

# Ferdinando FIORETTO

## Assistant Professor

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

## PROFESSIONAL EXPERIENCE

<b>Current</b>	<b>University of Virginia</b> , <i>Computer Science</i> , Charlottesville, VA
<b>Aug. 2023</b>	ASSISTANT PROFESSOR
<b>Jul. 2023</b>	<b>Syracuse University</b> , <i>Electrical Engineering &amp; Computer Science</i> , Syracuse, NY
<b>Jan. 2020</b>	ASSISTANT PROFESSOR
<b>Dec. 2019</b>	<b>Georgia Institute of Technology</b> , <i>School of Industrial and System Engineering</i> , Atlanta, GA
<b>Sep. 2018</b>	POST-DOCTORAL RESEARCHER
<b>Dec. 2018</b>	<b>University of Michigan</b> , <i>Industrial and Operations Engineering</i> , Ann Arbor, MI
<b>Sep. 2016</b>	RESEARCH FELLOW

## EDUCATION AND TRAINING

<b>Aug. 2016</b>	<b>University of Udine</b> <sup>1</sup> , <i>Computer Science</i> , Udine, IT PH.D. IN COMPUTER SCIENCE (WITH MS IN 2012)
<b>Nov. 2009</b>	<b>University of Parma</b> , <i>Computer Science &amp; Mathematics</i> , Parma, IT BS. IN COMPUTER SCIENCE

## SELECTED HONORS AND AWARDS

2022	<b>Caspar Bowden PET Award</b> , Privacy Enhancing Technologies (PETs). <a href="#">Link</a>
2022	<b>NSF CAREER Award</b> , National Science Foundation. <a href="#">Press</a>
2022	<b>Google Research Scholar Award</b> , Google (Privacy). <a href="#">Link</a>
2022	<b>Amazon Research Award</b> , Amazon – AWS AI (Responsible AI). <a href="#">Press</a>
2022	<b>Best Paper Award</b> , IEEE Transaction of Power Systems. <a href="#">Link</a>
2022	<b>Early Career Spotlight</b> , International Joint Conference on Artificial Intelligence (IJCAI). <a href="#">Link</a>
2021	<b>Early Career Researcher Award</b> , Association for Constraint Programming. <a href="#">Link</a>
2021	<b>Mario Gerla Young Investigator Award</b> , ISSNAF. <a href="#">Press</a>
2021	<b>Best Paper Award</b> , IEEE Transaction of Power Systems. <a href="#">Link</a>
2017	<b>Best AI Dissertation Award</b> , AI*IA. <a href="#">Press</a>

## OTHER AWARDS


2025	<b>Outstanding Research Faculty Award</b> , University of Virginia. <a href="#">Link</a>
2025	<b>Fellowship in AI Research</b> , LaCross Institute for Ethical AI in Business. <a href="#">Link</a>
2023	<b>ICLR Notable Reviewer Award</b> , International conference on Learning Representations (ICLR). <a href="#">Link</a>
2023	<b>NMSU CS Star Award</b> , New Mexico State University (NMSU). <a href="#">Link</a>
2022	<b>Lightning Talk (Spotlight)</b> , Conference on Neural Information Processing Systems (NeurIPS). <a href="#">Link</a>
2022	<b>Top Reviewer Award</b> , Conference on Neural Information Processing Systems (NeurIPS). <a href="#">Link</a>
2021	<b>Outstanding Reviewer Award</b> , Conference on Neural Information Processing Systems (NeurIPS). <a href="#">Link</a>
2020	<b>Differentially Private Temporal Map Challenge Award</b> , \$5000, NIST. <a href="#">Press</a>
2020	<b>Young Investigator Award Nomination</b> , ISSNAF. <a href="#">Press</a>
2019	<b>Invited journal paper</b> , International Joint Conference on Artificial Intelligence (IJCAI). <a href="#">Link</a>
2017	<b>Most Visionary Workshop Paper Award</b> , International Conference of Autonomous Agents and Multiagent Systems (AAMAS). <a href="#">Link</a>
2016	<b>Top Graduate Student Honor's Cord</b> , NMSU.
2014	<b>Outstanding Research Assistant Award</b> , Computer Science, NMSU. <a href="#">Press</a>
2014	<b>Outstanding Teaching Assistant Nomination</b> , NMSU.
2013	<b>Best Student Paper Award</b> , Computational Methods in System Biology (CMSB). <a href="#">Link</a>


1. Dual degree with New Mexico State University

- 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 > 14 Journals articles > 2 Book chapters > 3 Editorial articles  
> 31 Workshop papers > 20+ Preprints

Total citations : 2730 H-index : 27  Google Scholar

Names of students I supervise(d) are prepended with symbol .

### RIGOROUSLY PEER REVIEWED CONFERENCES

- c77.  Vincenzo Di Vito, Mostafa Mohammadian, Kyri Baker, **Ferdinando Fioretto**. “Learning To Solve Differential Equation Constrained Optimization Problems”. *Proceedings of the International Conference on Learning Representations (ICLR)*, 2025. Acceptance Rate : 32.02%.
- c76.  Jacob K. Christopher,  Michael Cardei, Brian R Bartoldson, Bhavya Kailkhura, **Ferdinando Fioretto**. “Speculative Diffusion Decoding : Accelerating Language Generation through Diffusion”. *Proceedings of the Annual Conference of the Nations of the Americas Chapter of the Association for Computational Linguistics (NAACL)*, 2025. Acceptance Rate : unknown.
- c75. **Ferdinando Fioretto**, Diptangshu Sen, Juba Ziani. “Differentially Private Data Release on Graphs : Inefficiencies and Unfairness”. *Proceedings of the International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2025. Acceptance Rate : 31.3%.
- c74.  Joonhyuk Ko, Juba Ziani,  Saswat Das, Matt Williams, **Ferdinando Fioretto**. “Fairness Issues and Mitigations in (Differentially Private) Socio-demographic Data Processes”. *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*, 2025. Acceptance Rate : 19%.  
 **[Oral]** (5% of the accepted papers.).
- c73. FairDP : Certified Fairness with Differential Privacy. “Khang Tran, **Ferdinando Fioretto**, Issa Khalil, My T. Thai, Nha-thai Phan”. In *IEEE Secure and Trustworthy Machine Learning Conference (SaTML 2025)*, 2025. Acceptance Rate : 29.4%.
- c72.  Jacob K. Christopher, Stephen Baek, **Ferdinando Fioretto**. “Constrained Synthesis with Projected Diffusion Models”. *Proceedings of the Conference on Neural Information Processing Systems (NeurIPS)*, 2024. Acceptance Rate : 25.8%.
- c71.  Jacob K. Christopher, Stephen Baek, **Ferdinando Fioretto**. “Physics-Aware Generative Diffusion Models for Microstructure Material Design”. *AI 4 Material science, at NeurIPS*, 2024. Acceptance Rate : 39%.  
 **[Oral]** (6% of the accepted papers.).
- c70.  Jacob K. Christopher,  Michael Cardei, Brian R Bartoldson, Bhavya Kailkhura, **Ferdinando Fioretto**. “Speculative Diffusion Decoding : Accelerating Language Generation through Diffusion”. *Efficient Natural Language and Speech Processing (ENLSP)*, at *NeurIPS*, 2024. Acceptance Rate : 29%.
- c69. Ethan King,  James Kotary, **Ferdinando Fioretto**, Jan Drgona. “Metric Learning to Accelerate Convergence of Operator Splitting Methods for Differentiable Parametric Programming”. *63rd IEEE Conference on Decision and Control (CDC)*, 2024. Acceptance Rate : 56.7%.
- c68.  James Kotary,  Vincenzo Di Vito,  Jacob K. Christopher, Pascal Van Hentenryck, **Ferdinando Fioretto**. “Predict-Then-Optimize by Proxy : Learning Joint Models of Prediction and Optimization”. *Proceedings of the European Conference of Artificial Intelligence (ECAI)*, 2024. Acceptance Rate : 23.3%.
- c67.  Sree Harsha Nelaturu,  Nishaanth Kanna Ravichandran,  Cuong Tran, Sara Hooker, and **Ferdinando Fioretto**. “On The Fairness Impacts of Hardware Selection in Machine Learning”. *Proceedings of the International Conference on Machine Learning (ICML)*, 2024. Acceptance Rate : 27.5%.
- c66.  Saswat Das, Marco Romanelli, **Ferdinando Fioretto**. “Disparate Impact on Group Accuracy of Linearization for Private Inference”. *Proceedings of the International Conference on Machine Learning (ICML)*, 2024. Acceptance Rate : 27.5%.
- c65.  My H. Dinh,  James Kotary, **Ferdinando Fioretto**. “End-to-End Learning for Fair Multiobjective Optimization Under Uncertainty”. *Proceedings of the Conference of Uncertainty on Artificial Intelligence (UAI)*, 2024. Acceptance Rate : 27.0%.

- c64. 🧑🏫 Cuong Tran, Keyu Zhu, Pascal Van Hentenryck, **Ferdinando Fioretto**. “Fairness Increases Adversarial Vulnerability”. *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, 2024. Acceptance Rate : 13.9%.
- c63. 🧑🏫 My H. Dinh, 🧑🏫 James Kotary, **Ferdinando Fioretto**. “Learning Fair Ranking Policies via Differentiable Optimization of Ordered Weighted Averages”. *Proceedings of the ACM Conference on Fairness, Accountability, and Transparency (ACM FAccT)*, 2024. Acceptance Rate : 24.3%.
- c62. **Ferdinando Fioretto**, Keyu Zhu, Pascal Van Hentenryck, 🧑🏫 Saswat Das, Christine Task. “Finding  $\epsilon$  and  $\delta$  of Traditional Disclosure Control Systems”. *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*, 2024. Acceptance Rate : 23.75%.
- c61. 🧑🏫 My H. Dinh, 🧑🏫 James Kotary, **Ferdinando Fioretto**. “Differentiable Approximations of Fair OWA Optimization”. *Workshop on Differentiable Almost Everything*, at ICML, 2024. Acceptance Rate : 27.0%.
- c60. **Ferdinando Fioretto**. “The Data Minimization Principle in Machine Learning”. *Workshop on Generative AI and Law*, at ICML, 2024. Acceptance Rate : 30.0%.
- c60. 🧑🏫 Cuong Tran and **Ferdinando Fioretto**. “Data Minimization at Inference Time”. *Proceedings of the Conference on Neural Information Processing Systems (NeurIPS)*, 2023. Acceptance Rate : 23.0%.
- c59. Vladimir Dvorkin and **Ferdinando Fioretto**. “Price-Aware Deep Learning for Electricity Markets”. *Tackling Climate Change with Machine Learning*, at NeurIPS, 2023. Acceptance Rate : 35.0%.
- c58. 🧑🏫 James Kotary, 🧑🏫 My H. Dinh, **Ferdinando Fioretto**. “Folded Optimization for End-to-End Model-Based Learning”. *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, 2023. Acceptance Rate : 15.0%.
- c57. 🧑🏫 James Kotary, 🧑🏫 Vincenzo Di Vito, **Ferdinando Fioretto**, Pascal Van Hentenryck. “SF-PATE : Scalable, Fair, and Private Aggregation of Teacher Ensembles”. *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, 2023. Acceptance Rate : 15.0%.
- c56. 🧑🏫 James Kotary, 🧑🏫 Vincenzo Di Vito, **Ferdinando Fioretto**. “End-to-End Combinatorial Ensemble Learning”. *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, 2023. Acceptance Rate : 15.0%.
- c55. 🧑🏫 Cuong Tran, **Ferdinando Fioretto**. “On the Fairness Impacts of Private Ensembles Models”. *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, 2023. Acceptance Rate : 15.0%.
- c54. Terrence W.K. Mak, **Ferdinando Fioretto**, Pascal Van Hentenryck. “Load Encoding for Learning AC-OPF”. *Proceedings of the IEEE PES General Meeting (PES)*, 2023. Acceptance Rate : N/A.
- c53. 🧑🏫 My H. Dinh, **Ferdinando Fioretto**, Mostafa Mohammadian, and Kyri Baker. “An Analysis of the Reliability of AC Optimal Power Flow Deep Learning Proxies”. *IEEE PES Innovative Smart Grid Technologies*, 2023. Acceptance Rate : unknown.
- c52. 🧑🏫 James Kotary, 🧑🏫 Vincenzo Di Vito, **Ferdinando Fioretto**. “End-to-End Optimization and Learning for Multiagent Ensembles”. *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, 2023. Acceptance Rate : 40.0%.
- c51. 🧑🏫 Cuong Tran, **Ferdinando Fioretto**, Jung-Eun Kim, 🧑🏫 Rakshit Naidu. “Pruning has a disparate impact on model accuracy”. *Proceedings of the Conference on Neural Information Processing Systems (NeurIPS)*, 2022. Acceptance Rate : 25.6%.
- 🏆 [Spotlight] (~3% of all paper submissions (10,411, in 2022)).
- c50. Keyu Zhu, **Ferdinando Fioretto**, Pascal Van Hentenryck. “Post-processing of Differentially Private Data : A Fairness Perspective”. *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, 2022. Acceptance Rate : 15.0%.
- c49. **Ferdinando Fioretto**, 🧑🏫 Cuong Tran, Keyu Zhu, Pascal Van Hentenryck. “Differential Privacy and Fairness in Decisions and Learning Tasks : A Survey”. *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, 2022. Acceptance Rate : 18.0% (survey track).
- c48. **Ferdinando Fioretto**. “Integrating Machine Learning and Optimization to Boost Decision Making”. *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, 2022. Acceptance Rate : Invited.
- 🏆 [Early Career Spotlight] (Accompanying paper.).
- c47. 🧑🏫 James Kotary, **Ferdinando Fioretto**, Pascal Van Hentenryck, Ziwei Zhu. “End-to-end Learning for Fair Ranking Systems”. *Proceedings of the ACM Web Conferences (WWW)*, 2022. Acceptance Rate : 17.0%.
- c46. 🧑🏫 James Kotary, **Ferdinando Fioretto**, Pascal Van Hentenryck. “Fast Approximations for Job Shop Scheduling : A Lagrangian Dual Deep Learning Method”. *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*, 2022. Acceptance Rate : 15.0%.
- c45. Lesia Mitridati, Emma Romei, Gabriela Hug, **Ferdinando Fioretto**. “Differentially-Private Heat and Electricity Markets Coordination”. *Proceedings of the International Conference on Probabilistic Methods Applied to Power Systems (PMAPS)*, 2022. Acceptance Rate : N/A.

- c44. Mostafa Mohammadian, Kyri Baker, 🇺🇸My H. Dinh, **Ferdinando Fioretto**. “*Learning Solutions for Intertemporal Power Systems Optimization with Recurrent Neural Networks*”. *Proceedings of the International Conference on Probabilistic Methods Applied to Power Systems (PMAPS)*, 2022. Acceptance Rate : N/A.
- c43. 🇺🇸Cuong Tran, 🇺🇸My H. Dinh, **Ferdinando Fioretto**. “*Differentially Private Deep Learning under the Fairness Lens*”. *Proceedings of the Conference on Neural Information Processing Systems (NeurIPS)*, 2021. Acceptance Rate : 26.0%.
- c42. 🇺🇸James Kotary, **Ferdinando Fioretto**, Pascal Van Hentenryck. “*Learning Hard Optimization Problems: A Data Generation Perspective*”. *Proceedings of the Conference on Neural Information Processing Systems (NeurIPS)*, 2021. Acceptance Rate : 26.0%.
- c41. 🇺🇸Cuong Tran, **Ferdinando Fioretto**, Pascal Van Hentenryck, 🇺🇸Zhiyan Yao. “*Decision Making with Differential Privacy under the Fairness Lens*”. *Proceedings of the 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.).
- c40. 🇺🇸James Kotary, **Ferdinando Fioretto**, Pascal Van Hentenryck, Bryan Wilder. “*End-to-End Constrained Optimization Learning : A Survey*”. *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, 4475–4482, 2021. Acceptance Rate : 30.1%.
- c39. Keyu Zhu, Pascal Van Hentenryck, **Ferdinando Fioretto**. “*Bias and Variance of Post-processing in Differential Privacy*”. *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*, 11177–11184, 2021. Acceptance Rate : 21.0%.
- c38. 🇺🇸Cuong Tran, **Ferdinando Fioretto**, Pascal Van Hentenryck. “*Differentially Private and Fair Deep Learning : A Lagrangian Dual Approach*”. *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*, 9932–9939, 2021. Acceptance Rate : 21.0%.
- c37. 🇺🇸Anudit Nagar, 🇺🇸Cuong Tran, **Ferdinando Fioretto**. “*A Privacy-Preserving and Accountable Multi-agent Learning Framework*”. *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, 1605–1606, 2021. Acceptance Rate : 40.0%.
- c36. **Ferdinando Fioretto**. “*Constrained-based Differential Privacy*”. *Proceedings of the International Conference on Principles and Practice of Constraint Programming (CP)*, 1868–8969, 2021. Acceptance Rate : Invited.
- c35. Vladimir Dvorkin, **Ferdinando Fioretto**, Pascal Van Hentenryck, Jalal Kazempour, Pierre Pinson. “*Differentially Private Optimal Power Flow for Distribution Grids*”. *IEEE PowerTech*, 2021. Acceptance Rate : N/A.
- c34. **Ferdinando Fioretto**, Pascal Van Hentenryck, Terrence W.K. Mak, 🇺🇸Cuong Tran, Federico Baldo, Michele Lombardi. “*A Lagrangian Dual Framework for Deep Neural Networks with Constraints*”. *Proceedings of the European Conference on Machine Learning (ECML)*, 18–135, 2020. Acceptance Rate : 19.0%.
- c33. **Ferdinando Fioretto**, Lesia Mitridati, Pascal Van Hentenryck. “*Differential Privacy Stackelberg Games*”. *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, 3480–3486, 2020. Acceptance Rate : 12.6%.
- c32. **Ferdinando Fioretto**, Pascal Van Hentenryck. “*OptStream : Releasing Time Series Privately*”. *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, 5135–5139, 2020. Acceptance Rate : [Invited to the IJCAI journal track].
- 🏆 (selected papers only) .
- c31. Terrence W.K. Mak, **Ferdinando Fioretto**, Pascal Van Hentenryck. “*Privacy-Preserving Obfuscation for Distributed Power Systems*”. *Proceedings of the Power Systems Computation Conference (PSCC)*, 2020. Acceptance Rate : 20.5%.
- c30. **Ferdinando Fioretto**, Terrence W.K. Mak, Pascal Van Hentenryck. “*Predicting AC Optimal Power Flows : Combining Deep Learning and Lagrangian Dual Methods*”. *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*, pages 630–637, 2020. Acceptance Rate : 20.6%.
- c29. Atena Tabakhi, William Yeoh, **Ferdinando Fioretto**. “*The Smart Appliance Scheduling Problem : A Bayesian Optimization Approach*”. *Proceedings of the International Conference on Principles and Practice of Multi-Agent Systems (PRIMA)*, 100–115, 2020. Acceptance Rate : 38.0%.
- c28. **Ferdinando Fioretto**, Pascal Van Hentenryck. “*Privacy-Preserving Federated Data Sharing*”. *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 638–646, 2019. Acceptance Rate : 24.0%.
- c27. **Ferdinando Fioretto**, Terrence W.K. Mak, Pascal Van Hentenryck. “*Privacy-Preserving Obfuscation of Critical Infrastructure Networks*”. *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, pages 1086–1092, 2019. Acceptance Rate : 17.9%.



- c26. **Ferdinando Fioretto**, Pascal Van Hentenryck. “*Differential Privacy of Hierarchical Census Data : An Optimization Approach*”. *Proceedings of the 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.).
- c25. **Ferdinando Fioretto**, Hong Xu, Sven Koenig, TK Satish Kumar. “*Solving Multiagent Constraint Optimization Problems on the Constraint Composite Graph*”. *Proceedings of the International Conference on Principles and Practice of Multi-Agent Systems (PRIMA)*, pages 106–122, 2018. Acceptance Rate : 26.2%.
- c24. **Ferdinando Fioretto**, Chansoo Lee, Pascal Van Hentenryck. “*Constrained-based Differential Privacy for Private Mobility*”. *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 1405–1413, 2018. Acceptance Rate : 25.2%.
- c23. Khoi Hoang, **Ferdinando Fioretto**, William Yeoh, Enrico Pontelli, Roie Zivan. “*A Large Neighboring Search Schema for Multi-Agent Optimization*”. *Proceedings of the International Conference on Principles and Practice of Constraint Programming (CP)*, pages 688–706, 2018. Acceptance Rate : 33.0%.
- c22. **Ferdinando Fioretto**, Pascal Van Hentenryck. “*Constrained-based Differential Privacy : Releasing Optimal Power Flow Benchmarks Privately*”. *Proceedings of the International Conference on the Integration of Constraint Programming, Artificial Intelligence, and Operations Research (CPAIOR)*, pages 215–231, 2018. Acceptance Rate : 48.0%.
- c21. **Ferdinando Fioretto**, Hong Xu, Sven Koenig, TK Satish Kumar. “*Constraint Composite Graph-Based Lifted Message Passing for Distributed Constraint Optimization Problems*”. *International Symposium on Artificial Intelligence and Mathematics (ISAIR)*, 2018. Acceptance Rate : N/A.
- c20. **Ferdinando Fioretto**, William Yeoh, Enrico Pontelli, Ye Ma, Satishkumar J. Ranade. “*A Distributed Constraint Optimization (DCOP) Approach to the Economic Dispatch with Demand Response*”. *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 999–1007, 2017. Acceptance Rate : 24.9%.
- c19. **Ferdinando Fioretto**, William Yeoh, Enrico Pontelli. “*A Multiagent System Approach to Scheduling Devices in Smart Homes*”. *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 981–989, 2017. Acceptance Rate : 24.9%.
- c18. Khoi Hoang, Ping Hou, **Ferdinando Fioretto**, Makoto Yokoo, William Yeoh, Roie Zivan. “*Infinite-Horizon Proactive Dynamic DCOPs*”. *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 212–220, 2017. Acceptance Rate : 24.9%.
- c17. Atena M. Tabakhi, Tiep Le, **Ferdinando Fioretto**, William Yeoh. “*Preference Elicitation for DCOPs*”. *Proceedings of the International Conference on Principles and Practice of Constraint Programming (CP)*, pages 278–296, 2017. Acceptance Rate : 43.0%.
- c16. Khoi Hoang, **Ferdinando Fioretto**, Ping Hou, Makoto Yokoo, William Yeoh, Roie Zivan. “*Proactive Dynamic Distributed Constraint Optimization Problems*”. *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 597–605, 2016. Acceptance Rate : 24.9%.
- c15. Tiep Le, **Ferdinando Fioretto**, William Yeoh, Enrico Pontelli, Tran Cao Son. “*ER-DCOPs : A Framework for Distributed Constraint Optimization Problems With Uncertainty*”. *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 606–614, 2016. Acceptance Rate : 24.9%.
- c14. **Ferdinando Fioretto**, William Yeoh, Enrico Pontelli. “*Multi-Variable Agent Decompositions for DCOPs*”. *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*, pages 2480–2486, 2016. Acceptance Rate : 25.7%.
- c13. **Ferdinando Fioretto**, William Yeoh, Enrico Pontelli. “*A Dynamic Programming-Based MCMC Framework for Solving DCOPs with GPUs*”. *Proceedings of the International Conference on Principles and Practice of Constraint Programming (CP)*, pages 813–831, 2016. Acceptance Rate : 35.0%.
- c12. **Ferdinando Fioretto**, Tiep Le, Enrico Pontelli, William Yeoh, Tran Cao Son. “*Exploiting GPUs in Solving (Distributed) Constraint Optimization Problems with Dynamic Programming*”. *Proceedings of the International Conference on Principles and Practice of Constraint Programming (CP)*, pages 121–139, 2015. Acceptance Rate : 48.7%.
- c11. **Ferdinando Fioretto**, Federico Campeotto, Agostino Dovier, Enrico Pontelli, William Yeoh. “*Large Neighborhood Search with Quality Guarantees for Distributed Constraint Optimization Problems*”. *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 1835–1836, 2015. Acceptance Rate : 46.0%.
- c10. **Ferdinando Fioretto**, William Yeoh, Enrico Pontelli. “*Multi-Variable Agents Decomposition for DCOPs to Exploit Multi-Level Parallelism*”. *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 1823–1824, 2015. Acceptance Rate : 46.0%.

- c9. **Ferdinando Fioretto**. “Exploiting the Structure of Distributed Constraint Optimization Problems”. *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 2007–2008, 2015. Acceptance Rate : N/A.
- c8. **Ferdinando Fioretto**. “Exploiting the Structure of Distributed Constraint Optimization Problems”. *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*, pages 4233–4234, 2015. Acceptance Rate : N/A.
- c7. ( $\alpha$ - $\beta$ ) Federico Campeotto, Agostino Dovier, **Ferdinando Fioretto**, Enrico Pontelli. “A GPU Implementation of Large Neighborhood Search for Solving Constraint Optimization Problems”. *Proceedings of the European Conference of Artificial Intelligence (ECAI)*, pages 189–194, 2014. Acceptance Rate : 28.0%.
- c6. **Ferdinando Fioretto**, Tiep Le, William Yeoh, Enrico Pontelli, Tran Cao Son. “Improving DPOP with Branch Consistency for Solving Distributed Constraint Optimization Problems”. *Proceedings of the International Conference on Principles and Practice of Constraint Programming (CP)*, pages 307–323, 2014. Acceptance Rate : 49.8%.
- c5. ( $\alpha$ - $\beta$ ) Federico Campeotto, Alessandro Dal Palù, Agostino Dovier, **Ferdinando Fioretto**, Enrico Pontelli. “Exploring the Use of GPUs in Constraint Solving”. *Proceedings of the Practical Aspects of Declarative Languages (PADL)*, pages 152–167, 2014. Acceptance Rate : 55.0%.
- c4. **Ferdinando Fioretto**, Federico Campeotto, Luca Da Rin Fioretto, William Yeoh, Enrico Pontelli. “GD-Gibbs : A GPU-based Sampling Algorithm for Solving Distributed Constraint Optimization Problems”. *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 1339–1340, 2014. Acceptance Rate : 46.0%.
- c3. **Ferdinando Fioretto**, Enrico Pontelli. “Constraint Programming in Community-based Gene Regulatory Network Inference”. *Proceedings of the Computational Methods in System Biology (CMSB)*, pages 135–149, 2013. Acceptance Rate : 55.0%.
- 🏆 **[Best Student Paper Award]** .
- c2. ( $\alpha$ - $\beta$ ) Federico Campeotto, Alessandro Dal Palù, Agostino Dovier, **Ferdinando Fioretto**, Enrico Pontelli. “A Filtering Technique for Fragment Assembly-based Proteins Loop Modeling with Constraints”. *Proceedings of the International Conference on Principles and Practice of Constraint Programming (CP)*, pages 850–866, 2012. Acceptance Rate : 36.0%.
- c1. Michael R. Best, **Ferdinando Fioretto**, Alessandro Dal Palù, Enrico Pontelli, Tran Son, TuShun R. Powers, Elba E. Serrano. “The role of secondary and tertiary structure prediction in determining the function of novel genes found in *Xenopus Leavis*”. *Neuroscience*, 2011, (518.20/ZZ45). Acceptance Rate : N/A.

## JOURNALS

- j14. Jayanta Mandi, 🌟 James Kotary, Senne Berden, Maxime Mulamba, Victor Bucarey, Tias Guns, **Ferdinando Fioretto**. “Decision-Focused Learning : Foundations, State of the Art, Benchmark and Future Opportunities”. *Journal of Artificial Intelligence Research (JAIR)*, (81), pages 1623–1701, 2024.
- j13. Mostafa Mohammadian, Kyri Baker, **Ferdinando Fioretto**. “Gradient-Enhanced Physics-Informed Neural Networks for Power Systems Operational Support”. *Electric Power Systems Research* (223), pages 109551, 2023.
- j12. Khoi D. Hoang, **Ferdinando Fioretto**, Ping Hou, William Yeoh, Makoto Yokoo, Roie Zivan. “Proactive Dynamic Distributed Constraint Optimization Problems”. *Journal of Artificial Intelligence Research (JAIR)*, (73), pages 179–225, 2022.
- j11. **Ferdinando Fioretto**, Pascal Van Hentenryck, Keyu Zhu. “Differential Privacy of Hierarchical Census Data : An Optimization Approach”. *Artificial Intelligence Journal (AIJ)*, (296), pages 103475, 2021.
- j10. Vladimir Dvorkin, **Ferdinando Fioretto**, Pascal Van Hentenryck, Pierre Pinson, Jalal Kazempour. “Differentially Private Optimal Power Flow for Distribution Grids”. *IEEE Transactions on Power Systems*, 36(3), pages 2186–2196, 2021.
- 🏆 **[Best IEEE TPS paper award]** (Given to 8 out of all TPS papers published in 2019–2021.).
- j9. **Ferdinando Fioretto**, Terrence W.K. Mak, Pascal Van Hentenryck. “Differential Privacy for Power Grid Obfuscation”. *IEEE Transactions on Smart Grids*, 11(2), pages 1356–1366, 2020.
- j8. Terrence W.K. Mak, **Ferdinando Fioretto**, 🌟 Lyndon Shi, Pascal Van Hentenryck. “Privacy-Preserving Power System Obfuscation : A Bilevel Optimization Approach”. *IEEE Transactions on Power Systems*, 35(2), pages 1627–1637, 2020.
- 🏆 **[Best IEEE TPS paper award]** Given to 7 out of all TPS papers published in 2018–2020)..
- j7. **Ferdinando Fioretto**, Pascal Van Hentenryck. “OptStream : Releasing Time Series Privately”. *Journal of Artificial Intelligence Research (JAIR)*, (65) pages 423–456, 2019.
- 🏆 **[Invited to IJCAI 2020 journal track]** .

- j6. **Ferdinando Fioretto**, Agostino Dovier, Enrico Pontelli. “*Distributed Multi-Agent Optimization for Smart Grids and Home Automation*”. **Intelligenza Artificiale (IA)**, 12 (2), pages : 67–87, 2019.
- 🏆 **[Best 2018 Thesis in Artificial Intelligence (AI\*IA)]** (Accompanying paper.).
- j5. **Ferdinando Fioretto**, Enrico Pontelli, William Yeoh. “*Distributed Constraint Optimization Problems and Applications : A Survey*”. **Journal of Artificial Intelligence Research (JAIR)**, 61, pages 623–698, 2018.
- j4. **Ferdinando Fioretto**, William Yeoh. “*AI Buzzwords Explained : Distributed Constraint Optimization Problems*”. **AI Matters**, 3 (4), pages 8–13, 2018.
- j3. **Ferdinando Fioretto**, Enrico Pontelli, William Yeoh, Rina Dechter. “*Accelerating Exact and Approximate Inference for (Distributed) Discrete Optimization with GPUs*”. **Constraints**, 23 (1), pages 1–43, 2018.
- j2. **Ferdinando Fioretto**, Agostino Dovier, Enrico Pontelli. “*Constrained Community-based Gene Regulatory Network Inference*”. **ACM Transactions on Modeling and Computer Simulation (TOMACS)**, 25 (2), pages 11:1–11:26, 2015.
- j1.  $(\alpha-\beta)^2$  Federico Campeotto, Alessandro Dal Palù, Agostino Dovier, **Ferdinando Fioretto**, Enrico Pontelli. “*A Constraint Solver for Flexible Protein Models*”. **Journal of Artificial Intelligence Research (JAIR)**, 48, pages 953–1000, 2013.

#### BOOK CHAPTERS AND EDITORIAL ARTICLES

- j6. **Ferdinando Fioretto**, Pascal Van Hentenryck, and Juba Ziani. “*Differential Privacy Overview and Fundamental Techniques*”. **DP Book**, forthcoming.
- j5. **Ferdinando Fioretto**, et al.. “*Reports of the Workshops Held at the 2022 AAAI Conference on Artificial Intelligence*”. **AI Magazine**, 2022.
- j4. **Ferdinando Fioretto**, et al.. “*Reports of the Workshops Held at the 2021 AAAI Conference on Artificial Intelligence*”. **AI Magazine**, 2021.
- j3. **Ferdinando Fioretto**, et al.. “*Reports of the Workshops Held at the 2020 International Association for the Advancement of Artificial Intelligence Conference on Web and Social Media*”. **AI Magazine**, 41(4) 2020.
- j2. 🧑 **William Kluegel**, 🧑 **Muhammad A. Iqbal**, **Ferdinando Fioretto**, William Yeoh, Enrico Pontelli. “*A Realistic Dataset for the Smart Home Device Scheduling Problem for DCOPs*”. **Lecture Notes in Computer Science (LNCS)**, LNCS, volume 10643 pages 125–142, Springer, 2017.
- 🏆 **Visionary Paper Award** (AAMAS workshop series).
- j1. Moinul M.P. Chowdhury, Russell Y. Folk, **Ferdinando Fioretto**, Christopher Kiekintveld, William Yeoh. “*Investigation of Learning Strategies for the SPOT Broker in Power TAC*”. **AgentMediated Electronic Commerce : Designing Trading Strategies and Mechanisms for Electronic Markets**, volume 271 of **Lecture Notes in Business Information Processing**, pages 96–111, Springer, 2017.

#### PEER REVIEWED WORKSHOPS

- w31. 🧑 **Joonhyuk Ko**, Juba Ziani, 🧑 **Saswat Das**, Matt Williams, **Ferdinando Fioretto**. “*Fairness Issues and Mitigations in (Differentially Private) Socio-demographic Data Processes*”. **AAAI Workshop on Privacy Preserving Artificial Intelligence (PPAI)–at AAAI**, 2022.
- 🏆 **[Oral]**.
- w30. Low-rank finetuning for LLMs : A fairness perspective. “**🧑 Saswat Das**, **Marco Romanelli**, 🧑 **Cuong Tran**, 🧑 **Zarreen Reza**, **Bhavya Kailkhura**, **Ferdinando Fioretto**”. **AAAI CoLoRAI Workshop**, 2025.
- w29. 🧑 **Jinhao Liang**, 🧑 **Jacob Christopher**, Sven Koenig, **Ferdinando Fioretto**. “*Multi-Agent Path Finding in Continuous Spaces with Projected Diffusion Models*”. **Combining AI and OR/MS for Better Trustworthy Decision Making**, at AAAI, 2025.
- 🏆 **[Oral]**.
- w28. 🧑 **Vincenzo Di Vito**, Mostafa Mohammadian, Kyri Baker, **Ferdinando Fioretto**. “*OPF-Net : Real-Time Stability Constrained AC Optimal Power Flow*”. **AAAI 2025 Bridge on Explainable AI, Energy and Critical Infrastructure Systems**.
- w27. 🧑 **Jacob K. Christopher**, Stephen Baek, **Ferdinando Fioretto**. “*Physics-Aware Diffusion Models for Micro-structure Material Design*”. **ELLIS ML for Molecules and Materials in the Era of LLMs Workshop**, 2024.
- w26. 🧑 **Jacob K. Christopher**, Michael Cardei, Brian R Bartoldson, Bhavya Kailkhura, **Ferdinando Fioretto**. “*Speculative Diffusion Decoding : Accelerating Language Generation through Diffusion*”. **Efficient Natural Language and Speech Processing (ENLSP) workshop – at NeurIPS**, 2024.
- w25. 🧑 **Jacob K. Christopher**, Stephen Baek, **Ferdinando Fioretto**. “*Constrained Synthesis with Projected Diffusion Models*”. **Machine Learning and the Physical Sciences Workshop – at NeurIPS**, 2024.

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2. Author list is order alphabetically.

- w24. Prakhar Ganesh, Cuong Tran, Reza Shokri, **Ferdinando Fioretto**. “The Data Minimization Principle in Machine Learning”. **Workshop on Regulatory ML – at NeurIPS**, 2024.
- w23. My H. Dinh, James Kotary, **Ferdinando Fioretto**. “Differentiable Approximations of Fair OWA Optimization”. **Workshop on Differentiable Almost Everything – at ICML**, 2024.
- w22. **Ferdinando Fioretto**. “The Data Minimization Principle in Machine Learning”. **Workshop on Generative AI and Law – at ICML**, 2024.
- w21. Vladimir Dvorkin, **Ferdinando Fioretto**, Pascal Van Hentenryck, Pierre Pinson, Jalal Kazempour. “Privacy-Preserving Convex Optimization : When Differential Privacy Meets Stochastic Programming”. **Workshop on Climate Change AI – at NeurIPS**, 2023.
- w20. Cuong Tran, My H. Dinh, **Ferdinando Fioretto**. “A Fairness Analysis on Private Aggregation of Teacher Ensembles”. **AAAI Workshop on Privacy Preserving Artificial Intelligence (PPAI)–at AAAI**, 2022.
-  **Spotlight Paper.**
- w19. Cuong Tran, **Ferdinando Fioretto**. “Decision Making with Differential Privacy under the Fairness Lens”. **Theory and Practice of Differential Privacy (TPDP) – at ICML**, 2021.
- w18. Anudit Nagar, Cuong Tran, **Ferdinando Fioretto**. “A Privacy-Preserving and Accountable Multi-agent Learning Framework”. **International Workshop on Learning and Optimization in Multi-Agent Systems (OPTLearnMAS)–at AAMAS**, 2021.
- w17. Cuong Tran, **Ferdinando Fioretto**, Pascal Van Hentenryck. “Differentially Private and Fair Deep Learning : A Lagrangian Dual Approach”. **AAAI Workshop on Privacy Preserving Artificial Intelligence (PPAI)–at AAAI**, 2021.
- w16. **Ferdinando Fioretto**, Cuong Tran, Pascal Van Hentenryck. “Lagrangian Duality for Constrained Deep Learning”. **INFORMS**, 2020.
- w15. Lesia Mitridati, **Ferdinando Fioretto**, Pascal Van Hentenryck. “Differential Privacy For Stackelberg Games : An Application To Gas And Electricity Markets”. **INFORMS**, 2020.
- w14. Khoi Hoang, **Ferdinando Fioretto**, William Yeoh, Enrico Pontelli, Roie Zivan. “A Large Neighboring Search Schema for Multi-Agent Optimization”. **International Workshop on Optimization in Multi-Agent Systems (OPTMAS)–at AAMAS**, 2019.
- w13. **Ferdinando Fioretto**, Hong Xu, Sven Koenig, TK Satish Kumar. “Solving Multiagent Constraint Optimization Problems on the Constraint Composite Graph”. **International Workshop on Optimisation in Multi-Agent Systems (OptMAS)–at AAMAS**, 2018.
- w12. William Kluegel, Muhammad Aamir Iqbal, **Ferdinando Fioretto**, William Yeoh, Enrico Pontelli. “A Realistic Dataset for the Smart Home Device Scheduling Problem for DCOPs”. **International Workshop on Optimisation in Multi-Agent Systems (OPTMAS)–at AAMAS**, 2017.
- w11. **Ferdinando Fioretto**, William Yeoh, Enrico Pontelli. “A Multiagent System Approach to Scheduling Devices in Smart Homes”. **Workshop on AI for Smart Grids and Smart Buildings (AISGSB)–at AAAI**, 2017.
- w10. Atena M. Tabakhi, **Ferdinando Fioretto**, William Yeoh. “A Preliminary Study on Preference Elicitation in DCOPs for Scheduling Devices in Smart Buildings”. **10th Workshop on Advances in Preference Handling (MPREF)–at IJCAI**, 2016.
- w9. Porag Chowdhury, Russell Y. Folk, **Ferdinando Fioretto**, Christopher Kiekintveld, William Yeoh. “Investigation of Learning Strategies for the SPOT Broker in Power TAC”. **International Workshop on Agent Mediated Electronic Commerce and Trading Agents Design and Analysis (AMEC/TADA)–at AAMAS**, 2016.
- w8. Khoi Hoang, **Ferdinando Fioretto**, Ping Hou, Makoto Yokoo, William Yeoh, Roie Zivan. “Proactive Dynamic DCOPs”. **Workshop on AI for Smart Grids and Smart Buildings (AISGSB)–at AAAI**, 2016.
- w7. **Ferdinando Fioretto**, Federico Campeotto, Agostino Dovier, Enrico Pontelli, William Yeoh. “Large Neighborhood Search with Quality Guarantees for Distributed Constraint Optimization Problems”. In **International Workshop on Optimization in Multi-Agent Systems (OptMAS)– at AAMAS**, 2015.
- w6. **Ferdinando Fioretto**, Tiep Le, William Yeoh, Enrico Pontelli, Tran Cao Son. “Improving DPOP with Branch Consistency for Solving Distributed Constraint Optimization Problems”. In **International Workshop on Optimization in Multi-Agent Systems (OptMAS)– at AAMAS**, 2015.
- w5. ( $\alpha$ - $\beta$ ) Federico Campeotto, Alessandro Dal Palù, Agostino Dovier, **Ferdinando Fioretto**, Enrico Pontelli. “Experimenting with FIASCO for protein structure prediction”. **Workshop on Constraint Based Methods for Bioinformatics (WCB)–at CP**, 2014.
- w4. ( $\alpha$ - $\beta$ ) Federico Campeotto, Alessandro Dal Palù, Agostino Dovier, **Ferdinando Fioretto**, Enrico Pontelli. “Towards a complete constraint solver on GPU”. In **Workshop on Parallel Methods for Search & Optimization (ParSearchOpt)–at ECAI**, 2014.
- w3. **Ferdinando Fioretto**, Enrico Pontelli. “Community-based Gene Regulatory Network Inference via Constraint Programming”. **Workshop on Constraint Based Methods for Bioinformatics (WCB)–at CP**, 2013.



- w2. ( $\alpha$ - $\beta$ ) Federico Campeotto, Alessandro Dal Palù, Agostino Dovier, **Ferdinando Fioretto**, Enrico Pontelli. “*Protein Loop Modelling via Constraints and Fragment Assembly*”. **Workshop on Constraint Based Methods for Bioinformatics (WCB)–at CP**, 2012.
- w1. ( $\alpha$ - $\beta$ ) Michael R. Best, Kabi Bhattarai, Federico Campeotto, Alessandro Dal Palù, Hung Dang, Agostino Dovier, **Ferdinando Fioretto**, Federico Fogolari, Tiep Le, Enrico Pontelli. “*Introducing FIASCO : Fragment-based Interactive Assembly for protein Structure prediction with COntstraints*”. **Workshop on Constraint Based Methods for Bioinformatics (WCB)–at CP**, 2011.

#### PRE-PRINTS AND IN-PRESS

- w10. 🧑🏫 Jinhao Liang, 🧑🏫 Jacob K Christopher, Sven Koenig, **Ferdinando Fioretto**. “*Simultaneous Multi-Robot Motion Planning with Projected Diffusion Models*”. **ICML** (under review), 2025.
- w9. 🧑🏫 Stefano Zampini, 🧑🏫 Jacob K Christopher, Luca Oneto, Davide Anguita, **Ferdinando Fioretto**. “*Training-Free Constrained Generation With Stable Diffusion Models*”. **ICML** (under review), 2025.
- w8. Prince Zizhuang Wang, 🧑🏫 Jinhao Liang, Shuyi Chen, **Ferdinando Fioretto**, Shixiang Zhu. “*Gen-DFL : Decision-Focused Generative Learning for Robust Decision Making*”. **ICML** (under review), 2025.
- w7. 🧑🏫 Jinhao Liang, 🧑🏫 Jacob K. Christopher, Sven Koenig, **Ferdinando Fioretto**. “*Multi-Agent Path Finding in Continuous Spaces with Projected Diffusion Models*”. **CoRR abs/2412.17993**, 2025.
- w6. 🧑🏫 Vincenzo Di Vito, Mostafa Mohammadian, Kyri Baker, **Ferdinando Fioretto**. “*OPF-Net : Real-Time Stability Constrained AC Optimal Power Flow*”. **IEEE Transactions on Power Systems** (revision), 2025.
- w5. 🧑🏫 My H. Dinh, 🧑🏫 James Kotary, Lauryn P. Gouldin, William Yeoh, **Ferdinando Fioretto**. “*End-to-End Optimization and Learning of Fair Court Schedules*”. **FACCT** (under review), 2025.
- w4. 🧑🏫 Saswat Das, Marco Romanelli, 🧑🏫 Cuong Tran, 🧑🏫 Zarreen Reza, Bhavya Kailkhura, **Ferdinando Fioretto**. “*Low-rank finetuning for LLMs : A fairness perspective*”. **FACCT** (under review), 2025.
- w3. Prakhar Ganesh, 🧑🏫 Cuong Tran, Reza Shokri, **Ferdinando Fioretto**. “*The Data Minimization Principle in Machine Learning*”. **FACCT** (under review), 2025.
- w2. 🧑🏫 James Kotary, **Ferdinando Fioretto**. “*Learning Constrained Optimization with Deep Augmented Lagrangian Methods*”. **CoRR abs/2403.03454**, 2024.
- w1. 🧑🏫 James Kotary, 🧑🏫 Jacob K. Christopher, 🧑🏫 My H Dinh, and **Ferdinando Fioretto**. “*Analyzing and Enhancing the Backward-Pass Convergence of Unrolled Optimization*”. **INFORMS journal of computing** (under review), 2024.

#### ARCHIVED AND EXTENDED VERSIONS OF PUBLISHED PAPERS

- w12. 🧑🏫 My H. Dinh, **Ferdinando Fioretto**. “*Context-Aware Differential Privacy for Language Modeling*”. **CoRR abs/2301.12288**, 2023.
- w11. Sawinder Kaur, **Ferdinando Fioretto**, Asif Salekin. “*Deadwooding : Robust Global Pruning for Deep Neural Networks*”. **CoRR abs/2202.05226**, 2022.
- w10. 🧑🏫 My H. Dinh, **Ferdinando Fioretto**, Mostafa Mohammadian, Kyri Baker. “*Towards Understanding the Unreasonable Effectiveness of Learning AC-OPF Solutions*”. **CoRR abs/2111.11168**, 2021.
- w9. 🧑🏫 Cuong Tran, 🧑🏫 My H. Dinh, **Ferdinando Fioretto**. “*Differentially Private Deep Learning under the Fairness Lens*”. **CoRR abs/2106.02674**, 2021 (extended **NeurIPS-21** version).
- w8. 🧑🏫 Anudit Nagar, 🧑🏫 Cuong Tran, **Ferdinando Fioretto**. “*A Privacy-Preserving and Trustable Multi-agent Learning Framework*”. **CoRR abs/2106.01242**, 2021. (extended **AAMAS-21** version).
- w7. 🧑🏫 James Kotary, **Ferdinando Fioretto**, Pascal Van Hentenryck, Bryan Wilder. “*End-to-End Constrained Optimization Learning : A Survey*”. **CoRR abs/2103.16378**, 2021. (extended **IJCAI-21** version).
- w6. Terrence W.K. Mak, **Ferdinando Fioretto**, Pascal Van Hentenryck. “*Load Embeddings for Scalable AC-OPF Learning*”. **CoRR abs/2101.03973**, 2021.
- w5. Keyu Zhu, Pascal Van Hentenryck, **Ferdinando Fioretto**. “*Bias and Variance of Post-processing in Differential Privacy*”. **CoRR abs/2010.04327**, 2020 (extended **AAAI-21** version).
- w4. Minas Chatzos, **Ferdinando Fioretto**, Terrence W.K. Mak, Pascal Van Hentenryck. “*High-Fidelity Machine Learning Approximations of Large-Scale Optimal Power Flow*”. **CoRR abs/2006.16356**, 2020.
- w3. Vladimir Dvorkin, **Ferdinando Fioretto**, Pascal Van Hentenryck, Jalal Kazempour, Pierre Pinson. “*Differentially Private Convex Optimization with Feasibility Guarantees*”. **CoRR abs/2006.12338**, 2020.
- w2. **Ferdinando Fioretto**, Terrence W.K. Mak, Pascal Van Hentenryck. “*Predicting AC Optimal Power Flows : Combining Deep Learning and Lagrangian Dual Methods*”. **CoRR abs/1909.10461**, 2019 (extended **AAAI-20** version).
- w1. **Ferdinando Fioretto**, Terrence W. K. Mak, Pascal Van Hentenryck. “*Privacy-Preserving Obfuscation of Critical Infrastructure Networks*”. **CoRR abs/1905.09778**, 2019 (extended **IJCAI-19** version).

## TEACHING

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

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 PhD Students

- **Vincenzo Di Vito** (UVA CS) *Fall 2022*  
RESEARCH : Physics Informed Machine Learning.
- **My Dinh** (UVA CS) *Spring 2021*  
RESEARCH : Deep Learning, Optimization, Fairness.
- **Saswat Das** (UVA CS) *Fall 2023*  
RESEARCH : Responsible AI, Differential Privacy.
- **Jacob K. Christopher** (UVA CS) *Fall 2023*  
RESEARCH : Generative AI for Science, Safety.  
AWARDS : **[Best paper at LLM workshop, UVA] [2 Oral at NeurIPS-24 workshops]**
- **Jinhao Liang** (UVA CS) *Fall 2024*  
RESEARCH : Generative AI, Differentiable Optimization.
- **Michael Cardei** (UVA CS) *Fall 2024*  
RESEARCH : LLMs, Generative AI, Safety.  
AWARDS : **Best paper at LLM workshop, UVA**
- **Liyuan Hou (rotation)** (UVA CS) *Spring 2025*  
RESEARCH : Diffusion Models for Science.

### Current MS and BS Students

- **Peggy Cui**, (MS, UVA CS) *Spring 2024*
- **Jameson Sandler** (BS, UVA CS) *Fall 2024*
- **Joonhyuk Ko** (BS, UVA CS) *Fall 2023*  
AWARDS : **[CRA outstanding undergraduate research honorable mention] [Oral at AAAI]**

### Current visitors

- **Stefano Zampini**, (PHD, UNIVERSITY OF GENOVA) *Summer 2024*
- **Lea Demelius** (PHD, TECHNICAL UNIVERSITY OF GRAZ ) *Spring 2025*

### Past (Graduated) Students

- **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.  
 DISSERTATION TITLE : The Interplay between Privacy and Fairness in Learning and Decision-making Problems  
 NEXT POSITION : Research Scientist, Amazon.
- > **Jacob Kennedy Christopher, MS** (SYRACUSE UNIVERSITY) *Spring 2023*  
 RESEARCH : Differentiable Optimization.  
 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*.

## Other Advised Students and Visitors

- > **Cuong Tran** (POSTDOC) *Sep 2023 – Mar 2024*  
 RESEARCH : Data Minimization, Fairness in Large Language Models.
- > **Razan Tajeddine**, PhD at U of Helsinki (VISITING POSTDOC) *Sep 2023 – Mar 2024*  
 RESEARCH : Differential Privacy and Fairness.
- > **St John Grimbly**, MS at UniSA (VISITING STUDENT RESEARCHER) *Spring 2023*  
 NEXT POSITION : PhD student at *University of South Africa*.
- > **Jayanta Mandi**, PhD at KU Leuven (VISITING STUDENT RESEARCHER) *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

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

- > **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

## TUTORIALS, SELECTED INVITED TALKS AND MEDIA INTERVIEWS

> <b>Workshop talk</b> : On the Safety of Foundations Models for Autonomous BioLabs. <i>DOE Workshop on Envisioning Frontiers in AI and Computing for Biological Research</i>	Feb 2024
> <b>Keynote talk</b> : Privacy and Fairness issues in Large Language Models. <i>S-HPC Workshop, at Supercomputing 24</i>	Nov 2024
> <b>Invited talk</b> : Unfairness in Constrained Machine Learning. <i>Ohio State University, Department of Computer Science</i>	Nov 2024
> <b>Invited talk</b> : Constraining diffusion models for scientific applications. <i>UVA LLM Workshop</i>	Oct 2024
> <b>Invited talk</b> : Privacy and Fairness in Resource Allocations. <i>2024 Federal Committee on Statistical Methodology (FCSM) Research and Policy Conference</i>	Oct 2024
> <b>Invited talk</b> : Constrained Diffusion for Science and Engineering. <i>Oklahoma State University, School of Industrial Engineering and Management</i>	Oct 2024
> <b>Invited talk</b> : Constrained Diffusion for Science and Engineering. <i>University of Virginia, Department of Systems and Information Engineering</i>	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. <i>National Security Institute at George Mason University's Antonin Scalia Law School</i>	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
> <b>Invited talk</b> : The Principle of Data Minimization in Machine Learning. <i>Google Research Seminars</i>	Apr, 2024
> <b>Media cover</b> : Building fairness into AI is crucial – and hard to get right. <a href="#">🔗 The Conversation</a> , <a href="#">🔗 CHED/QR Radio</a>	Mar 2024
> <b>Invited talk</b> : Responsible AI in Decision Making Processes. <i>Amazon Research Seminars</i>	Feb 2024
> <b>Keynote talk</b> : Privacy and Fairness in Societal Systems. <i>Workshop on the Tradeoffs in Ethical AI, INRIA, France</i>	Nov 2023
> <b>Invited talk</b> : Responsible AI : Privacy and Fairness in Decision Making and Learning Tasks. <i>TOC FOR FAIRNESS, Simons Collaboration on the Theory of Algorithmic Fairness</i>	Nov 2023
> <b>Panelist</b> : Navigating the Frontiers of Artificial Intelligence. <i>The Center for Politics, University of Virginia</i>	Oct 2023
> <b>Invited talk</b> : Optimization and Learning for Science and Engineering. <i>Conference on Complex Systems 2023</i>	Oct 2023
> <b>Invited talk</b> : ML for Optimization and Optimization for ML. <i>AI/ML Seminar Series, University of Virginia</i>	Sep 2023
> <b>Keynote talk</b> : The Unintended Societal Effects of Privacy in Decision and Learning Tasks. <i>IJCAI-2023, International Workshop on Mining Actionable Insights from Social Networks</i>	Aug 2023
> <b>Invited talk</b> : End-to-end Constrained Optimization Learning. <i>AC Summer School : Machine Learning for Constraint Programming</i>	Jul 2023
> <b>Invited talk</b> : Differential Privacy for Power Systems. <i>DTU PES Summer School</i>	Jun 2023
> <b>Invited talk</b> : Optimization Proxies and Differentiable Optimization for Decision Making. <i>MARS Seminar, Pacific Northwest National Laboratory (PNNL)</i>	Jun 2023
> <b>Invited talk</b> : Constrained-aware Machine Learning in Energy Systems. <i>IEEE Power and Energy Society webinar series</i>	Jun 2023
> <b>Invited talk</b> : Responsible AI : Privacy and Fairness in Decision and Learning Tasks. <i>UC San Diego</i>	Apr 2023



- > **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 \(AlxIA 2022\)](#)
- > **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](#) [🔗 Startuptalia](#) [🔗 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*.  
[🔗 NetworkDigital360](#)
Feb 2020
- > **Invited talk** : *Privacy-Preserving Artificial Intelligence*.  
University of Parma (CS Dept)
Jun 2019
- > **Tutorial** : *Tutorial on Multiagent Optimization for IoT Applications*.  
[🔗 International Conference on Autonomous Agents and Multiagent Systems \(AAMAS 2019\)](#)
May 2019
- > **Invited talk** : *Differential Privacy for AI Applications*  
University of Southern California - Information Sciences Institute.  
Michigan State University.

Jan 2019  
Feb 2019
- > **Invited talk** : *Privacy Preserving Artificial Intelligence*  
Syracuse University.  
Drexel University.  
University of Arkansas.  
Colorado State University.  
University of Connecticut.

Feb 2019  
Feb 2019  
Feb 2019  
Mar 2019  
Mar 2019
- > **Tutorial** : *Tutorial on Constrained Multi-agent Optimization*.  
[🔗 AAAI Conference on Artificial Intelligence \(AAAI 2018\)](#)
Feb 2018
- > **Plenary Keynote talk** : *Distributed Constraint Optimization for Smart Energy Networks*.  
Italian Conference on Artificial Intelligence (AI\*IA 2017)
Nov 2017
- > **Invited talk** : *Distributed Constraint Optimization*  
Delft University (TU Delft).  
University of Udine.  
New Mexico State University.

Apr 2016  
Apr 2016  
Mar 2016
- > **Invited talk** : *Large Neighboring Search for Distributed Constrained Optimization*.  
Ben-Gurion University of the Negev
Mar 2016

## RESEARCH GRANTS AND GIFTS

<b>Summary :</b> <u>Total External</u> : \$2,848,003 <u>Total Internal</u> : \$181,000	
> <b>LACROSS INSTITUTE</b> , 2025 Fellowship in AI Research (\$100,000 [entire amount for the PI]) Role : PI (with collaborator Max Biggs)	06/25-05/27
> <b>COHERE FOR AI</b> , Cohere For AI Research Grant (LLM credits) (\$20,000) Role : PI	12/24
> <b>UNIVERSITY OF VIRGINIA (RESEARCH INNOVATION AWARD)</b> (\$60,000) Project title : <i>Understanding and Mitigating Privacy Leakage Risks for Large Language Model Applications</i> Role : PI (with David Evans as coPI)	8/24-7/25
> <b>NATIONAL SCIENCE FOUNDATION (CISE - RI)</b> (\$600,000 - UVA portion : \$350,000) Project title : <i>Collaborative Research : End-to-end Learning of Fair and Explainable Schedules for Court Systems</i> Role : Lead PI (with L. Gouldin (SYR) as coPI and W. Yeoh WASHU as collaborative PI)	08/23-07/26
> <b>NATIONAL SCIENCE FOUNDATION (EECS - EPCN)</b> (\$520,000 - UVA porition : \$260,000) Project title : <i>Collaborative Research : Physics Informed Real-time Optimal Power Flow</i> Role : PI (with Kyri Baker (UC BOULDER) as collaborative PI)	08/23-07/26
> <b>AMAZON RESEARCH AWARDS AWS AI</b> (\$55,000) Project title : <i>Toward Understanding the Unintended Disparate Impacts of Private Machine Learning Systems</i> Role : PI	01/23
> <b>NATIONAL SCIENCE FOUNDATION (CAREER, CISE - RI)</b> (\$515,403) Project title : <i>CAREER : End-to-end Constrained Optimization Learning</i> Role : PI	03/22-02/27
> <b>GOOGLE RESEARCH SCHOLAR AWARD</b> (\$60,000) Project title : <i>On the Equity of Differentially Private Decision Processes</i> Role : PI	06/22
> <b>NATIONAL SCIENCE FOUNDATION (CISE - SATC)</b> (\$500,000 - UVA portion : \$281,000) Project title : <i>Collaborative Research : SaTC : Core : Small : Privacy and Fairness in Critical Decision Making</i> 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) 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

- > **Google** (\$5000) (pending review) 02/24  
 Project title : *Support for Scholarship awards to attend the 2025 AAAI Privacy Preserving AI workshop*  
 Role : PI
- > **Apple** (\$3000) 02/24  
 Project title : *Support for Scholarship awards to attend the 2025 AAAI Privacy Preserving AI workshop*  
 Role : PI
- > **OpenDP** (\$500) 02/24  
 Project title : *Support for Scholarship awards to attend the 2025 AAAI Privacy Preserving AI workshop*  
 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 AU-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
- > **OpenDP** (\$500) 02/24  
 Project title : *Support for Scholarship awards to attend the 2024 AAAI Privacy Preserving AI workshop*  
 Role : PI
- > **Google** (\$5,000) 02/24  
 Project title : *Support for Scholarship awards to attend the 2023 AAAI Privacy Preserving AI workshop*  
 Role : PI
- > **Google** (\$2,500) 02/23  
 Project title : *Support for Scholarship awards to attend the 2023 AAAI Privacy Preserving AI workshop*  
 Role : PI

#### PENDING GRANTS SUBMISSIONS

- > **DARPA YFA**, (\$1,000,000) 2/25  
 Project title : *Constraint-Driven Generative AI for Grounded, Physics-informed, and Reliable Outputs*  
 Role : PI
- > **AMAZON RESEARCH AWARDS AWS AI**, (\$70,000) 09/24  
 Project title : *Massively Accelerating Large Language Models Inferences through Speculative Diffusion Decoding*  
 Role : PI
- > **NATIONAL SCIENCE FOUNDATIONS**, (\$1,200,000) 06/24  
 Project title : *Privacy and Fairness : From Data Collection to Downstream Decisions*  
 Role : PI (with Juba Ziani (Georgia Tech) as coPI)
- > **NATIONAL SCIENCE FOUNDATIONS**, (\$600,000) 2/25  
 Project title : *Towards Certifiable Constraint-aware Generative Models*  
 Role : PI
- > **CISCO**, (\$100,000) 10/24  
 Project title : *Massively Accelerating Foundations Models through Speculative Diffusion Decoding*  
 Role : PI

<ul style="list-style-type: none"> <li> <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) </li> </ul>	10/24
<ul style="list-style-type: none"> <li> <b>UNIVERSITY OF VIRGINIA, RIA</b>, (\$60,000)  <b>Project title</b> : Constraining Generative AI for Safe Embodied Robotic Agents  <b>Role</b> : PI (with Nicola Bezzo as coPI) </li> </ul>	01/25
<ul style="list-style-type: none"> <li> <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) </li> </ul>	01/25
<ul style="list-style-type: none"> <li> <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) </li> </ul>	01/25
<ul style="list-style-type: none"> <li> <b>3-CAVALLIERS, UVA</b>, (\$80,000)  <b>Project title</b> : Advancing Multi-Contrast Brain MRI with High-Resolution Generative Diffusion Models  <b>Role</b> : PI (with Craig Meyer and Mathews Jacob as coPIs) </li> </ul>	01/25

## SERVICE

### CONFERENCE CHAIR

<ul style="list-style-type: none"> <li> <b>International Conference on Principles and Practice of Constraint Programming (CP)</b>  <i>with Roie Zivan</i> </li> </ul>	2022
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### WORKSHOP CHAIR

<ul style="list-style-type: none"> <li> <b>Sixth AAAI Workshop on Privacy Preserving Artificial Intelligence (PPAI)</b>, at AAAI  <i>with Juba Ziani, Wanrong Zhang, and Jeremy Seeman</i> </li> </ul>	2025
<ul style="list-style-type: none"> <li> <b>Algorithmic Fairness through the lens of Metrics and Evaluation (AFME)</b>, at NeurIPS  <i>with Awa Dieng, Miriam Rateike, and Golnoosh Farnadi</i> </li> </ul>	2024
<ul style="list-style-type: none"> <li> <b>AAAI Workshop on Learnable Optimization (LEARNOPT)</b>, at AAAI  <i>with Elias B. Khalil, Pascal Van Hentenryck, Jan Drgona, Draguna Vrabie, and Priya Donti</i> </li> </ul>	2024
<ul style="list-style-type: none"> <li> <b>Fifth AAAI Workshop on Privacy Preserving Artificial Intelligence (PPAI)</b>, at AAAI  <i>with Juba Ziani, Christine Task, and Niloofar Mireshghallah</i> </li> </ul>	2024
<ul style="list-style-type: none"> <li> <b>Algorithmic Fairness through the lens of Time (AFT)</b>, at NeurIPS  <i>with Awa Dieng, Miriam Rateike, and Golnoosh Farnadi</i> </li> </ul>	2023
<ul style="list-style-type: none"> <li> <b>Workshop on Optimization and Learning in Multi-Agent Systems</b>, at AAMAS  <i>with Hau Chan, Jiaoyang Li, Filippo Bistaffa, and James Kotary</i> </li> </ul>	2023
<ul style="list-style-type: none"> <li> <b>Fourth AAAI Workshop on Privacy Preserving Artificial Intelligence (PPAI)</b>, at AAAI  <i>with Catuscia Palamidessi, and Pascal Van Hentenryck</i> </li> </ul>	2023
<ul style="list-style-type: none"> <li> <b>Algorithmic Fairness through the lens of Causality and Privacy (AFCP)</b>, at NeurIPS  <i>with Awa Dieng, Miriam Rateike, and Golnoosh Farnadi</i> </li> </ul>	2022
<ul style="list-style-type: none"> <li> <b>Workshop on Optimization and Learning in Multi-Agent Systems</b>, at AAMAS  <i>with Hau Chan and Jiaoyang Li</i> </li> </ul>	2022
<ul style="list-style-type: none"> <li> <b>Third AAAI Workshop on Privacy Preserving Artificial Intelligence (PPAI)</b>, at AAAI  <i>with Aleksandra Korolova and Pascal Van Hentenryck</i> </li> </ul>	2022
<ul style="list-style-type: none"> <li> <b>AAAI Workshop on Machine Learning for Operational Research (ML4OR)</b>, at AAAI  <i>with Emma Frejinger, Elias Khalil, and Pashootan Vaezipoor</i> </li> </ul>	2022
<ul style="list-style-type: none"> <li> <b>Second AAAI Workshop on Privacy Preserving Artificial Intelligence (PPAI)</b>, at AAAI  <i>with Pascal Van Hentenryck and Richard W. Evans</i> </li> </ul>	2021
<ul style="list-style-type: none"> <li> <b>Workshop on Optimization and Learning in Multi-Agent Systems (OptLearnMAS)</b>, at AAMAS  <i>with Amulya Yadav, Gauthier Picard, and Bryan Wilder</i> </li> </ul>	2021
<ul style="list-style-type: none"> <li> <b>First AAAI Workshop on Privacy Preserving Artificial Intelligence (PPAI)</b>, at AAAI  <i>with Pascal Van Hentenryck and Rachel Cummings</i> </li> </ul>	2020
<ul style="list-style-type: none"> <li> <b>Workshop on Optimization and Learning in Multi-Agent Systems (OptLearnMAS)</b>, at AAMAS  <i>with Bryan Wilder and Long Tran-Thanh</i> </li> </ul>	2020
<ul style="list-style-type: none"> <li> <b>Workshop on Optimization in Multi-Agent Systems (OptMAS)</b>, at AAMAS  <i>with Archie Chapman and Long Tran-Thanh</i> </li> </ul>	2019
<ul style="list-style-type: none"> <li> <b>Workshop on Optimization in Multi-Agent Systems (OptMAS)</b>, at FAIM18  <i>with Archie Chapman, Long Tran-Thanh, and Roie Zivan</i> </li> </ul>	2018



#### 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 2024–present
- **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

- 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
- Neural Information Processing Systems (NeurIPS) 2024
- International Conference on Machine Learning (ICML) 2025

#### 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 2024
- 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, 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

**SCHOOL/DEPARTMENT SERVICE (AT UVA)**

- › Search Committee (Teaching track) 2024
- › Graduate Program Committee 2023 – 2024
- › 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