information Processing Systems (NeurIPS). [🔗 Link](#)
- 2020 **Differentially Private Temporal Map Challenge Award, \$5000**, NIST. [🔗 Press](#)
- 2017 **Most Visionary Workshop Paper Award**, International Conference of Autonomous Agents and Multiagent Systems (AAMAS). [🔗 Link](#)
- 2016 **Top Graduate Student Honor’s Cord**, NMSU.
- 2014 **Outstanding Research Assistant Award**, Computer Science, NMSU. [🔗 Press](#)
- 2014 **Outstanding Teaching Assistant Nomination**, NMSU.
- 2013 **Best Student Paper Award**, Computational Methods in System Biology (CMSB). [🔗 Link](#)

- 2013 Ph.D. Scholarship Award (~\$50,000), University of Udine.
 2013 Outstanding Teaching Assistant Award, Computer Science, NMSU.  Press
 2013 Computer Science Scholarship (\$1500), NMSU.
 2012 Honors Graduate Recognition for Outstanding Academic Success, NMSU.
 2008 Erasmus Scholarship (~ \$14,000), University of Leeds.

Publications

Summary : > 83 Conference papers[†] > 15 Journals articles > 40 Workshop papers[†] > 3 Editorial articles
 > 4 Book chapters > 1 Book > 29 Preprints

Total citations : 3512 **H-index :** 29  [Google Scholar](#)

[†] : In computer science conferences are the main publication venues. Acceptance is highly competitive.

- > Authors order usually follows contribution, where students are first authors and faculty advisors are listed last to reflect their supervisory role. In the following, when the symbol $[\alpha/\beta]$ is used, authors are ordered alphabetically. When the symbol $[c]$ is used, author ordered follows contribution, regardless of their advisor or seniority role.
- > Names of students I supervise(d) are appended with symbol .
- > Award winning papers are highlighted with symbol .

Books

- [1] Differential Privacy in Artificial Intelligence : From Theory to Practice. 
Ferdinando Fioretto and Pascal Van Hentenryck.
 Now Publisher, 2025.

RIGOROUSLY PEER REVIEWED CONFERENCES

In computer science, conference proceedings serve as the primary outlet for disseminating significant research contributions.

- [83] SoK : Data Minimization in Machine Learning. 
 Robin Staab, Nikola Jovanović, Kimberly Mai, Prakhar Ganesh, Martin Vechev, **Ferdinando Fioretto**, Matthew Jagelski.
IEEE Secure and Trustworthy Machine Learning Conference, 2026.
 [Acceptance Rate : 26.2%].
- [82] Discrete-Guided Diffusion for Scalable and Safe Multi-Robot Motion Planning. 
 Jinhao Liang, Sven Koenig, **Ferdinando Fioretto**.
AAAI Conference on Artificial Intelligence (AAAI), 2026.
 [Acceptance Rate : 17.6%].
- [81] Training-Free Constrained Generation With Stable Diffusion Models. 
 Stefano Zampini, Jacob K Christopher, Luca Oneto, Davide Anguita, **Ferdinando Fioretto**.
 **Conference on Neural Information Processing Systems (NeurIPS)**, 2025.
 [Acceptance Rate : 24.5%].
 [**Spotlight**] (3.18% of the submitted papers).
- [80] Constrained Discrete Diffusion. 
 Michael Cardei, Jacob K Christopher, Thomas Hartvigsen, Bhavya Kailkhura, **Ferdinando Fioretto**.
Conference on Neural Information Processing Systems (NeurIPS), 2025.
 [Acceptance Rate : 24.5%].
 > Also appeared in [w35] at NeurIPS, 2025.  **[Oral]** (6% of the accepted papers (36% acceptance rate)).
- [79] Robust Bidding Strategies in Local Energy Markets. 
 Jinhao Liang, **Ferdinando Fioretto**, Chenye Wu.
IEEE PES General Meeting.
 [Acceptance Rate : Unknown].
- [78] Privacy-Preserving Convex Optimization : When Differential Privacy Meets Stochastic Programming. 
 Vladimir Dvorkin, **Ferdinando Fioretto**, Pascal Van Hentenryck, Pierre Pinson, Jalal Kazempour.
IEEE Conference on Decision and Control (CDC), 2025.
 [Acceptance Rate : TBA].

- [77] Multi-Agent Path Finding in Continuous Spaces with Projected Diffusion Models. [✉] Jinhao Liang♣, Jacob K. Christopher♣, Sven Koenig, **Ferdinando Fioretto**. **International Conference on Machine Learning (ICML)**, 2025. [Acceptance Rate : 26.9%].
- [76] Neuro-symbolic Generative Diffusion Models for Physically Grounded, Robust, and Safe Generation. [✉] Jacob K. Christopher♣, Michael Cardel♣, Jinhao Liang♣, **Ferdinando Fioretto**. **International Conference on Neuro-symbolic Systems (NeuS)**, 2025. [Acceptance Rate : 40%].
[Oral (~10% of accepted papers) & DARPA Disruptive Idea Award].
- [75] The Data Minimization Principle in Machine Learning. [✉] Prakhar Ganesh, Cuong Tran♣, Reza Shokri, **Ferdinando Fioretto**. **ACM Conference on Fairness, Accountability, and Transparency (FAccT)**, 2025. [Acceptance Rate : 26.8%].
- [74] Learning To Solve Differential Equation Constrained Optimization Problems. [✉] Vincenzo Di Vito♣, Mostafa Mohammadian, Kyri Baker, **Ferdinando Fioretto**. **International Conference on Learning Representations (ICLR)**, 2025. [Acceptance Rate : 31.73%].
[Spotlight] (3.26% of the submitted papers).
- [73] Speculative Diffusion Decoding : Accelerating Language Generation through Diffusion. [✉] Jacob K. Christopher♣, Michael Cardel♣, Brian R Bartoldson, Bhavya Kailkhura, **Ferdinando Fioretto**. **North American Chapter of the Association for Computational Linguistics (NAACL)**, 2025. [Acceptance Rate : 22.5%].
[oral] (14.9% of the submitted papers).
➤ Also appeared in [w28] at **NeurIPS**, 2024. [Accepted Rate : 7.7%].
- [72] Differentially Private Data Release on Graphs : Inefficiencies and Unfairness. [✉] [α/β] **Ferdinando Fioretto**, Diptangshu Sen, Juba Ziani. **International Conference on Artificial Intelligence and Statistics (AISTATS)**, 2025. [Acceptance Rate : 31.3%].
- [71] Fairness Issues and Mitigations in (Differentially Private) Socio-demographic Data Processes. [✉] Joonhyuk Ko♣, Juba Ziani, Saswat Das♣, Matt Williams, **Ferdinando Fioretto**. **AAAI Conference on Artificial Intelligence (AAAI)**, 2025. [Acceptance Rate : 23.4%].
[Oral] 1.9% of the submitted papers).
➤ Also appeared in [w33] at **AAAI**, 2024. [Oral] (7.6% of the accepted papers).
- [70] FairDP : Certified Fairness with Differential Privacy. [✉] [c] Khang Tran, **Ferdinando Fioretto**, Issa Khalil, My T. Thai, NhatHai Phan. **IEEE Secure and Trustworthy Machine Learning Conference (SaTML)**, 2025. [Acceptance Rate : 29.4%].
- [69] Constrained Synthesis with Projected Diffusion Models. [✉] Jacob K. Christopher♣, Stephen Baek, **Ferdinando Fioretto**. **Conference on Neural Information Processing Systems (NeurIPS)**, 2024. [Acceptance Rate : 25.8%].
➤ Also appeared in [w27,w29] at **NeurIPS**, 2024. [Oral] (6% of the accepted papers (39% acceptance rate)).
- [68] Metric Learning to Accelerate Convergence of Operator Splitting Methods for Differentiable Parametric Programming. [✉] [c] Ethan King, James Kotary♣, **Ferdinando Fioretto**, Jan Drgona. **63rd IEEE Conference on Decision and Control (CDC)**, 2024. [Acceptance Rate : 56.7%].
- [67] Predict-Then-Optimize by Proxy : Learning Joint Models of Prediction and Optimization. [✉] James Kotary♣, Vincenzo Di Vito♣, Jacob K. Christopher♣, Pascal Van Hentenryck, **Ferdinando Fioretto**. **European Conference of Artificial Intelligence (ECAI)**, 2024.

- [Acceptance Rate : 23.3%].
- [66] On The Fairness Impacts of Hardware Selection in Machine Learning. [🔗]
 Sree Harsha Nelaturu, Nishaanth Kanna Ravichandran, Cuong Tran, Sara Hooker, **Ferdinando Fioretto**.
International Conference on Machine Learning (ICML), 2024.
 [Acceptance Rate : 27.5%].
- [65] Disparate Impact on Group Accuracy of Linearization for Private Inference. [🔗]
 Saswat Das, Marco Romanelli, **Ferdinando Fioretto**.
International Conference on Machine Learning (ICML), 2024.
 [Acceptance Rate : 27.5%].
- [64] End-to-End Learning for Fair Multiobjective Optimization Under Uncertainty. [🔗]
 My H. Dinh, James Kotary, **Ferdinando Fioretto**.
Conference on Uncertainty in Artificial Intelligence (UAI), 2024.
 [Acceptance Rate : 27.0%].
- [63] Fairness Increases Adversarial Vulnerability. [🔗]
 Cuong Tran, Keyu Zhu, Pascal Van Hentenryck, **Ferdinando Fioretto**.
International Joint Conference on Artificial Intelligence (IJCAI), 2024.
 [Acceptance Rate : 13.9%].
- [62] Learning Fair Ranking Policies via Differentiable Optimization of Ordered Weighted Averages. [🔗]
 My H. Dinh, James Kotary, **Ferdinando Fioretto**.
ACM Conference on Fairness, Accountability, and Transparency (FAccT), 2024.
 [Acceptance Rate : 24.3%].
- [61] Finding ϵ and δ of Traditional Disclosure Control Systems. [🔗]
 [c] **Ferdinando Fioretto**, Keyu Zhu, Pascal Van Hentenryck, Saswat Das, Christine Task.
AAAI Conference on Artificial Intelligence (AAAI), 2024.
 [Acceptance Rate : 23.75%].
- [60] Data Minimization at Inference Time. [🔗]
 Cuong Tran and **Ferdinando Fioretto**.
Conference on Neural Information Processing Systems (NeurIPS), 2023.
 [Acceptance Rate : 23.0%].
- [59] Price-Aware Deep Learning for Electricity Markets. [🔗]
 Vladimir Dvorkin and **Ferdinando Fioretto**.
Tackling Climate Change with Machine Learning, at NeurIPS, 2023.
 [Acceptance Rate : 35.0%].
- [58] Folded Optimization for End-to-End Model-Based Learning. [🔗]
 James Kotary, My H. Dinh, **Ferdinando Fioretto**.
International Joint Conference on Artificial Intelligence (IJCAI), 2023.
 [Acceptance Rate : 15.0%].
- [57] SF-PATE : Scalable, Fair, and Private Aggregation of Teacher Ensembles. [🔗]
 James Kotary, Vincenzo Di Vito, **Ferdinando Fioretto**, Pascal Van Hentenryck.
International Joint Conference on Artificial Intelligence (IJCAI), 2023.
 [Acceptance Rate : 15.0%].
- [56] End-to-End Combinatorial Ensemble Learning. [🔗]
 James Kotary, Vincenzo Di Vito, **Ferdinando Fioretto**.
International Joint Conference on Artificial Intelligence (IJCAI), 2023.
 [Acceptance Rate : 15.0%].
- [55] On the Fairness Impacts of Private Ensembles Models. [🔗]
 Cuong Tran, **Ferdinando Fioretto**.
International Joint Conference on Artificial Intelligence (IJCAI), 2023.
 [Acceptance Rate : 15.0%].
- [54] Load Encoding for Learning AC-OPF. [🔗]
 [c] Terrence W.K. Mak, **Ferdinando Fioretto**, Pascal Van Hentenryck.

Proceedings of the **IEEE PES General Meeting (PES)**, 2023.

[Acceptance Rate : Unknown].

- [53] An Analysis of the Reliability of AC Optimal Power Flow Deep Learning Proxies. [🔗]
[c] My H. Dinh♣, **Ferdinando Fioretto**, Mostafa Mohammadian, Kyri Baker.
IEEE PES Innovative Smart Grid Technologies, 2023.
[Acceptance Rate : unknown].
- [52] End-to-End Optimization and Learning for Multiagent Ensembles. [🔗]
James Kotary♣, Vincenzo Di Vito♣, **Ferdinando Fioretto**.
International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2023.
[Acceptance Rate : 40.0%].
- [51] Pruning has a disparate impact on model accuracy. [🔗]
Cuong Tran♣, **Ferdinando Fioretto**, Jung-Eun Kim, Rakshit Naidu♣.
🏆 **Conference on Neural Information Processing Systems (NeurIPS)**, 2022.
[Acceptance Rate : 25.6%].
[Spotlight] (~3% of all paper submissions.).
- [50] Post-processing of Differentially Private Data : A Fairness Perspective. [🔗]
[c] Keyu Zhu, **Ferdinando Fioretto**, Pascal Van Hentenryck.
International Joint Conference on Artificial Intelligence (IJCAI), 2022.
[Acceptance Rate : 15.0%].
- [49] Differential Privacy and Fairness in Decisions and Learning Tasks : A Survey. [🔗]
[c] **Ferdinando Fioretto**, Cuong Tran♣, Keyu Zhu, Pascal Van Hentenryck.
International Joint Conference on Artificial Intelligence (IJCAI), 2022.
[Acceptance Rate : 18.0% (survey track)].
- [48] Integrating Machine Learning and Optimization to Boost Decision Making. [🔗]
Ferdinando Fioretto.
🏆 **International Joint Conference on Artificial Intelligence (IJCAI)**, 2022.
[Acceptance Rate : Invited].
[Early Career Spotlight] (Accompanying paper.).
- [47] End-to-end Learning for Fair Ranking Systems. [🔗]
[c] James Kotary♣, **Ferdinando Fioretto**, Pascal Van Hentenryck, Ziwei Zhu.
ACM Web Conferences (WWW), 2022.
[Acceptance Rate : 17.0%].
- [46] Fast Approximations for Job Shop Scheduling : A Lagrangian Dual Deep Learning Method. [🔗]
[c] James Kotary♣, **Ferdinando Fioretto**, Pascal Van Hentenryck.
AAAI Conference on Artificial Intelligence (AAAI), 2022.
[Acceptance Rate : 15.0%].
- [45] Differentially-Private Heat and Electricity Markets Coordination. [🔗]
Lesia Mitridati, Emma Romei, Gabriela Hug, **Ferdinando Fioretto**.
International Conference on Probabilistic Methods Applied to Power Systems (PMAPS), 2022.
[Acceptance Rate : Unknown].
- [44] Learning Solutions for Intertemporal Power Systems Optimization with Recurrent Neural Networks. [🔗]
[c] Mostafa Mohammadian, Kyri Baker, My H. Dinh♣, **Ferdinando Fioretto**.
International Conference on Probabilistic Methods Applied to Power Systems (PMAPS), 2022.
[Acceptance Rate : Unknown].
- [43] Differentially Private Deep Learning under the Fairness Lens. [🔗]
Cuong Tran♣, My H. Dinh♣, **Ferdinando Fioretto**.
Conference on Neural Information Processing Systems (NeurIPS), 2021.
[Acceptance Rate : 26.0%].
- [42] Learning Hard Optimization Problems : A Data Generation Perspective. [🔗]
James Kotary♣, [c] **Ferdinando Fioretto**, Pascal Van Hentenryck.
Conference on Neural Information Processing Systems (NeurIPS), 2021.

- [Acceptance Rate : 26.0%].
- [41] Decision Making with Differential Privacy under the Fairness Lens. [🔗]
 [c] Cuong Tran♣, Ferdinando Fioretto, Pascal Van Hentenryck, Zhiyan Yao♣.
 International Joint Conference on Artificial Intelligence (IJCAI), 560–566, 2021.
 [Acceptance Rate : 13.9%].
[Winner of the 2022 Caspar Bowden PET Award] (Selected among all papers about Privacy Enhancing Technologies published in international conferences between 2020–2022.).
- [40] End-to-End Constrained Optimization Learning : A Survey. [🔗]
 [c] James Kotary♣, Ferdinando Fioretto, Pascal Van Hentenryck, Bryan Wilder.
 International Joint Conference on Artificial Intelligence (IJCAI), 4475–4482, 2021.
 [Acceptance Rate : 30.1%].
- [39] Bias and Variance of Post-processing in Differential Privacy. [🔗]
 Keyu Zhu, Pascal Van Hentenryck, Ferdinando Fioretto.
 AAAI Conference on Artificial Intelligence (AAAI), 11177–11184, 2021.
 [Acceptance Rate : 21.0%].
- [38] Differentially Private and Fair Deep Learning : A Lagrangian Dual Approach. [🔗]
 Cuong Tran♣, [c] Ferdinando Fioretto, Pascal Van Hentenryck.
 AAAI Conference on Artificial Intelligence (AAAI), 9932–9939, 2021.
 [Acceptance Rate : 21.0%].
- [37] A Privacy-Preserving and Accountable Multi-agent Learning Framework. [🔗]
 Anudit Nagar♣, Cuong Tran♣, Ferdinando Fioretto.
 International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 1605–1606, 2021.
 [Acceptance Rate : 40.0%].
- [36] Constrained-based Differential Privacy. [🔗]
 Ferdinando Fioretto.
 International Conference on Principles and Practice of Constraint Programming (CP), 1868–8969, 2021.
 [Acceptance Rate : Invited].
- [35] Differentially Private Optimal Power Flow for Distribution Grids. [🔗]
 [c] Vladimir Dvorkin, Ferdinando Fioretto, Pascal Van Hentenryck, Jalal Kazempour, Pierre Pinson.
 IEEE PowerTech, 2021.
 [Acceptance Rate : Unknown].
- [34] A Lagrangian Dual Framework for Deep Neural Networks with Constraints. [🔗]
 [c] Ferdinando Fioretto, Pascal Van Hentenryck, Terrence W.K. Mak, Cuong Tran♣, Federico Baldo, Michele Lombardi.
 European Conference on Machine Learning (ECML), 18–135, 2020.
 [Acceptance Rate : 19.0%].
- [33] Differential Privacy Stackelberg Games. [🔗]
 [c] Ferdinando Fioretto, Lesia Mitridati, Pascal Van Hentenryck.
 International Joint Conference on Artificial Intelligence (IJCAI), 3480–3486, 2020.
 [Acceptance Rate : 12.6%].
- [32] OptStream : Releasing Time Series Privately. [🔗]
 Ferdinando Fioretto, Pascal Van Hentenryck.
 International Joint Conference on Artificial Intelligence (IJCAI), 5135–5139, 2020.
 [Acceptance Rate : [Invited to the IJCAI journal track]].
 (*selected papers only.*) .
- [31] Privacy-Preserving Obfuscation for Distributed Power Systems. [🔗]
 [c] Terrence W.K. Mak, Ferdinando Fioretto, Pascal Van Hentenryck.
 Power Systems Computation Conference (PSCC), 2020.
 [Acceptance Rate : 20.5%].
- [30] Predicting AC Optimal Power Flows : Combining Deep Learning and Lagrangian Dual Methods. [🔗]
 Ferdinando Fioretto, Terrence W.K. Mak, Pascal Van Hentenryck.
 AAAI Conference on Artificial Intelligence (AAAI), pages 630–637, 2020.

[Acceptance Rate : 20.6%].

- [29] The Smart Appliance Scheduling Problem : A Bayesian Optimization Approach. [DOI]
Athena Tabakhi, William Yeoh, **Ferdinando Fioretto**.
International Conference on Principles and Practice of Multi-Agent Systems (PRIMA), 100–115, 2020.
[Acceptance Rate : 38.0%].
- [28] Privacy-Preserving Federated Data Sharing. [DOI]
Ferdinando Fioretto, Pascal Van Hentenryck.
International Conference on Autonomous Agents and Multiagent Systems (AAMAS), pages 638–646, 2019.
[Acceptance Rate : 24.0%].
- [27] Privacy-Preserving Obfuscation of Critical Infrastructure Networks. [DOI]
Ferdinando Fioretto, Terrence W.K. Mak, Pascal Van Hentenryck.
International Joint Conference on Artificial Intelligence (IJCAI), pages 1086–1092, 2019.
[Acceptance Rate : 17.9%].
- [26] Differential Privacy of Hierarchical Census Data : An Optimization Approach. [DOI]
Ferdinando Fioretto, Pascal Van Hentenryck.
★ **International Conference on Principles and Practice of Constraint Programming (CP)**, pages 639–655, 2019.
[Acceptance Rate : 37.0%].
[Invited to **Constraint journal**] (selected papers – declined.).
- [25] Solving Multiagent Constraint Optimization Problems on the Constraint Composite Graph. [DOI]
Ferdinando Fioretto, Hong Xu, Sven Koenig, TK Satish Kumar.
International Conference on Principles and Practice of Multi-Agent Systems (PRIMA), pages 106–122, 2018.
[Acceptance Rate : 26.2%].
- [24] Constrained-based Differential Privacy for Private Mobility. [DOI]
Ferdinando Fioretto, Chansoo Lee, Pascal Van Hentenryck.
International Conference on Autonomous Agents and Multiagent Systems (AAMAS), pages 1405–1413, 2018.
[Acceptance Rate : 25.2%].
- [23] A Large Neighboring Search Schema for Multi-Agent Optimization. [DOI]
Khoi Hoang, **Ferdinando Fioretto**, William Yeoh, Enrico Pontelli, Roie Zivan.
International Conference on Principles and Practice of Constraint Programming (CP), pages 688–706, 2018.
[Acceptance Rate : 33.0%].
- [22] Constrained-based Differential Privacy : Releasing Optimal Power Flow Benchmarks Privately. [DOI]
Ferdinando Fioretto, Pascal Van Hentenryck.
International Conference on the Integration of Constraint Programming, Artificial Intelligence, and Operations Research (CPAIOR), pages 215–231, 2018.
[Acceptance Rate : 48.0%].
- [21] Constraint Composite Graph-Based Lifted Message Passing for Distributed Constraint Optimization Problems. [DOI]
Ferdinando Fioretto, Hong Xu, Sven Koenig, TK Satish Kumar.
International Symposium on Artificial Intelligence and Mathematics (ISAIM), 2018.
[Acceptance Rate : Unknown].
- [20] A Distributed Constraint Optimization (DCOP) Approach to the Economic Dispatch with Demand Response. [DOI]
Ferdinando Fioretto, William Yeoh, Enrico Pontelli, Ye Ma, Satishkumar J. Ranade.
International Conference on Autonomous Agents and Multiagent Systems (AAMAS), pages 999–1007, 2017.
[Acceptance Rate : 24.9%].
- [19] A Multiagent System Approach to Scheduling Devices in Smart Homes. [DOI]
Ferdinando Fioretto, William Yeoh, Enrico Pontelli.
International Conference on Autonomous Agents and Multiagent Systems (AAMAS), pages 981–989, 2017.
[Acceptance Rate : 24.9%].
- [18] Infinite-Horizon Proactive Dynamic DCOPs. [DOI]
Khoi Hoang, Ping Hou, **Ferdinando Fioretto**, Makoto Yokoo, William Yeoh, Roie Zivan.
International Conference on Autonomous Agents and Multiagent Systems (AAMAS), pages 212–220, 2017.
[Acceptance Rate : 24.9%].

- [17] Preference Elicitation for DCOPs. [[🔗](#)]
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Anudit Nagar[✉], Cuong Tran[✉], **Ferdinando Fioretto**.
CoRR [abs/2106.01242](#), 2021. (extended AAMAS-21 version).
- [7] End-to-End Constrained Optimization Learning : A Survey. [\[bib\]](#)
James Kotary[✉], **Ferdinando Fioretto**, Pascal Van Hentenryck, Bryan Wilder.
CoRR [abs/2103.16378](#), 2021. (extended IJCAI-21 version).
- [6] Load Embeddings for Scalable AC-OPF Learning. [\[bib\]](#)
Terrence W.K. Mak, **Ferdinando Fioretto**, Pascal Van Hentenryck.
CoRR [abs/2101.03973](#), 2021.
- [5] Bias and Variance of Post-processing in Differential Privacy. [\[bib\]](#)
Keyu Zhu, Pascal Van Hentenryck, **Ferdinando Fioretto**.
CoRR [abs/2010.04327](#), 2020 (extended AAAI-21 version).
- [4] High-Fidelity Machine Learning Approximations of Large-Scale Optimal Power Flow. [\[bib\]](#)
Minas Chatzos, **Ferdinando Fioretto**, Terrence W.K. Mak, Pascal Van Hentenryck.
CoRR [abs/2006.16356](#), 2020.
- [3] Differentially Private Convex Optimization with Feasibility Guarantees. [\[bib\]](#)
Vladimir Dvorkin, **Ferdinando Fioretto**, Pascal Van Hentenryck, Jalal Kazempour, Pierre Pinson.
CoRR [abs/2006.12338](#), 2020.
- [2] Predicting AC Optimal Power Flows : Combining Deep Learning and Lagrangian Dual Methods. [\[bib\]](#)
Ferdinando Fioretto, Terrence W.K. Mak, Pascal Van Hentenryck.
CoRR [abs/1909.10461](#), 2019 (extended AAAI-20 version).
- [1] Privacy-Preserving Obfuscation of Critical Infrastructure Networks. [\[bib\]](#)
Ferdinando Fioretto, Terrence W. K. Mak, Pascal Van Hentenryck.
CoRR [abs/1905.09778](#), 2019 (extended IJCAI-19 version).

Teaching

Responsible AI (CS 6501), University of Virginia

Spring 2025	COURSE EVALUATION : 4.67 (class), 4.24 (instructor) / 5.00
Spring 2024	COURSE EVALUATION : 4.8 (class), 4.75 (instructor) / 5.00

Artificial Intelligence (CS 4710), University of Virginia

Fall 2023	COURSE EVALUATION : 4.33 (class), 4.50 (instructor) / 5.00
Fall 2024	COURSE EVALUATION : 4.21 (class), 3.98 (instructor) / 5.00

Security and Privacy of Machine Learning (CS 700), Syracuse University

Spring 2020	COURSE EVALUATION : 4.55/5.00 (median 5.00)
Spring 2021	COURSE EVALUATION : 4.46/5.00 (median 5.00)
Spring 2022	COURSE EVALUATION : 4.93/5.00 (median 5.00)

Introduction to Artificial Intelligence (CIS 467), Syracuse University

Fall 2020	COURSE EVALUATION : 4.56/5.00 (median 5.00)
Fall 2021	COURSE EVALUATION : 4.48/5.00 (median 5.00)
Fall 2022	COURSE EVALUATION : 4.45/5.00 (median 5.00)
Fall 2023	COURSE EVALUATION : 4.15/5.00 (median 5.00)

Discrete Mathematics (CS 375), Syracuse University

Spring 2023	COURSE EVALUATION : 4.60/5.00 (median 5.00)
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Mentoring

Current Students & Postdocs

- **MEHDI TAGHIZADEH** (Postdoc, UVA Climate Fellow), co-advised with Negin Alemazkoor
Research : Learning to Optimize, Energy
Fall 2025
- **VINCENZO DI VITO** (PhD, UVA CS)
Research : Physics Informed Machine Learning.
Awards : • [Spotlight at ICLR-25]
Internships : Los Alamos National Laboratory (Summer 2024, Summer 2025); Google DeepMind (Fall 2025)
PhD Milestones : qualifying exam (Spring 2024); proposal defense (Spring 2025, expected); projected defense (Fall 2026).
Fall 2022
- **SASWAT DAS** (PhD, UVA CS)
Research : Responsible AI, Differential Privacy.
Awards : • [Best paper award at AAAI CoLoRAI Workshop, 2025] • [Oral at AAAI-25]
Internships : Pacific Northwest National Laboratory (Fall 2025)
PhD Milestones : qualifying exam (Fall 2025, expected); proposal defense (Fall 2026, expected); projected defense (Fall 2027).
Fall 2023
- **JACOB K. CHRISTOPHER** (PhD, UVA CS)
Research : Generative AI for Science, Safety.
Awards : • [NeurIPS AI4D3 Best paper award] • [NeuS-25 Best paper award] • [Oral at NAACL-25] • [Best paper award at UVA LLM workshop, 2024] • [Oral at NeurIPS-24 ENLSP workshops] • [Oral at NeurIPS-24 AI4Mat workshops]
Internships : Lawrence Livermore National Laboratory (Summer 2024); NASA (Fall 2025)
PhD Milestones : qualifying exam (Fall 2024); proposal defense (Fall 2025, expected); projected defense (Spring 2027).
Fall 2023
- **JINHAO LIANG** (PhD, UVA CS)
Research : Generative AI, Differentiable Optimization.
Awards : • [Oral at AAAI Bridge on ML for OR program, 2025] • [NeuS-25 Best paper award] • [Oral at AAAI MAPF workshop, 2025]
Internships : Argonne National Laboratory (Summer 2025)
PhD Milestones : qualifying exam (Spring 2026, expected)
Fall 2024
- **MICHAEL CARDEI** (PhD, UVA CS)
Research : LLMs, Generative AI, Safety.
Awards : • [NeurIPS AI4D3 Best paper award] • [NSF GRFP 2025 award] • [NeuS-25 Best paper award] • [Oral at NAACL-25]
• [Best paper at LLM workshop, UVA]
Internships : VISA (Summer 2025)
PhD Milestones : qualifying exam (Spring 2026, expected)
Fall 2024
- **HUU BINH TA** (PhD, UVA CS)
Research : Generative AI; AI for Science.
Fall 2025
- **ZEHUA WANG** (PhD, UVA CS)
Research : Generative AI; Privacy.
Fall 2025
- **JAMESON SANDLER** (PhD, UVA CS)
Research : Fairness, Generative AI, and Optimization.
Fall 2025
- **Peggy Cui**, (MS, UVA CS)
Spring 2024
- **Joonhyuk Ko** (BS, UVA CS)
Awards : • [CRA outstanding undergraduate research honorable mention] • [Oral at AAAI-25] • [UVA, Undergraduate Research Award, 2025]
Internships : Carnegie Mellon University (Summer 2025)
Fall 2023
- **NATALIA WUNDER** (BS, UVA CS)
Spring 2025

> Connor Lewis (BS, UVA CS)	Spring 2025
> Lauren LaPorta (BS, UVA CS)	Spring 2025
> Joseph Lee (BS, UVA CS)	Spring 2025
> Xiaotian Gu (BS, UVA CS)	Spring 2025
> Kyle Briggs (BS, UVA CS)	Summer 2025
> Alexander Yao (BS, UVA CS)	Summer 2025
> Aarav Lodha (BS, UVA CS)	Fall 2025
> Ani Venkatapuram (BS, UVA CS)	Fall 2025
> Aran Jothi (BS, UVA CS)	Fall 2025
> Pranav Vaddepalli (BS, UVA CS)	Fall 2025

Graduated Students

> My Dinh, PhD, (UVA CS)	Spring 2021 – Spring 2025
Research : Deep Learning, Optimization, Fairness.	
Dissertation Title : Bridging Machine Learning and Optimization : Learning Fair and Scalable Problem Solving	
Next position : TBA	
> James Kotary, PhD (UVA, CS)	Fall 2020 – Fall 2024
Research : Integration of Deep Learning and Optimization.	
Dissertation Title : Integrating Constrained Optimization with Machine Learning to Enhance Data-Driven Decision Making	
Next position : Research Scientist, Pacific Northwest National Laboratory.	
> Cuong Tran, PhD (SYRACUSE UNIVERSITY, CISE)	Spring 2020 – Spring 2023
Research : Differential Privacy and Fairness.	
Awards : • [Caspar Bowden PET Award (2022)] • [Best Paper Award Nomination at NeurIPS-22]	
Dissertation Title : The Interplay between Privacy and Fairness in Learning and Decision-making Problems	
Next position : NLP Scientist at Dyania Health.	
> Jacob Kennedy Christopher, MS (SYRACUSE UNIVERSITY)	Spring 2023
Research : Differentiable Optimiztion.	
Next position : PhD student at University of Virginia.	
> Yehya Farhat, MS (SYRACUSE UNIVERSITY)	Fall 2022
DISSERTATION TITLE : Surrogate ML models for optimization.	
Next position : PhD student at Rice University.	

Past Students and Visitors

> Jameson Sandler (BS, UVA CS)	Fall 2024
Awards : • [Highest distinction in CS, UVA]	
Next position : PhD student at UVA.	
> Lea Demelius (VISITING PHD STUDENT, TECHNICAL UNIVERSITY OF GRAZ)	Spring 2025
> Stefano Zampini, (VISITING STUDENT, PhD at University of Genova)	Summer 2024
> Cuong Tran (POSTDOC)	Sep 2023 – Mar 2024
Research : Data Minimization, Fairness in Large Language Models.	
Next position : NLP Scientist at Dyania Health.	
> Razan Tajeddine, (VISITING STUDENT, Postdoc at U of Helsinki)	Sep 2023 – Mar 2024
Research : Differential Privacy and Fairness.	
Next position : Assistant professor in EECS at the American University of Beirut (AUB)	
> St John Grimbly, (VISITING STUDENT, MS at UniSA)	Spring 2023
Next position : PhD student at University of South Africa.	
> Jayanta Mandi, (VISITING STUDENT RESEARCHER, PhD at KU Leuven)	Jun 2022 – Sep 2022
Research : Decision Focused Learning.	
> Rakshit Naidu, MS at CMU (INTERN)	Summer 2022
Research : Privacy and Fairness in ML. Next position : PhD student at Georgia Tech	

BS and High-School Students

Aiden Want (HS, Academy of Science High School, Summer 2025), Shujun Xia (BS, City University of Hong Kong, Summer 2024), Zarreen Reza (BS, OpenMined, Spring 2024), Eric Nguyen (BS, University of Virginia, Fall 2023), Catherine Smolka (HS,

Deep Run High School, VA, 2023-2024), **Pranav Putta** (BS, GaTech, Summer 2023) [NSF REU], **Winston Tsui** (BS, SU Summer 2023), **Zhongquan Cheng** (BS SU, Summer 2023), **Adya Parida** (BS SU, Fall 2022) [NSF REU], **Deniz Gursoy** (HS, Fayetteville High School, Summer 2022), **Saswat Das** (BS, ITS, Summer 2022), **Utsav Pathak** (BS, Alliance University, Bengaluru, Summer 2022), **Daiwei Shen** (BS, Northwestern, Summer 2022), **Sunish Kumar** (BS, Bennett University, Summer 2022), **Kyle Beiter** (BS, SU, Summer 2021) [NSF REU], **Shantanu Jhaveri** (BS, USC, Summer 2021) [NSF REU], **Dayong Gu** (BS, SU, Summer 2021), **Guoliang Chen** (BS, SU, Summer 2021), **Pradyumn Yadav** (BS, SU, Summer 2021), **Anudit Nagar** (BS, SU, Summer 2020), **Zhiyan Yao** (BS, SU, Summer 2020), **Zifei Lu** (BS, SU, Summer 2020), **Thomas Montfort** (BS, SU, Summer 2020), **Cong Liu** (BS, SU, Summer 2020), **Pratik Paranjape**, (BS, SU, Summer 2020), **Pavan Kumar Vaddineni** (BS, SU, Spring 2020), **William Kluegel**, (BS, NMSU, 2016 – 2018), **Lyndon Shi** (BS, UMich, 2018), **Jiayu Chen** (BS, UMich, 2018), **Eric Frechette** (BS, NMSU, 2016).

PhD Dissertation Committee

> Xingbo Fu, (UNIVERSITY OF VIRGINIA)	2025
> Zihan QE, (UNIVERSITY OF VIRGINIA)	2025
> Rahul Ramesh Reddy, (UNIVERSITY OF VIRGINIA)	2025
> Kai Chen, (UNIVERSITY OF VIRGINIA)	2025
> Anders Gyllenhoff, (UNIVERSITY OF VIRGINIA)	2025
> Hannah Cyberey, (UNIVERSITY OF VIRGINIA)	2025
> Chen Gong, (UNIVERSITY OF VIRGINIA)	2025
> Galen Harrison, (UNIVERSITY OF VIRGINIA)	2025
> Felipe Toledo, (UNIVERSITY OF VIRGINIA)	2025
> Luca Giuliani, (UNIVERSITY OF BOLOGNA)	2024
> Eleonora Misino, (UNIVERSITY OF BOLOGNA)	2024
> Guangtao Zheng, (UNIVERSITY OF VIRGINIA)	2024
> Dung Nguyen, (UNIVERSITY OF VIRGINIA)	2023
> Elena Long, (UNIVERSITY OF VIRGINIA)	2023
> Khang Tran, (NEW JERSEY INSTITUTE OF TECHNOLOGY)	2023
> Keyu Zhu, (GEORGIA INSTITUTE OF TECHNOLOGY)	2023
> Adrià Fenoy Barcel, (UNIVERSITY OF VERONA)	2023
> Jeroen Fransman, (DELFT UNIVERSITY OF TECHNOLOGY)	2022
> Pegah Hozhabrierdi, (SYRACUSE UNIVERSITY)	2022
> Carlos Pinzon, (ÉCOLE POLYTECHNIQUE)	2022
> Baocheng Geng, (SYRACUSE UNIVERSITY)	2021
> Pranay Sharma, (SYRACUSE UNIVERSITY)	2021

Research Grants and Gifts

Summary : Total External : \$3,941,403 (\$2,978,403 as PI) Total Internal : \$81,000

> NATIONAL SCIENCE FOUNDATIONS , (\$600,000)	9/25-8/28
Project title : <i>Constrained Generation for Scientific and Engineering Applications</i>	
Role : PI	
> DARPA , (\$100,000)	8/25-7/26
Project title : <i>Neuro-symbolic Generative Diffusion Models for Physically Grounded, Robust, and Safe Generation</i>	
Role : PI	
> OFFICE OF NAVAL RESEARCH , (\$180,000)	1/26-12/28
Project title : <i>AI-SCORE : Artificial Intelligence School for Computer science and Operations Research Education</i>	
Role : PI (with Lavanya Marla (UIUC) as coPI)	
> 4-VA , 4-VA Collaborative Research Program (\$30,000)	6/25-5/26
Project title : <i>Towards Fair Decision Systems : Augmenting LLMs with Causal Graph Discovery</i>	
Role : PI (with Ziwei Zhu (GMU) as coPI)	
> 4-VA , 4-VA Collaborative Research Program (\$5,000)	6/25-5/26
Project title : <i>A Decomposition Architecture for Solving Constrained Combinatorial Optimization Problems</i>	
Role : co-PI (with Esra Toy (Virginia Tech) as lead PI)	

- > NVIDIA, NVIDIA Academic Research Award (GPUs usage) (15,000 hours on A100) 5/25-12/25
Role : PI
- > GOOGLE, Google Cloud Academic Research Award (\$10,000 in compute credits) 4/25
Role : PI
- > LACROSS INSTITUTE, 2025 Fellowship in AI Research (\$100,000 [entire amount for the PI]) 06/25-05/27
Role : PI (with collaborator Max Biggs)
- > COHERE FOR AI, Cohere For AI Research Grant (LLM credits) (\$20,000) 12/24
Role : PI
- > UNIVERSITY OF VIRGINIA (RESEARCH INNOVATION AWARD) (\$60,000) 8/24-7/25
Project title : *Understanding and Mitigating Privacy Leakage Risks for Large Language Model Applications*
Role : PI (with David Evans as coPI)
- > NATIONAL SCIENCE FOUNDATION (CISE - RI) (\$600,000 - UVA portion : \$350,000) 08/23-07/26
Project title : *Collaborative Research : End-to-end Learning of Fair and Explainable Schedules for Court Systems*
Role : Lead PI (with L. Gouldin (SYR) as coPI and W. Yeoh WASHU as collaborative PI)
- > NATIONAL SCIENCE FOUNDATION (EECS - EPCN) (\$520,000 - UVA portion : \$260,000) 08/23-07/26
Project title : *Collaborative Research : Physics Informed Real-time Optimal Power Flow*
Role : PI (with Kyri Baker (UC BOULDER) as collaborative PI)
- > AMAZON RESEARCH AWARDS AWS AI (\$55,000) 01/23
Project title : *Toward Understanding the Unintended Disparate Impacts of Private Machine Learning Systems*
Role : PI
- > NATIONAL SCIENCE FOUNDATION (CAREER, CISE - RI) (\$515,403) 03/22-02/27
Project title : *CAREER : End-to-end Constrained Optimization Learning*
Role : PI
- > GOOGLE RESEARCH SCHOLAR AWARD (\$60,000) 06/22
Project title : *On the Equity of Differentially Private Decision Processes*
Role : PI
- > NATIONAL SCIENCE FOUNDATION (CISE - SATC) (\$500,000 - UVA portion : \$281,000) 10/21-09/25
Project title : *Collaborative Research : SaTC : Core : Small : Privacy and Fairness in Critical Decision Making*
Role : Lead PI (with P. Van Hentenryck (GEORGIA TECH) as collaborative PI)
- > NATIONAL SCIENCE FOUNDATION (CISE - RI) (\$500,000 - UVA portion : \$266,000) 10/20-09/24
Project title : *Collaborative Research : RI : Small : Deep Constrained Learning for Power Systems*
Role : PI (with P. Van Hentenryck (GEORGIA TECH) as collaborative PI)
- > CUSE PROGRAM (\$21,000) 07/21-06/23
Project title : *On the Potential Perils of Fairness Algorithms in Decision Making and Learning Tasks*
Role : PI (with S. Soundarajan (SYR) as coPI)

TRAVEL AND SERVICE GRANTS

- > Support for Scholarship awards to attend the 2025 AAAI Privacy Preserving AI workshop 03/25
Sponsorship from : Deloitte (\$3,000); Google (\$5,000); Apple (\$3,000); OpenDP (\$500)
Role : PI
- > National Science Foundation (\$50,000) 05/24
Project title : *Conference : Artificial Intelligence Summer School for Computer Science and Operations Research Education*
Role : coPI (with Lavanya Marla (UIUC) as PI)
- > Artificial Intelligence Journal (\$4,000) 03/24
Project title : *Student Support AI-SCORE 2024*
Role : PI (with Lavanya Marla)
- > Artificial Intelligence Journal (\$15,000) 01/23
Project title : *Student Support for AAMAS 2023*
Role : PI (with Ana L. C. Bazzan)
- > National Science Foundation (\$25,000) 05/23
Project title : *Travel : Travel : Doctoral Mentoring Consortium at the 22nd International Conference on Autonomous Agents and Multiagent Systems*
Role : PI

- > *Support for Scholarship awards to attend the 2024 AAAI Privacy Preserving AI workshop* 03/24
Sponsorship from : Google (\$5,000); NJIT (\$2,500); OpenDP (\$500)
Role : PI
- > *Support for Scholarship awards to attend the 2023 AAAI Privacy Preserving AI workshop* 03/23
Sponsorship from : Google (\$2,500)
Role : PI

PENDING GRANTS SUBMISSIONS

- > **NSF SCH**, (\$1,200,000) 10/25
Project title : SCH : Multimodal Wearable edge Intelligence via Neuro-Symbolic AI for Early Diagnosis of Neurodegenerative Disorder
Role : co-PI (with Kyusang Lee as PI)
- > **NSF SCH**, (\$1,200,000) 10/25
Project title : SCH : AI-Powered Multimodal Sensing Platform for Personalized Intra- and Post-Surgical Spine Care
Role : co-PI (with Kyusang Lee as PI)
- > **DARPA NODES**, (\$1,700,000) 10/25
Project title : Phase I : Biophysics-Guided Diffusion Prediction of Function
Role : co-PI (with Alvaro Velasquez (CU Boulder) as PI)
- > **AMAZON RESEARCH AWARDS AWS AI**, (\$70,000) 04/25
Project title : Massively Accelerating Large Language Models Inferences through Speculative Diffusion Decoding
Role : PI

(Several other proposals are in preparation with imminent planned submission or submitted in pre-proposal stage.)

Tutorials, Selected Invited Talks and Media interviews

- > **Keynote Talk** : Foundations for Constrained-aware Diffusion Models. Dec 2025
Constrained Optimization for Machine Learning (COML) Workshop at NeurIPS-25.
- > **Invited Talk** : Thrusting Generative AI for Scientific Discovery. Oct 2025
CORE Workshop, Argonne National Laboratories
- > **Keynote talk** : Physics-aware Models for Power Grids. Sep 2025
Hexagon Workshop on Power Grids
- > **Invited Talk** : Physics-aware Foundation Models for Scientific Discovery. Sep 2025
AI initiative, Argonne National Laboratories
- > **Invited talk** : Robust and Safety-constrained Foundation Models. Jul 2025
The Trillion Parameter Consortium
- > **Invited talk** : Constrained-diffusion Models for Physics-guided Discovery. Jul 2025
USNCCM18
- > **Invited talk** : Simultaneous Multi-Robot Motion Planning with Projected Diffusion Models. Jun 2025
PlutonsAI
- > **Spotlight presentation** : Towards Physics-Aware Generative Inverse Solvers. Jun 2025
DOE workshop on inverse design
- > **Invited talk** : Generative AI for Science. Jun 2025
TED-X Chantilly High School
- > **Google talk** : Conversational audits for Privacy Exploits in LLM Agents. May 2025
Google Research
- > **Panelist** : Combining AI and ORMS for better trustworthy Decision Making. Mar 2025
AAAI 2025 Bridge Program
- > **Invited participant and group lead** : On the Safety of Foundations Models for Autonomous BioLabs. Feb 2025
DOE Workshop on Envisioning Frontiers in AI and Computing for Biological Research
- > **Keynote talk** : Privacy and Fairness issues in Large Language Models. Nov 2024
S-HPC Workshop, at Supercomputing 24
- > **Invited talk** : Unfairness in Constrained Machine Learning. Nov 2024
Ohio State University, Department of Computer Science

- **Invited talk** : Constraining diffusion models for scientific applications.
[UVA LLM Workshop](#) Oct 2024
- **Invited talk** : Privacy and Fairness in Resource Allocations.
[2024 Federal Committee on Statistical Methodology \(FCSM\) Research and Policy Conference](#) Oct 2024
- **Invited talk** : Constrained Diffusion for Science and Engineering.
[Oklahoma State University, School of Industrial Engineering and Management](#) Oct 2024
- **Invited talk** : Constrained Diffusion for Science and Engineering.
[University of Virginia, Department of Systems and Information Engineering](#) Sep 2024
- **Podcast invited speaker** : NSI Cyber and Tech Center : "Unleashing Innovation : Navigating Game Changing Technologies" – episode on open source large language model.
[National Security Institute at George Mason University's Antonin Scalia Law School](#) Jul 2024
- **Invited participant and group lead** : US-UK Scientific Forum on Science in the Age of AI.
[National Academy of Sciences](#) Jun 2024
- **Panelist** : AI and OR summer school.
[AI-SCORE](#) May 2024
- **Invited talk** : Fairness in ML : The curious case of computational shortcuts and hardware choices.
[BuzzRobot](#) May, 2024
- **Invited talk** : The Principle of Data Minimization in Machine Learning.
[Google Research Seminars](#) Apr, 2024
- **Media cover** : Building fairness into AI is crucial – and hard to get right.
[The Conversation](#) , [CHED/QR Radio](#) Mar 2024
- **Invited talk** : Responsible AI in Decision Making Processes.
[Amazon Research Seminars](#) Feb 2024
- **Keynote talk** : Privacy and Fairness in Societal Systems.
[Workshop on the Tradeoffs in Ethical AI](#), INRIA, France Nov 2023
- **Invited talk** : Responsible AI : Privacy and Fairness in Decision Making and Learning Tasks.
[TOC FOR FAIRNESS, Simons Collaboration on the Theory of Algorithmic Fairness](#) Nov 2023
- **Panelist** : Navigating the Frontiers of Artificial Intelligence.
[The Center for Politics, University of Virginia](#) Oct 2023
- **Invited talk** : Optimization and Learning for Science and Engineering.
[Conference on Complex Systems 2023](#) Oct 2023
- **Invited talk** : ML for Optimization and Optimization for ML.
[AI/ML Seminar Series, University of Virginia](#) Sep 2023
- **Keynote talk** : The Unintended Societal Effects of Privacy in Decision and Learning Tasks.
[IJCAI-2023, International Workshop on Mining Actionable Insights from Social Networks](#) Aug 2023
- **Invited talk** : End-to-end Constrained Optimization Learning.
[AC Summer School : Machine Learning for Constraint Programming](#) Jul 2023
- **Invited talk** : Differential Privacy for Power Systems.
[DTU PES Summer School](#) Jun 2023
- **Invited talk** : Optimization Proxies and Differentiable Optimization for Decision Making.
[MARS Seminar, Pacific Northwest National Laboratory \(PNNL\)](#) Jun 2023
- **Invited talk** : Constrained-aware Machine Learning in Energy Systems.
[IEEE Power and Energy Society webinar series](#) Jun 2023
- **Invited talk** : Responsible AI : Privacy and Fairness in Decision and Learning Tasks.
[UC San Diego](#) Apr 2023
- **Panelist** : ChatGPT : Charms and Challenges.
[Syracuse University](#) Apr 2023
- **Invited talk** : Responsible AI : Privacy and Fairness in Decision and Learning Tasks.
[University of Virginia](#) Mar 2023
- **Invited talk** : Constrained-Aware Machine Learning.
[Washington University in St. Louis](#) Feb 2023
- **Invited talk** : Differential Privacy for Power Systems.
[Los Alamos National Lab's 5th Grid Science Winter School and Conference](#) Jan 2023

- > **Panelist** : Algorithmic Fairness and its Intersections. Dec 2022
[↗ Thirty-sixth Conference on Neural Information Processing Systems \(NeurIPS\)](#)
- > **Tutorial** : End-to-end constrained optimization learning. Dec 2022
[↗ 21st International Conference of the Italian Association for Artificial Intelligence \(AIxIA 2022\)](#)
- > **Media cover** : How network pruning can skew deep learning models. Nov 2022
[↗ Science Daily](#) [↗ TechXplore](#) [↗ AAAS EurekAlert](#)
- > **Invited talk** : Disparate Impacts in Privacy-preserving Machine Learning. Nov 2022
Washington University in St. Louis
- > **Tutorial** : Decision Focused Learning. Oct 2022
Dagstuhl seminar on Data-Driven Combinatorial Optimisation
- > **Media interview** : Privacy and Fairness in AI. Jul/Sep 2022
[↗ Syracuse Media Report](#) [↗ NMSU News](#) [↗ Sun News](#)
- > **Media interview** : Google Scholar Research Award. Jun 2022
[↗ Syracuse Media Report](#)
- > **Tutorial** : Impacts of Data Privacy and Equity on Public Policy. Jun 2022
[↗ ACM Conference on Fairness, Accountability, and Transparency \(FAccT\)](#)
- > **Panelist** : Fostering the Use of AI for Power System Transformation. Jun 2022
[↗ Climate Change AI](#)
- > **Media interview** : NSF CAREER Award. Jun 2022
[↗ Syracuse Media Report](#)
- > **Invited talk** : End-to-end constrained deep learning optimization. Mar 2022
Hall of Science (Kantar.com)
- > **Panelist** : AAAI-22 DC - Career Panel. Feb 2022
[↗ 36th AAAI Conference on Artificial Intelligence \(AAAI\)](#)
- > **Invited talk** : Privacy-preserving ML and decisions-making : uses and unintended disparate effects. Feb 2022
[↗ PriSec-ML \(virtual seminars\)](#)
- > **Media interview** : AI for Climate Change. Dec 2021
[↗ RaiNews](#)
- > **Popular Media Report** : ISSNAF Young Investigator Award. Nov 2021
[↗ New York Voice](#) [↗ AISE](#) [↗ Il Mattino](#) [↗ StartupItalia](#) [↗ Zox](#) [↗ PugliaNews](#)
- > **Invited talk** : Deep Constraint Learning : Applications and Privacy Considerations. Nov 2021
[↗ Italian Scientists & Scholars in North America Foundation](#)
- > **Plenary Keynote talk** : Constraint-based Differential Privacy. Oct 2021
[↗ The International Conference on Principle and Practice of Constraint Programming \(CP 2021\)](#),
- > **Popular Media interview** : Deep Learning for Engineering Applications. Nov 2021
[↗ Blum News](#)
- > **Invited talk** : Privacy-Preserving Machine Learning : Uses and Unintended Disparate Effect. Sep 2021
ASPI Seminar (Syracuse University)
- > **Invited talk** : Differential Privacy and Machine Learning. May 2021
SUPA ECS workshop for High School Teachers
- > **Invited talk** : Deep Constraint Learning for Critical Engineering Systems. Nov 2020
[↗ Italian Scientists & Scholars in North America Foundation](#)
- > **Tutorial** : Tutorial on Multiagent Optimization. Feb 2020
[↗ AAAI Conference on Artificial Intelligence \(AAAI 2020\)](#)
- > **Media cover** : Multiagent Systems. Feb 2020
[↗ NetworkDigital360](#)
- > **Invited talk** : Privacy-Preserving Artificial Intelligence. Jun 2019
University of Parma (CS Dept)
- > **Tutorial** : Tutorial on Multiagent Optimization for IoT Applications. May 2019
[↗ International Conference on Autonomous Agents and Multiagent Systems \(AAMAS 2019\)](#)
- > **Invited talk** : Differential Privacy for AI Applications Jan 2019
University of Southern California - Information Sciences Institute.
Michigan State University. Feb 2019

> Invited talk : <i>Privacy Preserving Artificial Intelligence</i>		
Syracuse University.		Feb 2019
Drexel University.		Feb 2019
University of Arkansas.		Feb 2019
Colorado State University.		Mar 2019
University of Connecticut.		Mar 2019
> Tutorial : <i>Tutorial on Constrained Multi-agent Optimization.</i>		Feb 2018
AAAI Conference on Artificial Intelligence (AAAI 2018)		
> Plenary Keynote talk : <i>Distributed Constraint Optimization for Smart Energy Networks.</i>		Nov 2017
Italian Conference on Artificial Intelligence (AI*IA 2017)		
> Invited talk : <i>Distributed Constraint Optimization</i>		
Delft University (TU Delft).		Apr 2016
University of Udine.		Apr 2016
New Mexico State University.		Mar 2016
> Invited talk : <i>Large Neighboring Search for Distributed Constrained Optimization.</i>		Mar 2016
Ben-Gurion University of the Negev		

Internal Service

SCHOOL/DEPARTMENT SERVICE (AT UVA)

> AI Education Programs committee	2025
> Search Committee (Teaching track)	2024 – 2025
> Graduate Program Committee	2023 – 2025
> Advisor ACM SIGAI at UVA	2023 – 2024

SCHOOL/DEPARTMENT SERVICE (AT SU)

> Curriculum Committee	2023 – 2024
> Prepare and Grade Qualifier exam (Programming/Data Structure)	2022 – 2023
> Academic Integrity panelist	2021 – 2022
> Remembrance Scholars Selection Committee	2022

Professional Service

CONFERENCE CHAIR

> International Conference on Principles and Practice of Constraint Programming (CP) with Roie Zivan	2022
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WORKSHOP CHAIR

> Sixth AAAI Workshop on Privacy Preserving Artificial Intelligence (PPAI), at AAAI with Juba Ziani, Wanrong Zhang, and Jeremy Seeman	2025
> Algorithmic Fairness through the lens of Metrics and Evaluation (AFME), at NeurIPS with Awa Dieng, Miriam Rateike, and Golnoosh Farnadi	2024
> AAAI Workshop on Learnable Optimization (LEARNOPT), at AAAI with Elias B. Khalil, Pascal Van Hentenryck, Jan Drgona, Draguna Vrabie, and Priya Donti	2024
> Fifth AAAI Workshop on Privacy Preserving Artificial Intelligence (PPAI), at AAAI with Juba Ziani, Christine Task, and Niloofar Miresghallah	2024
> Algorithmic Fairness through the lens of Time (AFT), at NeurIPS with Awa Dieng, Miriam Rateike, and Golnoosh Farnadi	2023
> Workshop on Optimization and Learning in Multi-Agent Systems, at AAMAS with Hau Chan, Jiaoyang Li, Filippo Bistaffa, and James Kotary	2023
> Fourth AAAI Workshop on Privacy Preserving Artificial Intelligence (PPAI), at AAAI with Catuscia Palamidessi, and Pascal Van Hentenryck	2023
> Algorithmic Fairness through the lens of Causality and Privacy (AFCP), at NeurIPS with Awa Dieng, Miriam Rateike, and Golnoosh Farnadi	2022
> Workshop on Optimization and Learning in Multi-Agent Systems, at AAMAS with Hau Chan and Jiaoyang Li	2022

- **Third AAAI Workshop on Privacy Preserving Artificial Intelligence (PPAI)**, at AAAI
with Aleksandra Korolova and Pascal Van Hentenryck 2022
- **AAAI Workshop on Machine Learning for Operational Research (ML4OR)**, at AAAI
with Emma Freijinger, Elias Khalil, and Pashootan Vaezipoor 2022
- **Second AAAI Workshop on Privacy Preserving Artificial Intelligence (PPAI)**, at AAAI
with Pascal Van Hentenryck and Richard W. Evans 2021
- **Workshop on Optimization and Learning in Multi-Agent Systems (OptLearnMAS)**, at AAMAS
with Amulya Yadav, Gauthier Picard, and Bryan Wilder 2021
- **First AAAI Workshop on Privacy Preserving Artificial Intelligence (PPAI)**, at AAAI
with Pascal Van Hentenryck and Rachel Cummings 2020
- **Workshop on Optimization and Learning in Multi-Agent Systems (OptLearnMAS)**, at AAMAS
with Bryan Wilder and Long Tran-Thanh 2020
- **Workshop on Optimization in Multi-Agent Systems (OptMAS)**, at AAMAS
with Archie Chapman and Long Tran-Thanh 2019
- **Workshop on Optimization in Multi-Agent Systems (OptMAS)**, at FAIM18
with Archie Chapman, Long Tran-Thanh, and Role Zivan 2018

CONFERENCE ORGANIZING COMMITTEE

- **Tutorial Chair** : The ACM International Conference on AI in Finance (ICAF) 2025
- **Demo Track Chair** : International Joint Conference on Artificial Intelligence (IJCAI) 2023
- **Scholarship Chair** : International Conference on Autonomous Agents and Multiagent Systems (AAMAS) 2023
- **Tutorial Chair** : International Conference on Autonomous Agents and Multiagent Systems (AAMAS) 2022
- **Track Chair** : International Conference on Principles and Practice of Constraint Programming (CP) 2018 – 2019
- **Track Chair** : International Conference on Autonomous Agents and Multiagent Systems (AAMAS) (For Learning and Adaptation track) 2025
- **Publicity Chair** : International Conference on Logic Programming (ICLP) 2019
- **Track Chair** : International Symposium on Mathematical Programming (ISMP) 2018

AWARD COMMITTEE

- ACP Early Career Researcher Award committee 2024
- ISSNAF Mario Gerla Young Investigator Award 2023

SERVICE TO JOURNALS

- **Editorial Board Member** : Artificial Intelligence (AIJ) 2024–present
- **Editorial Board Member** : Journal of Artificial Intelligence Research (JAIR) 2025–2028
- **Associate Editor** : IJSE Transactions *Special issue on Federated Learning* 2023
- **Guest Editor** : Theory and Practice of Logic Programming (TPLP) *Past and Present (and Future) of Parallel and Distributed Computation in (Constraint) Logic Programming* 2018

SENIOR AREA CHAIR

- AAAI Conference on Artificial Intelligence (AAAI) 2026
- ACM Conference on Fairness, Accountability, and Transparency (FAccT) 2023 – 2026
- International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS) 2026
- International Joint Conference on Artificial Intelligence (IJCAI) 2024 – 2025

AREA CHAIR

- Neural Information Processing Systems (NeurIPS) 2024 – 2025
- International Conference on Machine Learning (ICML) 2024 – 2026
- AAAI Conference on Artificial Intelligence (AAAI) 2020 – 2025
- International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS) 2023 – 2025
- International Joint Conference on Artificial Intelligence (IJCAI) 2021 – 2023
- European Conference on Artificial Intelligence (ECAI) 2023 – 2024
- International Conference on Principles and Practice of Constraint Programming (CP) 2018, 2019, 2022

WORKSHOP/TUTORIAL PROPOSAL REVIEWER

- | | |
|---|-------------|
| > International Conference on Machine Learning (ICML) | 2024 – 2025 |
| > Neural Information Processing Systems (NeurIPS) | 2023, 2024 |
| > International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS) | 2022 |

PROGRAM COMMITTEE

- | | |
|--|-------------------|
| > ACM Computer and Communications Security (CCS) | 2024 – 2026 |
| > ACM Computer and Communications Security Asia (CCS Asia) | 2026 |
| > Bridge Program on AI and OR, at AAAI | 2025 |
| > IEEE Smartgridcomm | 2025 |
| > Neural Information Processing Systems (NeurIPS) | 2020 – 2023 |
| > International Conference on Machine Learning (ICML) | 2021 – 2024 |
| > International Conference on Learning Representations (ICLR) | 2021 – 2025 |
| > Privacy Enhancing Technologies Symposium (PETS) | 2021 – 2023 |
| > Electric Power System Research (PSCC) | 2022 |
| > International Conference on Logic Programming (ICLP) | 2021 |
| > International Conference on Principles and Practice of Constraint Programming (CP) | 2016 – 2018, 2021 |
| > International Joint Conference on Artificial Intelligence (IJCAI) | 2016 – 2020 |
| > European Conference on Machine Learning (ECML) | 2020 |
| > International Symposium on Combinatorial Search (SoCS) | 2015 – 2020 |
| > International Workshop on Optimization and Learning in Multi-Agent Systems (OptLearnMAS) | 2020 |
| > AAAI Conference on Artificial Intelligence (AAAI) | 2018 – 2019 |
| > Italian Conference on Computational Logic (CILC) | 2017 – 2019 |
| > Distributed Artificial Intelligence (DAI) | 2019 |
| > European Conference on Artificial Intelligence (ECAI) | 2016 – 2018 |
| > International Workshop on Optimization in Multi-Agent Systems (OptMAS) | 2016 – 2017 |
| > Italian Conference on Artificial Intelligence (AI*IA) | 2017 |

JOURNAL REVIEWER

- | | |
|---|--------------------------------|
| > Harvard Data Science Review | 2024 |
| > INFORMS Journal on Computing | 2022, 2023 |
| > Transactions on Machine Learning Research (TMLR) | 2022 |
| > Journal of Artificial Intelligence Research (JAIR) | 2016 – 2022 |
| > Artificial Intelligence Journal (AIJ) | 2016 – 2021 |
| > Journal of Machine Learning Research (JMLR) | 2021 |
| > IEEE Transactions on Smart Grid | 2019 – 2021 |
| > IEEE Transactions on Power Systems | 2020 – 2021 |
| > IEEE Transactions on Dependable and Secure Computing | 2020 |
| > IEEE Transactions on Information Forensics & Security | 2019 – 2020 |
| > Gates Open Research | 2020 |
| > Patterns | 2020 |
| > Autonomous Agents and Multi-Agent Systems (JAAMAS) | 2014 – 2017, 2019 – 2020, 2023 |
| > Artificial Intelligence Review (AIR) | 2016 – 2017 |
| > Fundamenta Informaticae Journal | 2016 – 2017 |
| > AI Communications | 2017 |
| > Algorithms for Molecular Biology (AMB) | 2014 |

DOCTORAL CONSORTIA MENTORING

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|---|------|
| > AAAI Conference on Artificial Intelligence (AAAI) | 2022 |
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CONFERENCE/SYMPOSIUM/WORKSHOP REVIEWER

- European Control Conference (ECC) 2021
- AAAI Conference on Artificial Intelligence (AAAI) 2014 – 2017
- International Conference on Autonomous Agents and Multiagent Systems (AAMAS) 2014 – 2016
- International Conference on Principles and Practice of Constraint Programming (CP) 2016 – 2017
- International Conference on Principles and Practice of Multi-Agent Systems (PRIMA) 2016
- International Joint Conference on Artificial Intelligence (IJCAI) 2015
- International Conference on Logic Programming (ICLP) 2015
- International Symposium on Combinatorial Search (SoCS) 2014
- International Workshop on Distributed Constraint Reasoning (DCR) 2014
- EURO-Par Parallel Processing (EUROPAR) 2014
- Principles and Practice of Declarative Programming (PPDP) 2014

PANEL REVIEWER

- NSF, CISE Panel 2025
- ISSNAF TEF Research Grants 2025
- AI Singapore Research - Governance Panel 2025
- NSF, TIP Panel 2025
- The Royal Society, Dorothy Hodgkin Fellowships 2025
- NSF, CISE Panel ($\times 2$) 2024
- Austrian Research Promotion Agency (FFG) 2023
- NSF, Eng Panel 2023
- NSF, NRT Panel 2022
- NSF, SaTC Panel 2022
- NSF, CISE Panel 2022
- Israel Science Foundation (IIS) (external reviewer) 2022 – 2023
- Climate Change AI (CCAI) Grant 2022 – 2023
- CUSE Grant, Syracuse University 2020 – 2021
- NSF, CISE RI (external reviewer) 2020