

ADJUSTMENT COMPUTATIONS FOR GEOINFORMATICS-II

1.5-0-1-0-6

Review of Least squares (LS): Adjustment of observations using observation equations, condition equations and combined equations form. Variations to LS methods: LS with constraints, Bayesian LS, treatment of nuisance parameters. Adjustment using Generalized LS. Datum Problem and Free Network Adjustment, rank deficient models. Least squares collocation. Dynamic Mode Filtering and Prediction: Prediction, Filtering, and Smoothing, sequential/recursive/phased adjustment, stacking of normal equations, Helmert-Wolf blocking, Kalman Filtering, comparison of Kalman filter and LS. Similarity (S) transformation, deformation analysis. Applications: Geodesy, Photogrammetry, GNSS, 3D Network adjustment.