David Chen

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Current Positions

Ph.D. Student, Graduate Group in Biostatistics, University of California, Berkeley
Advisors: Prof. Maya Petersen, Prof. Mark van der Laan

Research Interests

Methodology: causal inference and causal machine learning, semi-parametric estimation, targeted maximum likelihood estimation, reproducible research, statistical software development, statistical computing, survival analysis

Applications: clinical trials, trial design, and precision medicine

Education

PhD in Biostatistics **Expected August 2023**
University of California, Berkeley
Dissertation: *Targeted Learning Estimation of Time-to-Event Estimands with Cardiovascular Outcome Trial Applications*

MA in Biostatistics **August 2020**
University of California, Berkeley
Thesis: *Beyond the Cox Hazard Ratio: Survival Analysis following the Targeted Learning Roadmap*
Committee: Prof. Maya Petersen, Prof. Mark van der Laan, Prof. Alan Hubbard

BS in Neuroscience **June 2011**
University of California, Los Angeles

Research

PhD Researcher 2020 - Present
Joint Initiative for Causal Inference *University of California, Berkeley*
Projects: Alternative Statistical Methods for Evaluating Safety in Cardiovascular Outcome Trials
Targeted Estimation of Treatment Effects in Survival Data in the Presence of Competing Risks
concrete: R package Implementing the One-Step Continuous-Time Survival TMLE

MA Researcher 2019 - 2020
Lab of Prof. Maya Petersen and Prof. Elvin Geng *University of California, Berkeley*
Project: Optimal Tracing in Zambian HIV Setting

Researcher 2013 - 2017
Lab of Dr. Jason Hinman *UCLA Neurology*
Project: Developing a Novel Endothelialized Cerebrovascular Microfluidic Assay

Teaching

Graduate Student Instructor Fall 2019
Public Health 252E: Advanced Topics in Causal Inference

Indepedent MCAT Tutor 2013 - 2017
Wyzant Profile: *1500+ teaching hours, 100+ students, 5/5 average rating*

Kaplan Test Prep MCAT Instructor 2012 - 2013

Publications

Chen D, Petersen ML, Rytgaard HC, Grøn R, Lange T, Rasmussen S, Pratley RE, Marso SP, Kvist K, Buse J, vdLaan MJ (2023) Beyond the Cox Hazard Ratio: A Targeted Learning Approach to Survival Analysis in a Cardiovascular Outcome Trial Application. *Statistics in Biopharmaceutical Research*, DOI: 10.1080/19466315.2023.2173644

Kaneko N, Tateshima S, Chen D, Duckwiler G, Hinman H. Abstract WMP35: Endothelialized 3D cerebrovascular modeling: a novel in vitro approach to study gene expression in realistic vascular geometry. *Stroke* 2018;49.

Kaneko N, Tateshima S, Loecher M, Villablanca J, Chen D, Komuro Y, Chang W, Ennis D, Vinuela F, Duckwiler G, Hinman J. O-018 Proinflammatory gene expression on endothelium of growing intracranial aneurysms. *Journal of NeuroInterventional Surgery* 2018;**10**:A14

Presentations

Oral Presentations

Chen D (02/2022) *Continuous-time TMLE for Competing Risks and Beyond.* Novo Nordisk JICI Seminar, Copenhagen, Denmark

Chen D (10/2021) *Competing Risks and the Need for a Causal Roadmap.* Novo Nordisk Data Science Symposium, Copenhagen, Denmark

Chen D (10/2021) *Competing Risks and the Need for a Causal Roadmap.* Novo Nordisk Collaboration Workshop, Oxford, UK

Chen D (03/2021) *Analyzing Competing Risks with Discrete Time TMLE.* Joint Initiative for Causal Inference Webinar Series, online

Chen D (10/2020) *Discrete Time-to-Event TMLE: A CVOT Application.* 2020 Joint Initiative for Causal Inference Webinar, online

Poster Presentations

ADA 82nd Scientific Sessions, New Orleans, LA (06/2022)
Chen D, Abrahamsen TJ, Dang LEE, Lawson J, Pratley RE.
737-P: Targeted Maximum Likelihood Estimation (TMLE) to Estimate the Effect of Liraglutide on Cardiovascular (CV) Outcomes in Race/Ethnicity Subgroups: Post Hoc Analysis of LEADER

American Causal Inference Conference, Berkeley, CA (05/2022)
Chen D, Gerds T, Petersen ML, Grøn R, Rasmussen S, vdLaan MJ, Rytgaard HC
Continuous-time TMLE for Competing Risks Analysis of CVOTs

AHA/ASA International Stroke Conference, Los Angeles, CA (01/2018)
Kaneko N, Tateshima S, **Chen D**, Duckwiler G, Hinman J.
Endothelialized 3D Cerebrovascular Modeling: A Novel in vitro Approach to Study Gene Expression in Realistic Vascular Geometry

University Service

Biostatistics Delegate to the Graduate Assembly **2018 - 2021**
UC Berkeley School of Public Health

Other Work

Assistant Stunt Coordinator & Fight Choreographer **2015 - 2017**
Skeleton Crew Productions

Assistant Instructor **2011 - 2015**
UCLA Martial Arts: Boxing and Capoeira

References

Mark J. van der Laan, Ph.D.
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