

Why Causation Matters
Stanford 2nd Annual Colloquium on
Causal Inference and Machine Learning
Monday, April 29, 2019, 9am-4pm – SIEPR

Key: Video Number – time mark

Introduction		
1 - 0:00	Welcome	Steven Goodman , Professor of HRP (Epidemiology) and Medicine (Primary Care and Population Health), Chief, Division of Epidemiology Stanford School of Medicine
2 – 0:00	Machine Learning and Causal Inference: Better Together	Jennifer L. Hill , Professor of Applied Statistics, Social Science, and Humanities New York University Steinhardt
2 – 24:05		Discussion
Heterogeneity/Estimation (Julia Simard – Moderator)		
3 – 0:17	Research on Social Determinants of Health: Opportunities for Machine Learning Tools to Improve Discovery and Reduce Health Inequality	Maria Glymour , Associate Professor of Epidemiology & Biostatistics UC, San Francisco School of Medicine
3 – 16:20	Estimating Treatment Effect Heterogeneity and Optimal Treatment Assignment Policies	Susan Athey , The Economics of Technology Professor, Professor of Economics (by courtesy) Stanford Graduate School of Business
3 – 31:17	It is Time to Learn from Patients Like Mine	Nigam Shah , Associate Professor of Medicine (Biomedical Informatics) and of Biomedical Data Science Stanford School of Medicine
		Discussants
3 – 47:39		Jennifer L. Hill , Professor of Applied Statistics, Social Science, and Humanities New York University Steinhardt
3 – 52:20		Michelle Odden , Associate Professor of Health Research and Policy (Epidemiology) Stanford School of Medicine
3 – 58:11		Group Discussion

Prediction/Fairness (Steve Goodman – Moderator)		
4 – 1:01	<i>The Causal Impact of Bail on Case Outcomes for Indigent Defendants in New York City</i>	Kristian Lum , <i>Lead Statistician at the Human Rights Data Analysis Group (HRDAG)</i>
4 – 14:01	<i>Algorithms in Law and Public Policy: Bias and Debiasing, Big Data Hubris, and Health Inspections</i>	Daniel E. Ho , <i>William Benjamin Scott and Luna M. Scott Professor of Law, Professor of Political Science (by courtesy) Stanford Law School</i>
4 – 27:57	<i>Generalization of the synthetic control method to predict expected outcomes: Example of the Mental Health Services Act</i>	Jennifer Ahern , <i>Associate Professor of Epidemiology, Chancellor’s Professor of Public Health UC, Berkeley School of Public Health</i>
		Discussant
4 – 42:22		Sharad Goel , <i>Assistant Professor of Management Science and Engineering and, by courtesy, of Computer Science and Law Stanford School of Engineering</i>
4 – 48:47		Group Discussion
Design (Steve Goodman – Moderator)		
5 – 1:05	<i>Adaptive designs integrating machine learning to advance implementation science: examples from the HIV epidemic in eastern Africa</i>	Maya Petersen , <i>Associate Professor of Biostatistics & Epidemiology UC, Berkeley School of Public Health</i>
5 – 16:13	<i>Synthetic Control Methods and Difference in Differences</i>	Guido Imbens , <i>Professor of Economics, Applied Econometrics Professor Stanford Graduate School of Business</i>
5 – 30:53	<i>Design Considerations for Studies Incorporating Mobile Health Technology</i>	Manisha Desai , <i>Professor of Medicine (Biomedical Informatics), of Biomedical Data Science and, by courtesy, of Health Research and Policy (Epidemiology) Stanford School of Medicine</i>
		Discussant
5 – 45:59		Michael Baiocchi , <i>Assistant Professor of Medicine (Stanford Prevention Research Center) and, by courtesy, of Statistics and of Health Research and Policy (Epidemiology) Stanford School of Medicine</i>
5 – 51:13		Group Discussion