

R. Clifton Bailey Statistics Seminar Series

Semi-Low-Dimensional Inference With High-Dimensional Data

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4400 University Drive, Fairfax, VA 22030

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11:00 A.M. - 12:00 Noon

Abstract: We consider statistical inference in a semi-low-dimensional approach to the analysis of high-dimensional data. The relationship between this semi-low-dimensional approach and regularized estimation of high-dimensional objects is parallel to the more familiar one between semiparametric analysis and nonparametric estimation. Low-dimensional projection methods are used to correct the bias of regularized high-dimensional estimators, leading to efficient point and interval estimation. Bootstrap can be used to carry out simultaneous inference. Only a small fraction of labelled data are needed in a semi-supervised setting. Examples include regression and graphical models for continuous and binary data