Table S1. Computational efficiency comparison of PLMA algorithm with traditional meshing methods.

Algorithm	Time Complexity	Space Complexity	Processing Time (s)	Number of Facets
Alpha-shape	$O(n \log n)$	$O(n)$	0.508	4,850
Delaunay-2.5D	$O(n \log n)$	$O(n)$	0.082	19,495
Ball-pivoting	$O(n^2)$	$O(n)$	915.98	1,337
PLMA-3	$O(n \log n)$	$O(n)$	3.3027	86
PLMA-4	$O(n \log n)$	$O(n)$	3.3205	84
PLMA-5	$O(n \log n)$	$O(n)$	3.5241	112

Note: All algorithms were tested on identical leaf point cloud data. Processing times are reported for single leaf meshing operations. PLMA variants (3, 4, 5) represent different numbers of longitudinal axes used in the algorithm.