repeat until convergence:

for $i = 1$ **to** n :

$\gamma^*_{\lambda_k,i} \leftarrow \text{argmin}_\gamma \left[\|\bar{q} - c^*_i (q_i \circ \gamma)\|^2 + \lambda_k \mathcal{R}(\gamma) \right]$ *via Dynamic Programming*

$f^*_i \leftarrow \tilde{f}_{\lambda_{k-1},i} \circ \gamma^*_{\lambda_k,i}$, $q^*_i \leftarrow \texttt{srvf}(f^*_i)$, $c^*_i \leftarrow \frac{\langle \bar{q},\ q^*_i \rangle}{\langle q^*_i,\ q^*_i \rangle}$

end

$\bar{q}^* \leftarrow \frac{1}{n} \sum q^*_i, \quad \epsilon \leftarrow \|\bar{q} - \bar{q}^*\|^2$ } *convergence check*

if $\epsilon > tol$: $\bar{q} \leftarrow \bar{q}^*$

end repeat