Introduction

Curvilinear motion:

- Dynamics of vehicles (cars, planes, ...)

- Ballistics,

- Forces,

- Vortex lines,

- ...

$$\vec{r} = \vec{r}(t) \qquad \vec{v} = \frac{\mathrm{d}\vec{r}}{\mathrm{d}t} \qquad \vec{a} = \frac{\mathrm{d}\vec{v}}{\mathrm{d}t}$$