

Ferdinando FIORETTO

Assistant Professor

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EDUCATION AND TRAINING

Dec. 2019	Georgia Institute of Technology, <i>School of Industrial and System Engineering</i> , Atlanta, GA
Sep. 2018	POST-DOCTORAL RESEARCHER
Dec. 2018	University of Michigan, <i>Industrial and Operations Engineering</i> , Ann Arbor, MI
Sep. 2016	RESEARCH FELLOW
Aug. 2016	University of Udine, <i>Computer Science</i> , Udine, IT PH.D. IN COMPUTER SCIENCE (WITH MS IN 2012)
Nov. 2009	University of Parma, <i>Computer Science & Mathematics</i> , Parma, IT BS. IN COMPUTER SCIENCE

RESEARCH AND PROFESSIONAL EXPERIENCE

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

SELECTED HONORS AND AWARDS

- 2022 Caspar Bowden PET Award, Privacy Enhancing Technologies (PETs). [Link](#)
- 2022 NSF CAREER Award, National Science Foundation. [Press](#)
- 2022 Google Research Scholar Award, Google. [Link](#)
- 2022 Amazon Research Award, Amazon – AWS AI. [Link](#)
- 2022 Best Paper Award, IEEE Transaction of Power System. [Link](#)
- 2022 Early Career Spotlight, International Joint Conference on Artificial Intelligence (IJCAI). [Link](#)
- 2021 Early Career Researcher Award, Association for Constraint Programming. [Link](#)
- 2021 Mario Gerla Young Investigator Award for Research in Computer Science, ISSNAF. [Press](#)
- 2021 Best Paper Award, IEEE Transaction of Power System. [Link](#)
- 2018 Best AI Dissertation Award, AI*IA. [Press](#)

SELECTED PUBLICATIONS

FULL PUBLICATION LIST AVAILABLE [“here”](#)

- 1 Jacob K Christopher and Ferdinando Fioretto. “Projected Generative Diffusion Models for Constraint Satisfaction”. CoRR abs/2402.03559 (under review), 2024. [Link](#)
- 2 Cuong Tran and Ferdinando Fioretto. “Data Minimization at Inference Time”. Proceedings of the Conference on Neural Information Processing Systems (NeurIPS). [Link](#)
- 3 Mostafa Mohammadian, Kyri Baker, Ferdinando Fioretto. “Gradient-Enhanced Physics-Informed Neural Networks for Power Systems Operational Support”. Electric Power Systems Research, pages 109551, 2023. [Link](#)
- 4 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. [Link](#)
- 5 My H. Dinh, Ferdinando Fioretto. “Context-Aware Differential Privacy for Language Modeling”. CoRR abs/2301.12288, 2023. [Link](#)
- 6 James Kotary, Vincenzo Di Vito, Ferdinando Fioretto. “End-to-End Combinatorial Ensemble Learning”. Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI), 2023. [Link](#)
- 7 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. [Link](#)
- 8 Ferdinando Fioretto. “Integrating Machine Learning and Optimization to Boost Decision Making”. Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI), 2022. [Link](#)

- 9 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. [↗](#)
- 10 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. [↗](#)
- 11 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. [↗](#)
- 12 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. [↗](#)
- 13 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. [↗](#)
- 14 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. [↗](#)
- 15 **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. [↗](#)
- 16 **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. [↗](#)
- 17 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. [↗](#)
- 18 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. [↗](#)
- 19 **Ferdinando Fioretto**, Pascal Van Hentenryck, Keyu Zhu. “*Differential Privacy of Hierarchical Census Data : An Optimization Approach*”. *Artificial Intelligence Journal (AIJ)*, (296), pages 103475, 2021. [↗](#)
- 20 **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. [↗](#)

SELECTED SYNERGISTIC ACTIVITIES

- **Conference co-chair and Organizing Committee :**
 - Conference Chair :** International Conference on Principles and Practice of Constraint Programming (CP) 2022
 - 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
- **Workshop co-organizer :**
 - Workshop on Optimization and Learning in Multi-Agent Systems, at AAMAS 2018–2022
 - Workshop on Privacy Preserving Artificial Intelligence, (at AAAI) 2020–2024
 - Algorithmic Fairness through the Lens of Causality and Privacy, (at NeurIPS) 2022, 2023
 - Workshop on Machine Learning for Operational Research, (at AAAI) 2022, 2024
- **Senior Program Committee/Area Chair :**
 - AAAI Conference on Artificial Intelligence (AAAI) 2020 – 2024
 - International Joint Conference on Artificial Intelligence (IJCAI) 2021 – 2024
- ACM Conference on Fairness, Accountability, and Transparency (FAccT) 2023, 2024
- European Conference on Machine Learning (ECML) 2023
- European Conference on Artificial Intelligence (ECAI) 2023

COLLABORATIONS AND AFFILIATIONS

Name	Organizational Affiliation	Last Active
Cormode, Graham	Meta	02/24
Steinke, Thomas	Google Research	02/24
Tao, Yuchao	Duke University	02/24
Pujol, David	Tumult Labs	02/24
Machanavajjhala, Ashwin	Duke University	02/24
Ye, Jiayuan	National University of Singapore	02/24
Shokri, Reza	National University of Singapore	02/24
Thakurta, Abhradeep	Google DeepMind	02/24
Papernot, Nicolas	University of Toronto and Vector Institute	02/24
Bonawitz, Kallista	Google	02/24
Kairouz, Peter	Google	02/24
McMahan, Brendan	Google	02/24
Ramage, Daniel	Google	02/24
M. Abowd, John	Cornell University	02/24
B Hawes, Michael	US Census	02/24
Kifer, Daniel	Penn State University	02/24
M. Suriyakumar, Vinith	Massachusetts Institute of Technology	02/24
Goldenberg, Anna,	The Hospital for Sick Children	02/24
Ghassemi, Marzyeh	Massachusetts Institute of Technology	02/24
Anderson, James	Columbia University	02/24
Zhou, Fengyu	California Institute of Technology	02/24
H. Low, Steven	California Institute of Technology	02/24
Fan, Liyue	University of North Caroline	02/24
Gaboardi, Marco	Boston University	02/24
Hay, Michael	Colgate University	02/24
Vadhan, Salil	Harvard University	02/24
Gipson, Bryant	Google	02/24
Terzis, Andreas	Google	02/24
Sushko, Yurii	Google	02/24
Desfontaines, Damien	Tumult Labs	02/24
Cherubin, Giovanni	Alan Turing Institute	02/24
Chatzikokolakis, Konstantinos	University of Athens	02/24
Palamidessi, Catuscia	Inria and Institut Polytechnique de Paris	02/24
Seeman, Jeremy	Pennsylvania State University	02/24
Cummings, Rachel	Columbia University	02/24
Baek, Stephen	University of Virginia	02/24
Romanelli, Marco	New York University	02/24
Zhang, Aidong	University of Virginia	01/24
Wang, Tianhao	University of Virginia	01/24
Evans, David	University of Virginia	01/24
Behl, Madhur	University of Virginia	01/24
Li, Sheng	University of Virginia	01/24
Heng Huang	University of Maryland, College Park	01/24
Koenig, Sven	University of Southern California	01/24
Pan, Hai	New Jersey Institute of Technology	01/24
Hooker, Sara	Cohere AI	11/23
Task, Christine	Knexus Research	10/23
Dvorkin, Vladimir	University of Michigan	11/23
Van Hentenryck, Pascal	Georgia Institute of Technology	08/23
Yeoh, William	Washington University in St. Louis	01/23

Name	Organizational Affiliation	Last Active
My T. Thai	University of Florida	01/23
Pontelli, Enrico	New Mexico State University	01/22
Soundarajan, Sucheta	Syracuse University	01/22
Bowen, Claire	Urban Institute	01/22
Wang, Yeqing	Syracuse University	01/22
Baker, Kyri	UC Boulder	01/24
Zivan, Roie	Ben-Gurion University	01/22
Wilder, Bryan	Carnegie Mellon University	01/21
Mak, Terrence, W. K.	Georgia Institute of Technology	04/21
Tabakhi, Atena, M.	Washington University in St. Louis	12/20
Lombardi, Michele	University of Bologna	01/20
Pinson, Pierre	Technical University of Denmark	01/20
Kazempour, Jalal	Technical University of Denmark	01/20