

# Ferdinando FIORETTO

## Assistant Professor

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

**Research Interests :** Machine Learning | Differential Privacy | Algorithmic Fairness | AI for Science and Engineering

## Professional Experience

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Current Aug. 2023	<b>University of Virginia</b> , <i>Computer Science</i> , Charlottesville, VA ASSISTANT PROFESSOR
Jul. 2023 Jan. 2020	<b>Syracuse University</b> , <i>Electrical Engineering &amp; Computer Science</i> , Syracuse, NY ASSISTANT PROFESSOR

## Education and Training

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

## Selected Honors and Awards

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| 2025 | <b>Academic Grant Program Award</b> , NVIDIA. <a href="#">🔗 Link</a><br>➤ The NVIDIA Academic Grant Program is a competitive program providing world-class computing access and resources to selected researchers.  |
| 2025 | <b>Fellowship in AI Research</b> , LaCross Institute. <a href="#">🔗 Link</a><br>➤ Project name : “Privacy and Fairness in AI Pipelines : From Data Collection to Decision-Making”.<br>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 foundation for substantive future work.   |
| 2022 | <b>Caspar Bowden PET Award</b> , Privacy Enhancing Technologies (PETs). <a href="#">🔗 Link</a><br>➤ 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).<br>The award letter reads : “Your paper <a href="#">Decision Making with Differential Privacy under the Fairness Lens</a> 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 | <b>NSF CAREER Award</b> , National Science Foundation. <a href="#">🔗 Press</a><br>➤ Project name : “End-to-end Constrained Optimization Learning”.<br>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 de-   |

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1. Dual degree with New Mexico State University

partment 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**, AAAI colorai workshop. [Link](#)
- 2025 **Outstanding Research Faculty Award (by Dept. 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](#)
- 2020 **Young Investigator Award Nomination**, ISSNAF. [Press](#)
- 2019 **Invited journal paper**, International Joint Conference on Artificial Intelligence (IJCAI). [Link](#)
- 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 :** > 77 Conference papers<sup>†</sup> > 14 Journals articles > 32 Workshop papers<sup>†</sup> > 3 Editorial articles  
> 4 Book chapters > 19 Preprints














**Total citations :** 2974 **H-index :** 27 [🎓 Google Scholar](#)

<sup>†</sup> : In highly competitive venues.

- > Names of students I supervise(d) are appended with symbol .
- > In computer science publications, author order usually follows contribution, where students are first authors and faculty advisors are listed last to reflect their supervisory role.
- > 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.
- > Award winning papers are highlighted with symbol .





























### RIGOROUSLY PEER REVIEWED CONFERENCES

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

- [77] **Neuro-symbolic Generative Diffusion Models for Physically Grounded, Robust, and Safe Generation.** [\[🔗\]](#)  
Jacob K. Christopher, Michael Cardei, Jinhao Liang, **Ferdinando Fioretto.**  
 **International Conference on Neuro-symbolic Systems (NeuS), 2025.**  
[Acceptance Rate : TBA].  
**[Oral]** (rates to TBA).
- [76] **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%].
- [75] **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 : 32.02%].  
**[Spotlight]** (5.1% of the accepted papers / 0.01% of all submitted papers).
- [74] **Speculative Diffusion Decoding : Accelerating Language Generation through Diffusion.** [\[🔗\]](#)  
Jacob K. Christopher, Michael Cardei, Brian R Bartoldson, Bhavya Kailkhura, **Ferdinando Fioretto.**  
 **Nations of the Americas Chapter of the Association for Computational Linguistics (NAACL), 2025.**  
[Acceptance Rate : 26.0%].  
**[oral]** (22% of the accepted papers / 0.9% of all submitted papers).  
> Also appeared in [w8] at **NeurIPS, 2024.** [Accepted Rate : 29.0%].
- [73] **Differentially Private Data Release on Graphs : Inefficiencies and Unfairness.** [\[🔗\]](#)  
 $[\alpha/\beta]$  **Ferdinando Fioretto**, Diptangshu Sen, Juba Ziani.  
**International Conference on Artificial Intelligence and Statistics (AISTATS), 2025.**  
[Acceptance Rate : 31.3%].
- [72] **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 : 19%].  
**[Oral]** (5% of the accepted papers / 1.9% of all submitted papers).

➤ Also appeared in [w8] at AAAI, 2024. 🏆[Oral] (7.6% of the accepted papers).

- [71] **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%].
- [70] **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 [w8] at NeurIPS, 2024. 🏆[Oral] (6% of the accepted papers (39% acceptance rate)).
- [69] **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%].
- [68] **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%].
- [67] **On The Fairness Impacts of Hardware Selection in Machine Learning.** [🔗]  
Sree Harsha Nelaturu, Nishaanth Kanna Ravichandran, Cuong Tran, Sara Hooker, and **Ferdinando Fioretto**.  
International Conference on Machine Learning (ICML), 2024.  
[Acceptance Rate : 27.5%].
- [66] **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%].
- [65] **End-to-End Learning for Fair Multiobjective Optimization Under Uncertainty.** [🔗]  
My H. Dinh, James Kotary, **Ferdinando Fioretto**.  
Conference of Uncertainty on Artificial Intelligence (UAI), 2024.  
[Acceptance Rate : 27.0%].
- [64] **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%].
- [63] **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%].
- [62] **Finding  $\epsilon$  and  $\delta$  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%].
- [61] **Differentiable Approximations of Fair OWA Optimization.** [🔗]  
My H. Dinh, James Kotary, **Ferdinando Fioretto**.  
Differentiable Almost Everything, at ICML, 2024.  
[Acceptance Rate : 27.0%].
- [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, and 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 (10,411, in 2022).).
- [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<sup>✉</sup>, **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.** <sup>[🔗]</sup>  
[c] James Kotary<sup>✉</sup>, **Ferdinando Fioretto**, Pascal Van Hentenryck.  
AAAI Conference on Artificial Intelligence (AAAI), 2022.  
[Acceptance Rate : 15.0%].
- [45] **Differentially-Private Heat and Electricity Markets Coordination.** <sup>[🔗]</sup>  
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.** <sup>[🔗]</sup>  
[c] Mostafa Mohammadian, Kyri Baker, My H. Dinh<sup>✉</sup>, **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.** <sup>[🔗]</sup>  
Cuong Tran<sup>✉</sup>, My H. Dinh<sup>✉</sup>, **Ferdinando Fioretto**.  
Conference on Neural Information Processing Systems (NeurIPS), 2021.  
[Acceptance Rate : 26.0%].
- [42] **Learning Hard Optimization Problems : A Data Generation Perspective.** <sup>[🔗]</sup>  
James Kotary<sup>✉</sup>, [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.** <sup>[🔗]</sup>  
[c] Cuong Tran<sup>✉</sup>, **Ferdinando Fioretto**, Pascal Van Hentenryck, Zhiyan Yao<sup>✉</sup>.  
 **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.** <sup>[🔗]</sup>  
[c] James Kotary<sup>✉</sup>, **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.** <sup>[🔗]</sup>  
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.** <sup>[🔗]</sup>  
Cuong Tran<sup>✉</sup>, [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.** <sup>[🔗]</sup>  
Anudit Nagar<sup>✉</sup>, Cuong Tran<sup>✉</sup>, **Ferdinando Fioretto**.  
International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 1605–1606, 2021.  
[Acceptance Rate : 40.0%].
- [36] **Constrained-based Differential Privacy.** <sup>[🔗]</sup>  
**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.** <sup>[🔗]</sup>  
[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 Stackebel 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.**   
Atena 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.**   
**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.**   
**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.**   
**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.**   
**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.**   
**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.**   
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.**   
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.**   
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.**   
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.**   
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.**   
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.**   
Atena M. Tabakhi, Tiep Le, Ferdinando Fioretto, William Yeoh.  
International Conference on Principles and Practice of Constraint Programming (CP), pages 278–296, 2017.  
[Acceptance Rate : 43.0%].
- [16] **Proactive Dynamic Distributed Constraint Optimization Problems.**   
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- [1] **Privacy-Preserving Obfuscation of Critical Infrastructure Networks.** [\[🔗\]](#)  
**Ferdinando Fioretto**, Terrence W. K. Mak, Pascal Van Hentenryck.  
CoRR abs/1905.09778, 2019 (extended IJCAI-19 version : c5).

## Teaching

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Responsible AI (CS 7000), *University of Virginia*

Spring 2025 | COURSE EVALUATION : TBA (class), TBA (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), 4.5 (instructor) / 5.00

Fall 2024 | COURSE EVALUATION : 4.21 (class), 4.22 (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)

## Mentoring

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### Current Students

- › **Vincenzo Di Vito** (PhD, UVA CS) *Fall 2022*  
RESEARCH : Physics Informed Machine Learning.  
PHD MILESTONES : qualifying exam (Spring 2024); proposal defense (Spring 2025, expected); projected defense (Spring 2026).
- › **Saswat Das** (PhD, UVA CS) *Fall 2023*  
RESEARCH : Responsible AI, Differential Privacy.  
AWARDS : • [\[Best paper award at AAAI CoLoRAI Workshop, 2025\]](#) • [\[Oral at AAAI-25\]](#)  
PHD MILESTONES : qualifying exam (Spring 2025, expected)
- › **Jacob K. Christopher** (PhD, UVA CS) *Fall 2023*  
RESEARCH : Generative AI for Science, Safety.  
AWARDS : • [\[Oral at NAACL-25\]](#) • [\[Best paper award at UVA LLM workshop, 2024\]](#) • [\[Oral at NeurIPS-24 ENLSP workshops\]](#)  
• [\[Oral at NeurIPS-24 AI4Mat workshops\]](#)  
PHD MILESTONES : qualifying exam (Fall 2024); proposal defense (Fall 2025, expected))

- › **Jinhao Liang** (PhD, UVA CS)

RESEARCH : Generative AI, Differentiable Optimization.

AWARDS : • **[Oral at AAAI Bridge on ML for OR program, 2025]** • **[Oral at AAAI MAPF workshop, 2025]**

PHD MILESTONES : qualifying exam (Fall 2025)

*Fall 2024*
- › **Michael Cardei** (PhD, UVA CS)

RESEARCH : LLMs, Generative AI, Safety.

AWARDS : • **NSF GRFP 2025 honorable mention** • **[Oral at NAACL-25]** • **Best paper at LLM workshop, UVA**

PHD MILESTONES : qualifying exam (Fall 2025)

*Fall 2024*
- › **Huu Binh Ta** (PhD, UVA CS)

RESEARCH : Generative AI, AI for Science.

*Fall 2025*
- › **Zehua Wang** (PhD, UVA CS)

RESEARCH : Generative AI, LLMs, Privacy.

*Fall 2025*
- › **Jameson Sandler** (PhD, UVA CS)

RESEARCH : 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]**

*Fall 2023*
- › **Jameson Sandler** (BS, UVA CS)

*Fall 2024*
- › **Yili Bai** (BS, UVA CS)

*Spring 2025*
- › **Natalia Wunder** (BS, UVA CS)

*Spring 2025*
- › **Connor Lewis** (BS, UVA CS)

*Spring 2025*
- › **Lauren LaPorta** (BS, UVA CS)

*Spring 2025*
- › **Lea Demelius** (VISITING PHD STUDENT, TECHNICAL UNIVERSITY OF GRAZ )

*Spring 2025*

## Graduated Students

- › **My Dinh** (PhD, UVA CS)

RESEARCH : Deep Learning, Optimization, Fairness.

DISSERTATION TITLE : Bridging Machine Learning and Optimization : Learning Fair and Scalable Problem Solving

NEXT POSITION : TBA

*Spring 2021 – Spring 2025*
- › **James Kotary, PhD** (UVA, CS)

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.

*Fall 2020 – Fall 2024*
- › **Cuong Tran, PhD** (SYRACUSE UNIVERSITY, CISE)

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 : Research Scientist, Amazon.

*Spring 2020 – Spring 2023*
- › **Jacob Kennedy Christopher, MS** (SYRACUSE UNIVERSITY)

RESEARCH : Differentiable Optimization.

NEXT POSITION : PhD student at *University of Virginia*.

*Spring 2023*
- › **Yehya Farhat, MS** (SYRACUSE UNIVERSITY)

DISSERTATION TITLE : Surrogate ML models for optimization.

NEXT POSITION : PhD student at *Rice University*.

*Fall 2022*

## Past Students and Visitors

- › **Stefano Zampini**, (VISITING STUDENT, PhD at University of Genova)

*Summer 2024*
- › **Cuong Tran** (POSTDOC)

RESEARCH : Data Minimization, Fairness in Large Language Models.

*Sep 2023 – Mar 2024*
- › **Razan Tajeddine**, (VISITING STUDENT, Postdoc at U of Helsinki)

RESEARCH : Differential Privacy and Fairness.

*Sep 2023 – Mar 2024*

- > **St John Grimbly**, (VISITING STUDENT, MS at UniSA)  
 NEXT POSITION : PhD student at *University of South Africa*.
 
*Spring 2023*
- > **Jayanta Mandi**, (VISITING STUDENT RESEARCHER, PhD at KU Leuven)  
 RESEARCH : Decision Focused Learning.
 
*Jun 2022 – Sep 2022*
- > **Rakshit Naidu**, MS at CMU (INTERN)  
 RESEARCH : Privacy and Fairness in ML. NEXT POSITION : PhD student at *Georgia Tech*
*Summer 2022*

## BS and High-School Students

**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), **Sunisth 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

- |   |      |
|---|------|
| > <b>Chen Gong</b> , (UNIVERSITY OF VIRGINIA)               | 2025 |
| > <b>Galen Harrison</b> , (UNIVERSITY OF VIRGINIA)          | 2025 |
| > <b>Felipe Toledo</b> , (UNIVERSITY OF VIRGINIA)           | 2025 |
| > <b>Luca Giuliani</b> , (UNIVERSITY OF BOLOGNA)            | 2024 |
| > <b>Eleonora Misino</b> , (UNIVERSITY OF BOLOGNA)          | 2024 |
| > <b>Guangtao Zheng</b> , (UNIVERSITY OF VIRGINIA)          | 2024 |
| > <b>Dung Nguyen</b> , (UNIVERSITY OF VIRGINIA)             | 2023 |
| > <b>Elena Long</b> , (UNIVERSITY OF VIRGINIA)              | 2023 |
| > <b>Khang Tran</b> , (NEW JERSEY INSTITUTE OF TECHNOLOGY)  | 2023 |
| > <b>Keyu Zhu</b> , (GEORGIA INSTITUTE OF TECHNOLOGY)       | 2023 |
| > <b>Adrià Fenoy Barcel</b> , (UNIVERSITY OF VERONA)        | 2023 |
| > <b>Jeroen Fransman</b> , (DELFT UNIVERSITY OF TECHNOLOGY) | 2022 |
| > <b>Pegah Hozhabrierdi</b> , (SYRACUSE UNIVERSITY)         | 2022 |
| > <b>Carlos Pinzon</b> , (ÉCOLE POLYTECHNIQUE)              | 2022 |
| > <b>Baocheng Geng</b> , (SYRACUSE UNIVERSITY)              | 2021 |
| > <b>Pranay Sharma</b> , (SYRACUSE UNIVERSITY)              | 2021 |

## Research Grants and Gifts

- 
- Summary :**   Total External : \$2,848,003   (\$1,527,403 as PI)   Total Internal : \$181,000
- > **NVIDIA**, NVIDIA Academic Research Award (GPUs usage) (150,000 hours)  
 Role : PI
 
*5/25*
  - > **GOOGLE**, Google Cloud Academic Research Award ( \$10,000 in compute credits)  
 Role : PI
 
*4/25*
  - > **LACROSS INSTITUTE**, 2025 Fellowship in AI Research (\$100,000 [entire amount for the PI])  
 Role : PI (with collaborator Max Biggs)
 
*06/25-05/27*
  - > **COHERE FOR AI**, Cohere For AI Research Grant (LLM credits) (\$20,000)  
 Role : PI
 
*12/24*
  - > **UNIVERSITY OF VIRGINIA (RESEARCH INNOVATION AWARD)** (\$60,000)  
 Project title : *Understanding and Mitigating Privacy Leakage Risks for Large Language Model Applications*  
 Role : PI (with David Evans as coPI)
 
*8/24-7/25*

- **NATIONAL SCIENCE FOUNDATION (CISE - RI)** (\$600,000 - UVA portion : \$350,000)

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)

08/23-07/26
- **NATIONAL SCIENCE FOUNDATION (EECS - EPCN)** (\$520,000 - UVA portion : \$260,000)

Project title : *Collaborative Research : Physics Informed Real-time Optimal Power Flow*

Role : PI (with Kyri Baker (UC BOULDER) as collaborative PI)

08/23-07/26
- **AMAZON RESEARCH AWARDS AWS AI** (\$55,000)

Project title : *Toward Understanding the Unintended Disparate Impacts of Private Machine Learning Systems*

Role : PI

01/23
- **NATIONAL SCIENCE FOUNDATION (CAREER, CISE - RI)** (\$515,403)

Project title : *CAREER : End-to-end Constrained Optimization Learning*

Role : PI

03/22-02/27
- **GOOGLE RESEARCH SCHOLAR AWARD** (\$60,000)

Project title : *On the Equity of Differentially Private Decision Processes*

Role : PI

06/22
- **NATIONAL SCIENCE FOUNDATION (CISE - SATC)** (\$500,000 - UVA portion : \$281,000)

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)

10/21-09/25
- **NATIONAL SCIENCE FOUNDATION (CISE - RI)** (\$500,000 - UVA portion : \$266,000)

Project title : *Collaborative Research : RI : Small : Deep Constrained Learning for Power Systems*

Role : PI (with P. Van Hentenryck (GEORGIA TECH) as collaborative PI)

10/20-09/24
- **CUSE PROGRAM** (\$21,000)

Project title : *On the Potential Perils of Fairness Algorithms in Decision Making and Learning Tasks*

Role : PI (with S. Soundarajan (SYR) as coPI)

07/21-06/23

#### TRAVEL AND SERVICE GRANTS

- *Support for Scholarship awards to attend the 2025 AAAI Privacy Preserving AI workshop*

Sponsorship from : Deloitte (\$3000); Google (\$5000); Apple (\$3000); OpenDP (\$500)

Role : PI

03/25
- **National Science Foundation** (\$50,000)

Project title : *Conference : Artificial Intelligence Summer School for Computer Science and Operations Research Education*

Role : coPI (with Lavanya Marla (UIUC) as PI)

05/24
- **Artificial Intelligence Journal** (\$4,000)

Project title : *Student Support AU-SCORE 2024*

Role : PI (with Lavanya Marla)

03/24
- **Artificial Intelligence Journal** (\$15,000)

Project title : *Student Support for AAMAS 2023*

Role : PI (with Ana L. C. Bazzan)

01/23
- **National Science Foundation** (\$25,000)

Project title : *Travel : Travel : Doctoral Mentoring Consortium at the 22nd International Conference on Autonomous Agents and Multiagent Systems*

Role : PI

05/23
- *Support for Scholarship awards to attend the 2024 AAAI Privacy Preserving AI workshop*

Sponsorship from : Google (\$5000); OpenDP (\$500)

Role : PI

03/24
- *Support for Scholarship awards to attend the 2023 AAAI Privacy Preserving AI workshop*

Sponsorship from : Google (\$2,500)

Role : PI

03/23

#### PENDING GRANTS SUBMISSIONS

- **DOE EARLY CAREER RESEARCH PROGRAM**, (\$875,000)

Project title : Foundational Methods for Constrained Generative Modeling in Scientific Computing

Role : PI

4/25
- **NATIONAL SCIENCE FOUNDATIONS**, (\$600,000)

Project title : Constrained Generation for Scientific and Engineering Applications

Role : PI

3/25

> <b>AMAZON RESEARCH AWARDS AWS AI</b> , (\$70,000) <b>Project title</b> : Massively Accelerating Large Language Models Inferences through Speculative Diffusion Decoding <b>Role</b> : PI	04/24
> <b>DARPA YFA</b> , (\$1,000,000) <b>Project title</b> : Constraint-Driven Generative AI for Grounded, Physics-informed, and Reliable Outputs <b>Role</b> : PI	2/25
> <b>NATIONAL SCIENCE FOUNDATIONS</b> , (\$1,200,000) <b>Project title</b> : Privacy and Fairness : From Data Collection to Downstream Decisions <b>Role</b> : PI (with Juba Ziani (Georgia Tech) as coPI)	08/24
> <b>CISCO</b> , (\$100,000) <b>Project title</b> : Disclosure Audits for LLM-powered Agentic Systems <b>Role</b> : co-PI (with David Evans as PI)	10/24
> <b>4VA GRANTS</b> , (\$30,000) <b>Project title</b> : Towards Fair and Interpretable LLM-based Decision Systems <b>Role</b> : PI (with Ziwei Zhu as coPI)	01/25
> <b>4VA GRANTS</b> , (\$30,000) <b>Project title</b> : Dynamic LLM Benchmarks for Multimodal Social Intelligence <b>Role</b> : PI (with Jindong Wang as coPI)	01/25

(Several other grants are in preparation, including three NSF and one DOE proposals. In all proposals included here I play the primary role. I am also part of several other proposals being submitted where I play a secondary role (as co-PI or senior personnel) and are not included in this list.)

## Tutorials, Selected Invited Talks and Media interviews

> <b>Invited talk</b> : Generative AI for Science. <a href="#">TED-X Chantilly High School</a>	May, 2025
> <b>Google talk</b> : Conversational audits for Privacy Exploits in LLM Agents. <a href="#">Google Research</a>	May, 2025
> <b>Panelist</b> : Combining AI and ORMS for better trustworthy Decision Making. <a href="#">AAAI 2025 Bridge Program</a>	Mar 2025
> <b>Invited participant and group lead</b> : On the Safety of Foundations Models for Autonomous BioLabs. <a href="#">DOE Workshop on Envisioning Frontiers in AI and Computing for Biological Research</a>	Feb 2025
> <b>Keynote talk</b> : Privacy and Fairness issues in Large Language Models. <a href="#">S-HPC Workshop, at Supercomputing 24</a>	Nov 2024
> <b>Invited talk</b> : Unfairness in Constrained Machine Learning. <a href="#">Ohio State University, Department of Computer Science</a>	Nov 2024
> <b>Invited talk</b> : Constraining diffusion models for scientific applications. <a href="#">UVA LLM Workshop</a>	Oct 2024
> <b>Invited talk</b> : Privacy and Fairness in Resource Allocations. <a href="#">2024 Federal Committee on Statistical Methodology (FCSM) Research and Policy Conference</a>	Oct 2024
> <b>Invited talk</b> : Constrained Diffusion for Science and Engineering. <a href="#">Oklahoma State University, School of Industrial Engineering and Management</a>	Oct 2024
> <b>Invited talk</b> : Constrained Diffusion for Science and Engineering. <a href="#">University of Virginia, Department of Systems and Information Engineering</a>	Sep 2024
> <b>Podcast invited speaker</b> : NSI Cyber and Tech Center : "Unleashing Innovation : Navigating Game Changing Technologies" – episode on open source large language model. <a href="#">National Security Institute at George Mason University's Antonin Scalia Law School</a>	Jul 2024
> <b>Invited participant and group lead</b> : US-UK Scientific Forum on Science in the Age of AI. <a href="#">National Academy of Sciences</a>	Jun 2024
> <b>Panelist</b> : AI and OR summer school. <a href="#">AI-SCORE</a>	May 2024
> <b>Invited talk</b> : Fairness in ML : The curious case of computational shortcuts and hardware choices. <a href="#">BuzzRobot</a>	May, 2024

- > **Invited talk** : The Principle of Data Minimization in Machine Learning. Apr, 2024  
[Google Research Seminars](#)
- > **Media cover** : Building fairness into AI is crucial – and hard to get right. Mar 2024  
[The Conversation](#) , [CHED/QR Radio](#)
- > **Invited talk** : Responsible AI in Decision Making Processes. Feb 2024  
[Amazon Research Seminars](#)
- > **Keynote talk** : Privacy and Fairness in Societal Systems. Nov 2023  
[Workshop on the Tradeoffs in Ethical AI](#), INRIA, France
- > **Invited talk** : Responsible AI : Privacy and Fairness in Decision Making and Learning Tasks. Nov 2023  
[TOC FOR FAIRNESS](#), [Simons Collaboration on the Theory of Algorithmic Fairness](#)
- > **Panelist** : Navigating the Frontiers of Artificial Intelligence. Oct 2023  
[The Center for Politics](#), University of Virginia
- > **Invited talk** : Optimization and Learning for Science and Engineering. Oct 2023  
[Conference on Complex Systems 2023](#)
- > **Invited talk** : ML for Optimization and Optimization for ML. Sep 2023  
[AI/ML Seminar Series](#), University of Virginia
- > **Keynote talk** : The Unintended Societal Effects of Privacy in Decision and Learning Tasks. Aug 2023  
[IJCAI-2023](#), [International Workshop on Mining Actionable Insights from Social Networks](#)
- > **Invited talk** : End-to-end Constrained Optimization Learning. Jul 2023  
[AC Summer School : Machine Learning for Constraint Programming](#)
- > **Invited talk** : Differential Privacy for Power Systems. Jun 2023  
[DTU PES Summer School](#)
- > **Invited talk** : Optimization Proxies and Differentiable Optimization for Decision Making. Jun 2023  
[MARS Seminar](#), Pacific Northwest National Laboratory (PNNL)
- > **Invited talk** : Constrained-aware Machine Learning in Energy Systems. Jun 2023  
[IEEE Power and Energy Society webinar series](#)
- > **Invited talk** : Responsible AI : Privacy and Fairness in Decision and Learning Tasks. Apr 2023  
[UC San Diego](#)
- > **Panelist** : ChatGPT : Charms and Challenges. Apr 2023  
[Syracuse University](#)
- > **Invited talk** : Responsible AI : Privacy and Fairness in Decision and Learning Tasks. Mar 2023  
[University of Virginia](#)
- > **Invited talk** : Constrained-Aware Machine Learning. Feb 2023  
[Washington University in St. Louis](#)
- > **Invited talk** : Differential Privacy for Power Systems. Jan 2023  
[Los Alamos National Lab's 5th Grid Science Winter School and Conference](#)
- > **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 \(AIIA 2022\)](#)
- > **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.
- >
**Invited talk** : *Privacy Preserving Artificial Intelligence*
Feb 2019

Syracuse University.
- >
>
**Invited talk** : *Privacy Preserving Artificial Intelligence*
Feb 2019

Drexel University.
- >
>
**Invited talk** : *Privacy Preserving Artificial Intelligence*
Feb 2019

University of Arkansas.
- >
>
**Invited talk** : *Privacy Preserving Artificial Intelligence*
Mar 2019

Colorado State University.
- >
>
**Invited talk** : *Privacy Preserving Artificial Intelligence*
Mar 2019

University of Connecticut.
- >
**Tutorial** : *Tutorial on Constrained Multi-agent Optimization.*
Feb 2018

[AAAI Conference on Artificial Intelligence \(AAAI 2018\)](#)
- >
**Plenary Keynote talk** : *Distributed Constraint Optimization for Smart Energy Networks.*
Nov 2017

Italian Conference on Artificial Intelligence (AI\*IA 2017)
- >
**Invited talk** : *Distributed Constraint Optimization*
Apr 2016

Delft University (TU Delft).
- >
>
**Invited talk** : *Distributed Constraint Optimization*
Apr 2016

University of Udine.
- >
>
**Invited talk** : *Distributed Constraint Optimization*
Mar 2016

New Mexico State University.
- >
**Invited talk** : *Large Neighboring Search for Distributed Constrained Optimization.*
Mar 2016

Ben-Gurion University of the Negev

## Internal Service

### SCHOOL/DEPARTMENT SERVICE (AT UVA)

- 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) 2022  
*with Roie Zivan*

### WORKSHOP CHAIR

- Sixth AAAI Workshop on Privacy Preserving Artificial Intelligence (PPAI), at AAAI 2025  
*with Juba Ziani, Wanrong Zhang, and Jeremy Seeman*
- Algorithmic Fairness through the lens of Metrics and Evaluation (AFME), at NeurIPS 2024  
*with Awa Dieng, Miriam Rateike, and Golnoosh Farnadi*
- AAAI Workshop on Learnable Optimization (LEARNOPT), at AAAI 2024  
*with Elias B. Khalil, Pascal Van Hentenryck, Jan Drgona, Draguna Vrabie, and Priya Donti*
- Fifth AAAI Workshop on Privacy Preserving Artificial Intelligence (PPAI), at AAAI 2024  
*with Juba Ziani, Christine Task, and Niloofar Mireshghallah*
- Algorithmic Fairness through the lens of Time (AFT), at NeurIPS 2023  
*with Awa Dieng, Miriam Rateike, and Golnoosh Farnadi*
- Workshop on Optimization and Learning in Multi-Agent Systems, at AAMAS 2023  
*with Hau Chan, Jiaoyang Li, Filippo Bistaffa, and James Kotary*
- Fourth AAAI Workshop on Privacy Preserving Artificial Intelligence (PPAI), at AAAI 2023  
*with Catuscia Palamidessi, and Pascal Van Hentenryck*
- Algorithmic Fairness through the lens of Causality and Privacy (AFCP), at NeurIPS 2022  
*with Awa Dieng, Miriam Rateike, and Golnoosh Farnadi*
- Workshop on Optimization and Learning in Multi-Agent Systems, at AAMAS 2022  
*with Hau Chan and Jiaoyang Li*
- Third AAAI Workshop on Privacy Preserving Artificial Intelligence (PPAI), at AAAI 2022  
*with Aleksandra Korolova and Pascal Van Hentenryck*
- AAAI Workshop on Machine Learning for Operational Research (ML4OR), at AAAI 2022  
*with Emma Frejinger, Elias Khalil, and Pashootan Vaezipoor*
- Second AAAI Workshop on Privacy Preserving Artificial Intelligence (PPAI), at AAAI 2021  
*with Pascal Van Hentenryck and Richard W. Evans*
- Workshop on Optimization and Learning in Multi-Agent Systems (OptLearnMAS), at AAMAS 2021  
*with Amulya Yadev, Gauthier Picard, and Bryan Wilder*
- First AAAI Workshop on Privacy Preserving Artificial Intelligence (PPAI), at AAAI 2020  
*with Pascal Van Hentenryck and Rachel Cummings*
- Workshop on Optimization and Learning in Multi-Agent Systems (OptLearnMAS), at AAMAS 2020  
*with Bryan Wilder and Long Tran-Thanh*
- Workshop on Optimization in Multi-Agent Systems (OptMAS), at AAMAS 2019  
*with Archie Chapman and Long Tran-Thanh*
- Workshop on Optimization in Multi-Agent Systems (OptMAS), at FAIM18 2018  
*with Archie Chapman, Long Tran-Thanh, and Roie Zivan*

#### CONFERENCE ORGANIZING COMMITTEE

- › **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
- › **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) 2025
- › ACM Conference on Fairness, Accountability, and Transparency (FACCT) 2023 – 2025
- › International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS) 2024 – 2025
- › International Joint Conference on Artificial Intelligence (IJCAI) 2024 – 2025
- › European Conference on Artificial Intelligence (ECAI) 2023 – 2024

#### AREA CHAIR

- › Neural Information Processing Systems (NeurIPS) 2025
- › International Conference on Machine Learning (ICML) 2025
- › AAAI Conference on Artificial Intelligence (AAAI) 2020 – 2024
- › International Joint Conference on Artificial Intelligence (IJCAI) 2021 – 2023
- › International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS) 2023
- › 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) 2025
- › Bridge Program on AI and OR, at AAAI 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**

› 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, TIP Panel	2025
› The Royal Society, Dorothy Hodgkin Fellowships	2025
› NSF, CISE Panel (×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