

# ECE695: Probabilistic Causal Inference, Fall 2021

## List of Papers

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September 3, 2021

Each student should choose one of the papers from the list below and present as part of their grade assignment as detailed in the course syllabus. Papers outside this list is acceptable only with the instructor's approval.

1. Preventing Failures Due to Dataset Shift: Learning Predictive Models That Transport  
Adarsh Subbaswamy, Peter Schulam, Suchi Saria
2. Local Causal and Markov Blanket Induction for Causal Discovery and Feature Selection for Classification Part I: Algorithms and Empirical Evaluation  
Constantin F. Aliferis, Alexander Statnikov, Ioannis Tsamardinos, Subramani Mani, Xenofon D. Koutsoukos
3. Local Causal and Markov Blanket Induction for Causal Discovery and Feature Selection for Classification Part II: Analysis and Extensions  
Constantin F. Aliferis, Alexander Statnikov, Ioannis Tsamardinos, Subramani Mani, Xenofon D. Koutsoukos
4. Approximate Causal Abstraction  
Sander Beckers, Frederick Eberhardt, Joseph Y. Halpern
5. Learning Causal Effects via Weighted Empirical Risk Minimization  
Yonghan Jung, Jin Tian, Elias Bareinboim
6. Counterfactual Probabilities: Computational Methods, Bounds and Applications  
Alexander Balke, Judea Pearl
7. Local Causal Discovery of Direct Causes and Effects  
Tian Gao, Qiang Ji
8. Differentiable Causal Discovery from Interventional Data  
Philippe Brouillard, Sebastien Lachapelle, Alexandre Lacoste, Simon Lacoste-Julien, Alexandre Drouin

9. Universal Models of Multivariate Temporal Point Processes  
Asela Gunawardana, Christopher Meek
10. Cyclic Causal Discovery from Continuous Equilibrium Data  
Joris M. Mooij, Tom Heskes
11. Data-driven covariate selection for nonparametric estimation of causal effects  
Doris Entner, Patrik O. Hoyer, Peter Spirtes
12. Identifying Causal Effects With Proxy Variables of an Unmeasured Confounder  
Wang Miao, Zhi Geng, Eric Tchetgen Tchetgen
13. Domain Adaptation by Using Causal Inference to Predict Invariant Conditional Distributions  
Sara Magliacane, Thijs van Ommen, Tom Claassen, Stephan Bongers, Philip Versteeg, Joris M. Mooij
14. A Linear Non-Gaussian Acyclic Model for Causal Discovery  
Shohei Shimizu, Patrik O. Hoyer, Aapo Hyvarinen, Antti Kerminen
15. Sensitivity Analysis of Linear Structural Causal Models  
Carlos Cinelli, Daniel Kumor, Bryant Chen, Judea Pearl, Elias Bareinboim
16. Causal Discovery in the Presence of Missing Data  
Ruibo Tu, Cheng Zhang, Paul Ackermann, Karthika Mohan, Hedvig Kjellström, Kun Zhang
17. Dormant Independence  
Ilya Shpitser, Judea Pearl
18. Kernel-based Conditional Independence Test and Application in Causal Discovery  
Kun Zhang, Jonas Peters, Dominik Janzing, Bernhard Scholkopf
19. Chain graph models and their causal interpretations  
Steffen L. Lauritzen, Thomas S. Richardson
20. Interventional Fairness : Causal Database Repair for Algorithmic Fairness  
Babak Salimi, Luke Rodriguez, Bill Howe, Dan Suciu