

Medical Physics Seminar

Monday, March 5, 2018

1325 HSLC ~ 4:00 P.M.



Michelle Svatos, PhD
Medical Device Executive
Celestial Medical

Data Analysis Pitfalls: P-Hacking, Dredging, Harking and Other Barriers to Translation

In an age of growing data abundance, the collection, manipulation, and filtration of data are becoming increasingly important to counter high levels of noise. If not done carefully, intuition and plausibility may be superseded by hunting for correlations, and conclusions may be based on finding “significant” results even if they were outside the original experimental intent. Using pre-set P-values as a metric of statistical significance can inadvertently incentivize the practice of optimizing the analysis for that value, or P-hacking. Failing that, there is the temptation to Hypothesize After Results are Known (HARK). Be aware these practices may result in misleading conclusions, irreproducible work, and failure to translate to clinical use, among other problems. Best practices to avoid such quandaries will be discussed.

1325 Health Sciences Learning Center (HSLC) 4:00 - 5:00 P.M.