BRIGHAM AND WOMEN'S HOSPITAL

HARVARD MEDICAL SCHOOL

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Department of Medicine
Channing Division of Network Medicine

Channing Methods Meeting
October 24 (Tuesday), 2023, 11AM (ET)

MCP 5th-floor large conference room

https://us02web.zoom.us/j/579497999?pwd=cHNIWHMzWUlFUUVJTG1EeVJmY05aQT09

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Detecting parent-of-origin effects on omics data

Family history is an established risk factor for asthma, and the differential association of parental history with childhood asthma motivates the study of parent-of-origin effects (PoE). PoE describe the scenario where the effect of an allele depends on whether the allele is inherited from an individual's mother or father. Utilizing the multi-omics data and the trio-based structure of the TOPMed cohorts GACRS and CAMP, we discuss a robust approach to detect PoE on quantitative omics measurements. The high dimensionality of the data requires an efficient implementation using parallel computations, borrowing ideas from quantitative trait loci (QTL) analysis tools.

Bio: *Julian Hecker is an Instructor in Medicine at Harvard Medical School and an Associate Statistician at CDNM. He obtained a PhD in Epidemiology and a master's degree in mathematics. His methodological research interests include family-based association methodology and causal inference techniques.*