Fuzzy-based propagation of prior knowledge to improve large-scale image analysis pipelines

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S3 Table: Abbreviations, parameterizations and descriptions of the investigated seed detection algorithms.

Method	Parameters	Description
LoGSM	$\sigma_{\min} = 4$, $\sigma_{\max} = 8$, $\sigma_{\text{step}} = 1$, $t_{\text{wmi}} = 0.0025$	Seed detection in the LoG scale space maximum projection with a manually adjusted window mean intensity threshold (t_{wmi}) and a strict maximum detection.
LoGNSM	$\sigma_{\min} = 4$, $\sigma_{\max} = 8$, $\sigma_{\text{step}} = 1$, $t_{\text{wmi}} = 0.0025$	Seed detection in the LoG scale space maximum projection with a manually adjusted window mean intensity threshold (t_{wmi}) and a non-strict maximum detection.
LoGNSM+F	$\sigma_{\min} = 4$, $\sigma_{\max} = 8$, $\sigma_{\text{step}} = 1$, $t_{\text{wmi}} = 0.0025$, $t_{\text{dbc}} = 5$	Same detection as LoGNSM but with additional fusion (F) of redundant detections using a hierarchical clustering approach with a distance-based cutoff value (t_{dbc}).
LoGNSM+F+U	$\sigma_{\min} = 4$, $\sigma_{\max} = 8$, $\sigma_{\text{step}} = 1$, $t_{\text{dbc}} = 5$, $\boldsymbol{\theta}_{\text{wmi}} = (0.0025, 0.0025, \infty, \infty)$, $\boldsymbol{\theta}_{\text{smi}} = (0.0007, 0.0007, \infty, \infty)$, $\boldsymbol{\theta}_{\text{zpos}} = (50, 250, \infty, \infty)$, $\alpha_{11} = 0.0001$, $\beta_{11} = \alpha_{11}$	Same detection as LoGNSM but with uncertainty-based (U) threshold and the fusion of LoGNSM+F. The forward threshold α_{11} is set slightly above zero, such that obvious false positives are rejected. As no further processing was needed β_{11} was set to α_{11}.