

Pathlines @model

[@wikipedia](#)

Given velocity vector $\vec{u} = (u_x, u_y, u_z)$ the [pathlines](#) is a bunch of curves $\vec{r}_s = (x_s, y_s, z_s) \in \mathbb{R}^3$, parametrized by the stem points \vec{r}_{s0} at zero-time t_0 , and solving the following equation:

$$\begin{cases} \frac{d\vec{r}_s(t)}{dt} = \vec{u}_s(\vec{r}_s, t) \\ \vec{r}_s(t_0) = \vec{r}_{s0} \end{cases}$$