Bridge FE model updating according to on-field continuous measurements (refer to Prof. A. Collina and Ing. L. Bernardini)

FE model updating consists of calibrating model unknown/uncertain parameters to make the numerical model response match with the experimental measurements. In case of a bridge FE model, an updated model can be used for several purposes, such as damage detection, rational reinforcement design or novel working operational scenarios testing. In this context, the purpose of the present thesis is to investigate model updating algorithm to effectively calibrate and tune FE model parameters exploiting experimental measurements coming from a SHM permanent monitoring system.