A Guide to Branched Structure Analyses in Neurolucida

Categories of Branched Structure Analyses in Neurolucida	Part of the neuron									Morphometric data																																
	whole neuron	each segment	point to point	tree by order	order (all trees)	tree	user-defined closed contour	tree by terminal type*	bins along processes (below)	soma perimeter	soma area	soma volume	soma shape**	process length***	process surface area	process volume	process tortuosity	process diameter	number of nodes	distance to node	number of spines	spine density	spine length and diameter	number of endings	type of ending	order of ending	ending coordinate	distance to ending	ending neighbor coordinates	number of segments	terminal type*	angles	point coordinates	point type****	number of markers	location, distance of markers	density of markers	diameter of marker	synapse density +	synapse diameter +	synapse distance to branch +	synapse distance along branch+	synapse diameter +
Neuron Summary	●									●	●	●	●	●	●	●			●		●				●																		
Segment		●												●	●	●	●	●													●	●											
Segment Points			●											●	●	●		●			●												●	●									
Each Tree				●										●	●	●			●		●				●	●						●											
Tree Totals					●									●	●	●			●		●				●	●						●											
Individual Tree						●								●	●	●			●		●				●	●																	
Terminal Distance	●																									●	●	●	●													
Layer Length							●							●					●						●	●																	
Nearest Termination	●																											●		●												
Terminals								●						●	●	●					●				●						●												
Tree Intervals									●					●							●													●									
Individual Marker	●	●			●	●																												●	●							
Marker Totals					●									●	●	●																		●		●	●						
Spines					●																	●	●																				
Nodes	●																●			●																							
Synapse tree					●																																	●	●			
Synapse details		●																																						●	●	●

* end or node
** feret max, feret min, aspect ratio, compactness, convexity, form factor, roundness, solidity
*** process is axon, dendrite, and/or apical dendrite
**** end, center, or beginning

+ Synapse analyses are only available if you have the AutoSynapse module