APPLICATION OF THE AUTOMATIC OPTIMAL SPLINE SMOOTHING METHOD TO OPTIMIZING EDGES OF MOROCCAN BOUGUER GRAVITY ANOMALY MAP

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We present a singular method that is capable to filter out noise as well as suppress outliers of sampled real functions under fairly general conditions. From an a priori selection of the number of points that define the adjusting spline, but not their location in that curve, the automatic optimal spline smoothing method automatically determines the adjusting cubic spline in a least-squares optimal sense. The method is fast and easily allows for selection of various possible number of knots, adding a desirable flexibility to the procedure. As an illustration, we apply the AOSS method to Moroccan Bouguer gravity data map. The AOSS smoothing technique is an efficient tool in the interpretation of geophysical potential field data particularly suitable in denoising, filtering and analyzing gravity data singularities. The AOSS smoothing and filtering technique was found to be consistently useful for optimizing edges and contours of geophysical data maps as Moroccan Bouguer gravity anomaly data map.