

A Statistical Estimation of The Universal Constants Using A Simulation Predictor

by

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Abstract

This work deals with nonlinear least squares method for estimating unknown universal constants C in a computer simulation code real experimental data(or database) and computer simulation data. The best linear unbiased predictor based on a spatial statistical model is fitted from the computer simulation data. Then nonlinear least squares estimation method is applied to the real data using the fitted prediction model(or simulation predictor) as if it were the true simulation model. An application to the computational nuclear fusion device is presented.