

Command Second_Derivative Dialog Result Folder PROCESSED Result Name ☐ Append Result Name as Suffix <table><tr><th>Result Name</th><th>Signal Type</th><th>Signal Folder</th><th>Signal Name</th><th></th></tr><tr><td colspan="5"></td></tr></table> OK Cancel		Result Name	Signal Type	Signal Folder	Signal Name							Derivative of a Signal
Result Name	Signal Type	Signal Folder	Signal Name									
Second_Derivative												
/Signal_Types=		The type of signal to be processed										
/Signal_Names=		The names of the signals to be processed										
/Signal_Folder=		The name of the signal folder										

Compute the second derivative at each point of a signal. The first and last data points become DATA_NOT_FOUND(identified in the C3D file as a POINT Reliability value of &endash;1).

Derivatives are calculated using Finite Difference Algorithms.

Given the signal:

$x(t_i)$ for $i=1, 2, \dots, n$ The second derivative is calculated using: $xDDot(t_i) = (x(t_{i+1}) - 2x(t_i) + x(t_{i-1})) / ((t_{i+1} - t_i)^2)$

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