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**RONGHUI (LILY) XU**, University of California, San Diego  
*Explained Variation in Correlated Survival Data*

We consider explained variation in correlated survival data, specifically under the proportional hazards mixed-effects modeling (PHMM) of such data. The concept of explained variation can be formulated in different ways, and we discuss the formulations that are commonly encountered in the literature. Explained variation is particularly relevant under the mixed-effects modeling, as variance components are inherently defined, and their contributions to the total variation can be easily understood. We study the proposed measures both in theory and through simulation, and application examples will be provided.