

# 2021년 제 13회 통계세미나

고려대학교 통계연구소와 BK21 통계학교육연구팀이 다음과 같이  
공동으로 세미나를 개최하오니 많은 참여 바랍니다.

일시 : 2021년 11월 26일 (금) 오전 10시

장소 : 온라인(ZOOM)으로 진행

연사 : 유문성 (조형준 교수 연구실 소속)

## PLS-Tree Modeling

### <Abstract>

For analysis of modern biomedical data, some problems arise when the data consist of a large number of multi-collinear predictor variables and multivariate response variables with a small sample size. Partial least squares (PLS) linear regression can be employed rather than ordinary least squares (OLS) linear regression to capture the relationship between the predictor variables and response variables for such cases. However, the performance of inference and prediction by OLS and PLS linear regression can be deflated in case of complex nonlinear relationships. We develop a PLS-tree modeling algorithm to detect complex relationships and make predictions precisely by combining the merits of PLS and tree modeling. Our proposed PLS-Tree modeling can be applied to both univariate and multivariate response variables with a large number of multi-collinear predictor variables. The performance of the proposed algorithm is investigated with simulation data and real data.

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