



Figure 1: Illustration of Definition 4.1: Shaded region is the convex feasible set  $\mathcal{F}_f$ , with boundary  $R^*(\delta)$ . Algorithm 3 takes some slope value  $\rho$  and yields average loss attained by point with tangent of slope  $\rho$ . Algorithm 4 binary searches for  $\rho$  when given desired failure probability  $\delta$ .