Summary of lecture 11-Tangent

Equation of the tangent

- Consider $\mathbf{f}(t) = (x(t), y(t), z(t))$. The tangent vector is $\mathbf{T}(t) = \left(\frac{dx(t)}{dt}, \frac{dy(t)}{dt}, \frac{dz(t)}{dt}\right).$
- The equation of the tangent at the point $\mathbf{f}(a)$, is given by:

$$\mathbf{r}(s) = (x(a), y(a), z(a)) + s\mathbf{T}(a) = (x(a), y(a), z(a)) + s\left(\frac{dx(a)}{dt}, \frac{dy(a)}{dt}, \frac{dz(a)}{dt}\right)$$

