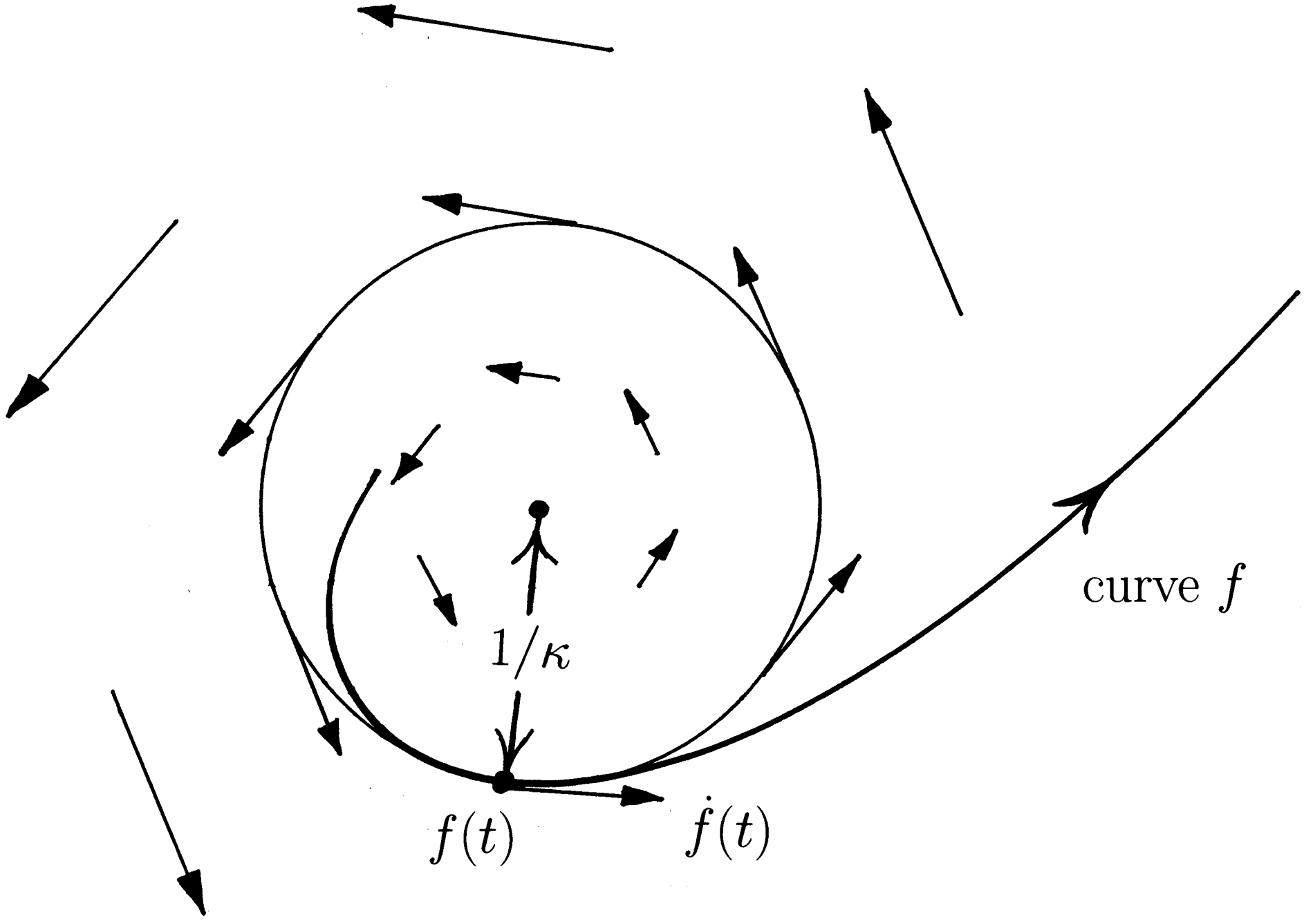
curve f
$1/\kappa$
$f(t)$
$\dot{f}(t)$