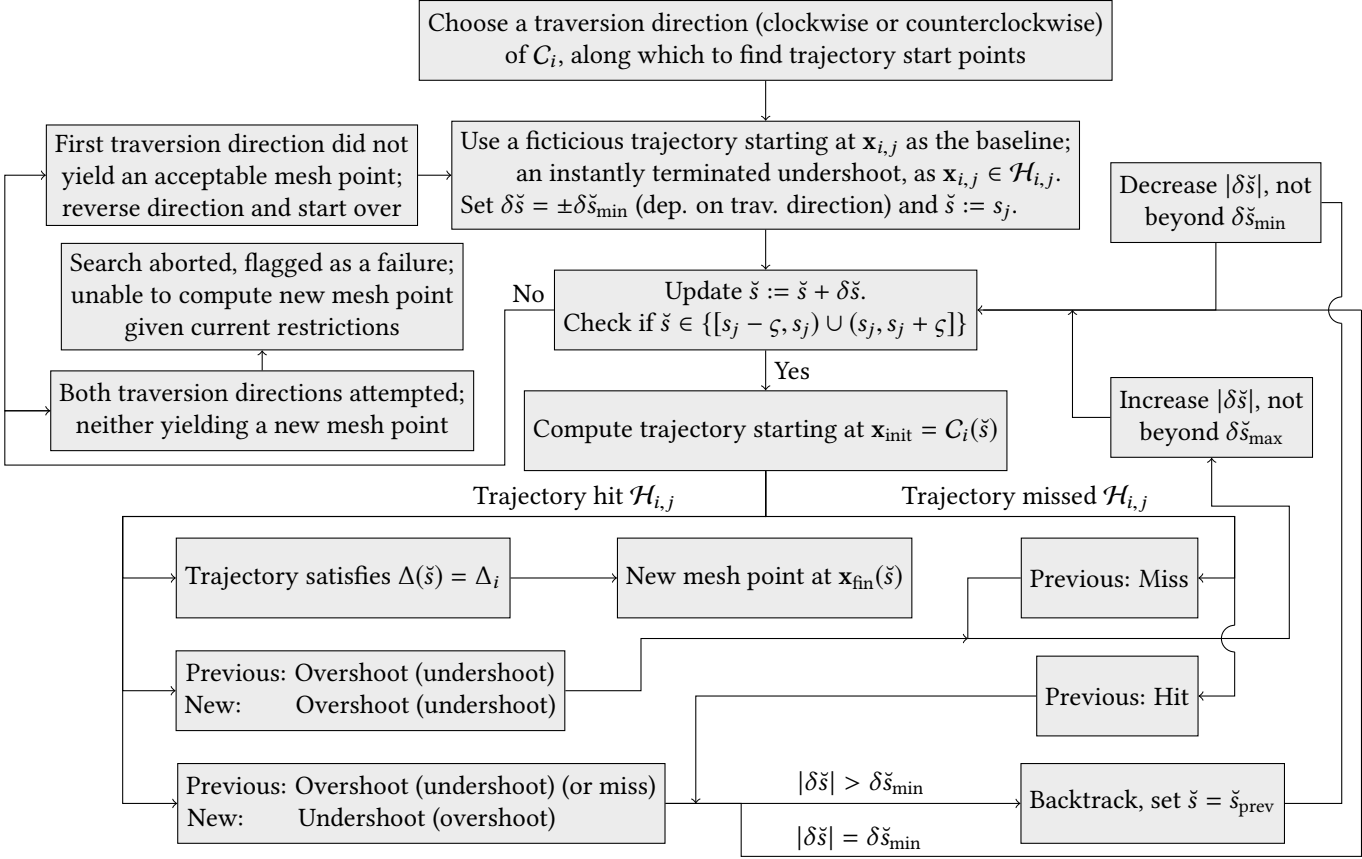
Choose a traversion direction (clockwise or counterclockwise) of C_i, along which to find trajectory start points
First traversion direction did not yield an acceptable mesh point; reverse direction and start over
Use a ficticious trajectory starting at $\mathbf{x}_{i,j}$ as the baseline; an instantly terminated undershoot, as $\mathbf{x}_{i,j} \in \mathcal{H}_{i,j}$. Set $\delta\check{s} = \pm\delta\check{s}_{\min}$ (dep. on trav. direction) and $\check{s} := s_j$.
Decrease $|\delta\check{s}|$, not beyond $\delta\check{s}_{\min}$
Search aborted, flagged as a failure; unable to compute new mesh point given current restrictions
No
Update $\check{s} := \check{s} + \delta\check{s}$. Check if $\check{s} \in \{[s_j - \varsigma, s_j) \cup (s_j, s_j + \varsigma]\}$
Yes
Both traversion directions attempted; neither yielding a new mesh point
Compute trajectory starting at $\mathbf{x}_{\text{init}} = C_i(\check{s})$
Increase $|\delta\check{s}|$, not beyond $\delta\check{s}_{\max}$
Trajectory hit $\mathcal{H}_{i,j}$
Trajectory missed $\mathcal{H}_{i,j}$
Trajectory satisfies $\Delta(\check{s}) = \Delta_i$
New mesh point at $\mathbf{x}_{\text{fin}}(\check{s})$
Previous: Miss
Previous: Overshoot (undershoot)
New: Overshoot (undershoot)
Previous: Hit
Previous: Overshoot (undershoot) (or miss)
New: Undershoot (overshoot)
$|\delta\check{s}| > \delta\check{s}_{\min}$
Backtrack, set $\check{s} = \check{s}_{\text{prev}}$
$|\delta\check{s}| = \delta\check{s}_{\min}$