

SIC 2004 Exercise Manuscript - Erratum

The SIC 2004 Exercise Manuscript had been submitted to AI-GEOSTAT for reviewing. Recently, We received comments from the reviewers regarding the manuscript. There is one notational error which we made in the manuscript and it has introduced error and caused revisions to some of the equations used in our interpolation methodology. The revisions have been incorporated in the updated document which is downloadable at: "<http://www.fanginc.com/rdic/texas2.doc>". In essence, (Eq. 3) in the manuscript should be modified as:

$$\delta_{\Delta}(x'-x) = \frac{1}{\pi} \left[\frac{\Delta}{(x'-x)^2 + \Delta^2} \right] \quad (\text{Eq. 3})$$

where

$$\lim_{\Delta \rightarrow 0} \delta_{\Delta}(x'-x) = \delta(x'-x)$$

and (Eq. 7A) is added into the manuscript right after (Eq. 7). That is,

$$\int_{a_1}^{b_1} [f(x') - f(x)] \delta(x' - x) dx' = 0 \quad (\text{Eq. 7})$$

and with the substitution of $\delta(x'-x)$ by $\delta_{\Delta}(x'-x)$ of (Eq. 3), (Eq. 7) becomes

$$\int_{a_1}^{b_1} [f(x') - f(x)] \delta_{\Delta}(x' - x) dx' = \mathcal{E} \quad (\text{Eq. 7A})$$

[The interpolant formula established is intact and good. The major revision has taken place in the accuracy/error and convergence analysis because of the \mathcal{E} factor in (Eq. 7A). In addition, new findings regarding the different delta width values for multi-dimension interpolant have also been documented in the above reference.]