BIOSTATISTICS SEMINAR

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Data-Adaptive Regression Modeling in High Dimensions

In recent years, it has become easier and less expensive to collect and store large amounts of data in a number of fields. This has amplified interest in the development of statistical methods to adequately model this data. With high-dimensional data, the traditional plots used in exploratory data analysis can be limiting, given the large number of possible predictors. Thus, it can be helpful to fit sparse regression models, in which variable selection is adaptively performed, to explore the relationships between a large set of predictors and an outcome. For maximal utility, the functional forms of the covariate fits should be flexible enough to adequately reflect the unknown relationships and interpretable enough to be useful as a visualization technique. In this talk, we will provide an overview of recent work in the area of sparse additive modeling that can be used for visualization of relationships in big data. In addition, we will present recent novel work that fuses together the aims of these previous proposals in order to not only adaptively perform variable selection and flexibly fit included covariates, but also adaptively control the complexity of the covariate fits for increased interpretability.

Thursday February 11, 2021   **3:30 pm - 4:30 pm**

Zoom meeting: Please also find a link in the email invite, with the password.
https://uncsph.zoom.us/j/95116832073?pwd=TnV4QUtGLzMwaFRBT1Rsd2xmTjVMQT09

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