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1: Calculate  $\mu_{\max} = \max_v 2\|K_v^{1/2}(Y - \bar{Y})\|/\sqrt{n}$ 
2: Set  $\mu_1 = \mu_{\max}$  and  $\mu_2 = \mu_{\max}/\mathbf{rat}$  ▷  $\mathbf{rat}$  is setted by user.
3: repeat
4:   Implement RKHS group lasso algorithm, Algorithm 1, with  $\mu_i = (\mu_1 + \mu_2)/2$ 
5:   Set  $q = |\hat{S}_{\hat{f}_{\text{Group Lasso}}}|$ 
6:   if  $q > q_{\max}$  then
7:     Set  $\mu_1 = \mu_1$  and  $\mu_2 = \mu_i$ 
8:   else
9:     Set  $\mu_1 = \mu_i$  and  $\mu_2 = \mu_2$ 
10:  end if
11: until  $q = q_{\max}$  or  $i > \mathbf{Num}$  ▷  $\mathbf{Num}$  is setted by user.
12: Implement RKHS ridge group sparse algorithm, Algorithm 2, with  $(\mu = \mu_{q_{\max}}, \gamma > 0)$ 

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