COLLOQUIUM

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Title: **Partial Least Squares Regression: What we learned in the past decade.**

Abstract: **Partial least squares (PLS) regression, which has been around for about four decades, is a dimension-reduction algorithm for fitting linear regression models without requiring that the sample size be larger than the number of predictors. It was developed primarily by the Chemometrics community where it is now ingrained as a core method, and it is apparently used throughout the applied sciences.**

And yet it seems fair to conclude that PLS regression has not been embraced by the Statistics community, even as a serviceable method that might be useful occasionally. Nor does there seem to be a common understanding as to why this rather enigmatic method should not be used.

This talk is intended as an appraisal of PLS regression from a statistical perspective, with emphasis on what we have learned recently. This will include a little historical context, personal encounters, relationship to envelopes, a few asymptotic results for high-dimensional regressions and its (surprising) serviceability in nonlinear regressions.

2-17-22

Via Zoom
3:00 PM

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