$\widetilde{\boldsymbol{L}_{\mathrm{p}}}^{0} = \boldsymbol{L}_{\mathrm{p}}(t_0)$

For $i = 0, 1, ..., n$

$\boldsymbol{R}^i = \widetilde{\boldsymbol{L}_{\mathrm{p}}}^{i} - \boldsymbol{L}_{\mathrm{p}}(\boldsymbol{F}_{\mathrm{e}}(\boldsymbol{S}(\widetilde{\boldsymbol{L}_{\mathrm{p}}}^{i})))$

Y: $\left|\left|\boldsymbol{R}^i\right|\right|_2 < \epsilon_{\mathrm{tol}}$ — N

break

Y: $\left|\left|\boldsymbol{R}^i\right|\right|_2 \leq \left|\left|\boldsymbol{R}^{i-1}\right|\right|_2$ or $i = 0$ — N

$\alpha^i = 1$

$\alpha^i = \beta\alpha^{i-1}$

solve $\boldsymbol{R}^i + \boldsymbol{R}_{,\widetilde{\boldsymbol{L}_{\mathrm{p}}}} \bullet\circ \Delta\boldsymbol{L}_{\mathrm{p}}^i = 0$

$\widetilde{\boldsymbol{L}_{\mathrm{p}}}^{i} = \widetilde{\boldsymbol{L}_{\mathrm{p}}}^{i-1}$

$\widetilde{\boldsymbol{L}_{\mathrm{p}}}^{i+1} = \widetilde{\boldsymbol{L}_{\mathrm{p}}}^{i} + \alpha^i \Delta\boldsymbol{L}_{\mathrm{p}}^i$

$\boldsymbol{L}_{\mathrm{p}}(t) = \widetilde{\boldsymbol{L}_{\mathrm{p}}}^{i}$