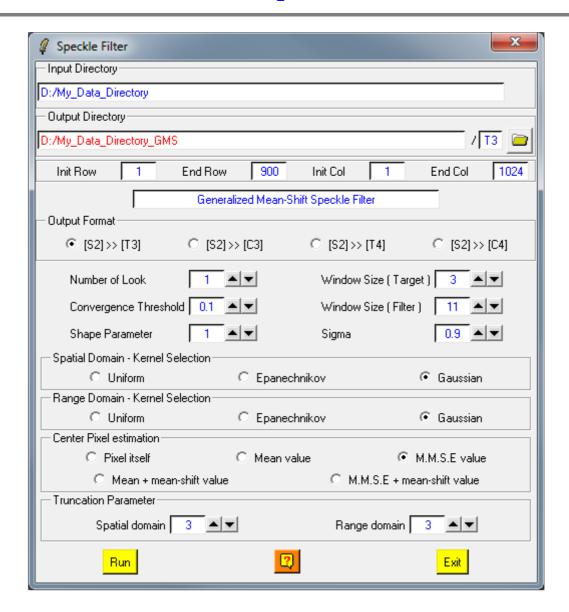


Generalized Mean Shift Speckle Filter



Description:

This function is used to apply a Polarimetric Speckle filtering on polarimetric raw binary data.

The proposed polarimetric Speckle Filetr is:

• Generalized Mean Shift filter.

According to the input data format, indicated in the widget, different compatible output data formats are proposed according the following table:

Input Data Format	Output Data Format
(2x2) Sinclair matrix [S2]	[T3], [T4], [C3], [C4]
(3x3) Coherency matrix [T3]	[T3]
(4x4) Coherency matrix [T4]	[T4]
(2x2) Covariance matrix [C2]	[C2]
(3x3) Covariance matrix [C3]	[C3]
(4x4) Covariance matrix [C4]	[C4]
Dual Polarimetric Elements (Sxx, Sxy)	[C2]

Comments:

Parameters written in Red can be modified directly by the user from the keyboard.

Input/Output Arguments:

Input Indicates the location of the considered **Main Directory** (**MD**)

Directory containing the polarimetric data sets to be filtered.

Output Indicates the location of the filtered data output directory.

Directory The default value is set automatically to:

Main Directory_GMS / YY.

where YY is associated with the Output Data Format (C2, C3, C4,

T3 or **T4**).

Output Image Number of Rows/Columns:

The output image numbers of rows and columns are initialised to the input data set dimensions.

Users wishing to process a sub-part of the initial image can modify the **Init** and **End** values of the converted images rows and columns.

Note: init and end values have to remain within the range defined by the input image dimensions.

Filtering Parameters:

Looks

Window size Users have to set the size of the different sliding window used

during the filtering process.

Number of Users have to set the Input data equivalent number of looks used to

compute the a priori input speckle noise variance.

The default value of N is set to 1.

Other parameters

A complete description of the other parameters to be set can be found in :

Mean-Shift-Based Speckle Filtering of Polarimetric SAR Data

IEEE TGRS vol 52, n°7, july 2014

Fengkai Lang, Jie Yang, Deren Li, Lei Shi, Jujie Wei

Note: The Non Local Means filter functionality is a contribution by

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