



UNIVERSIDAD TECNICA
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Latent models for test equating methods

In educational measurement, test score equating is essential for ensuring that scores from different test forms can be meaningfully compared and used interchangeably in educational and psychological assessment. While test scores are commonly discrete, traditional equating methods rely on continuous approximations of score distributions. In this talk we present a novel Bayesian nonparametric approach that directly addresses this limitation by producing equated scores on the original discrete scale. Our method treats scores as ordinal random variables and employs a continuous latent variable formulation to perform equipercentile-like equating while maintaining the discrete nature of the score scale. We evaluate the method's effectiveness using both simulated data and real test data collected under different sampling designs. The results show improved performance compared to traditional continuous-based equating methods.