Calculation of the numerical derivatives – comparison of the software

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A b s t r a c t: In the geophysical as well as other scientific practice we oftentimes need to calculate the derivatives of the measured data. Since the analytical approach cannot be used, numerical differentiation is adopted. There are many techniques to calculate the derivatives, usually as a part (or plugin) of commercial software. For 0% random noise all of the software lead to almost same results. But if noisy data are processed, the choice of the correct method (software) is far from being trivial because the differences in the outputs are surprisingly huge.

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