



THE UNIVERSITY OF
CHICAGO

DEPARTMENT OF STATISTICS

Master's Thesis Presentation

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“Intraclass Correlation Coefficient Confidence Interval
Derivation and Application in Longitudinal Data Analysis”

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Abstract

Intraclass Correlation Coefficient is an important parameter used in multilevel models to describe the degree of similarity or correlation of measurements within subjects, and the ratio of variability attributable to the subject over total variability in longitudinal data analysis. This paper introduces an innovative methodology to derive time-varying ICC and its confidence interval and we applied the methodology on a Adolescent Moods dataset to study ICC of positive mood and negative mood across times of day and days of week.