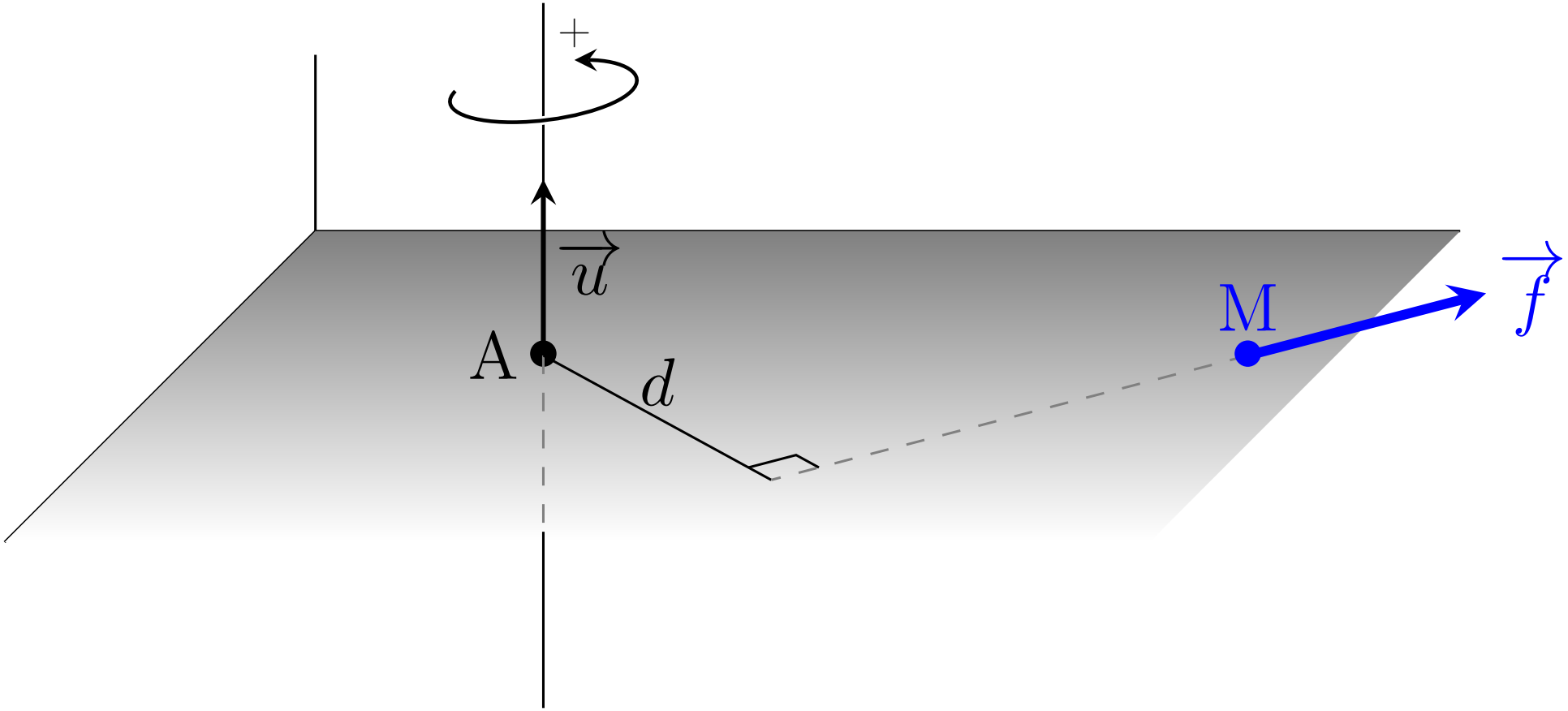
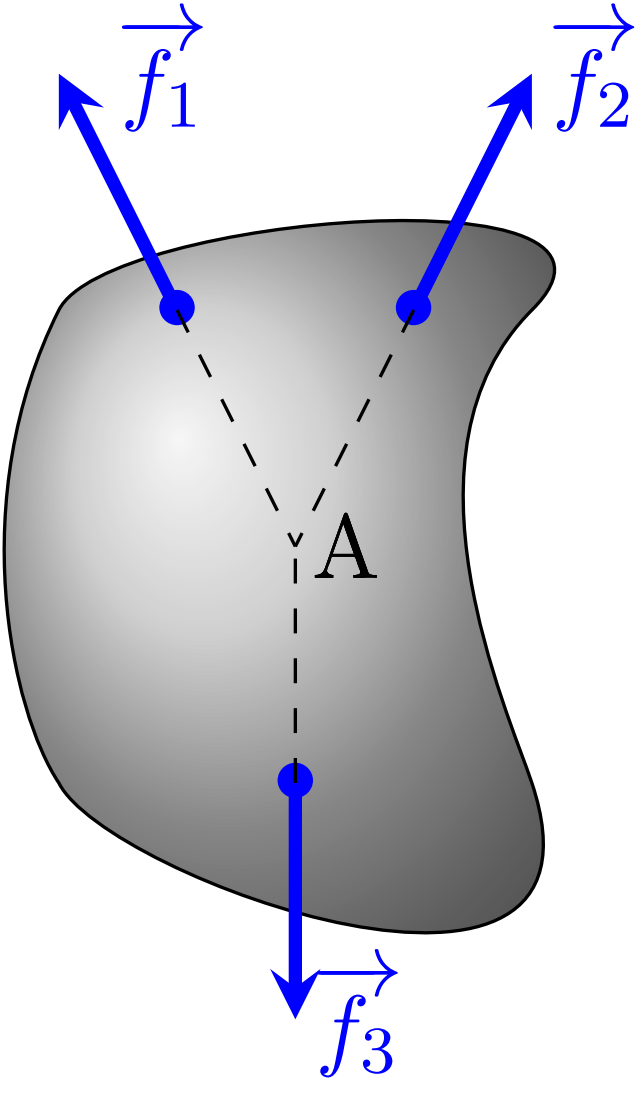
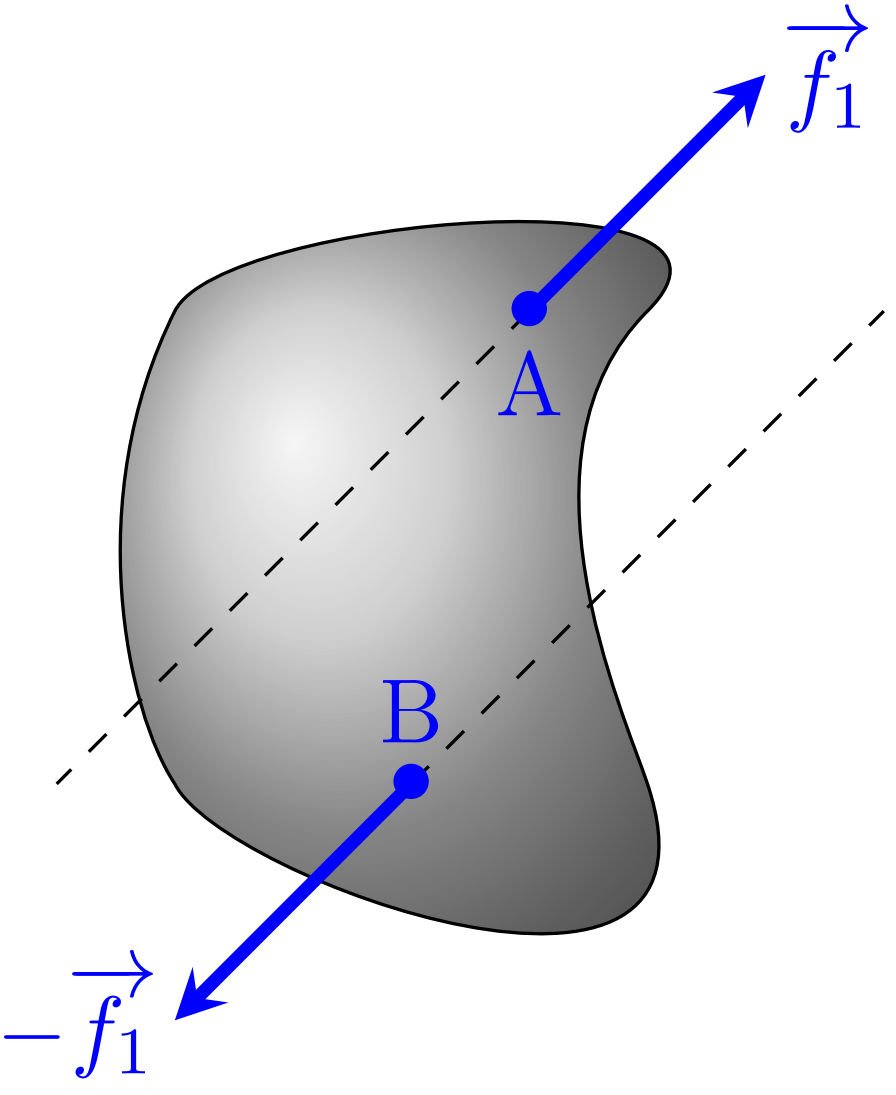
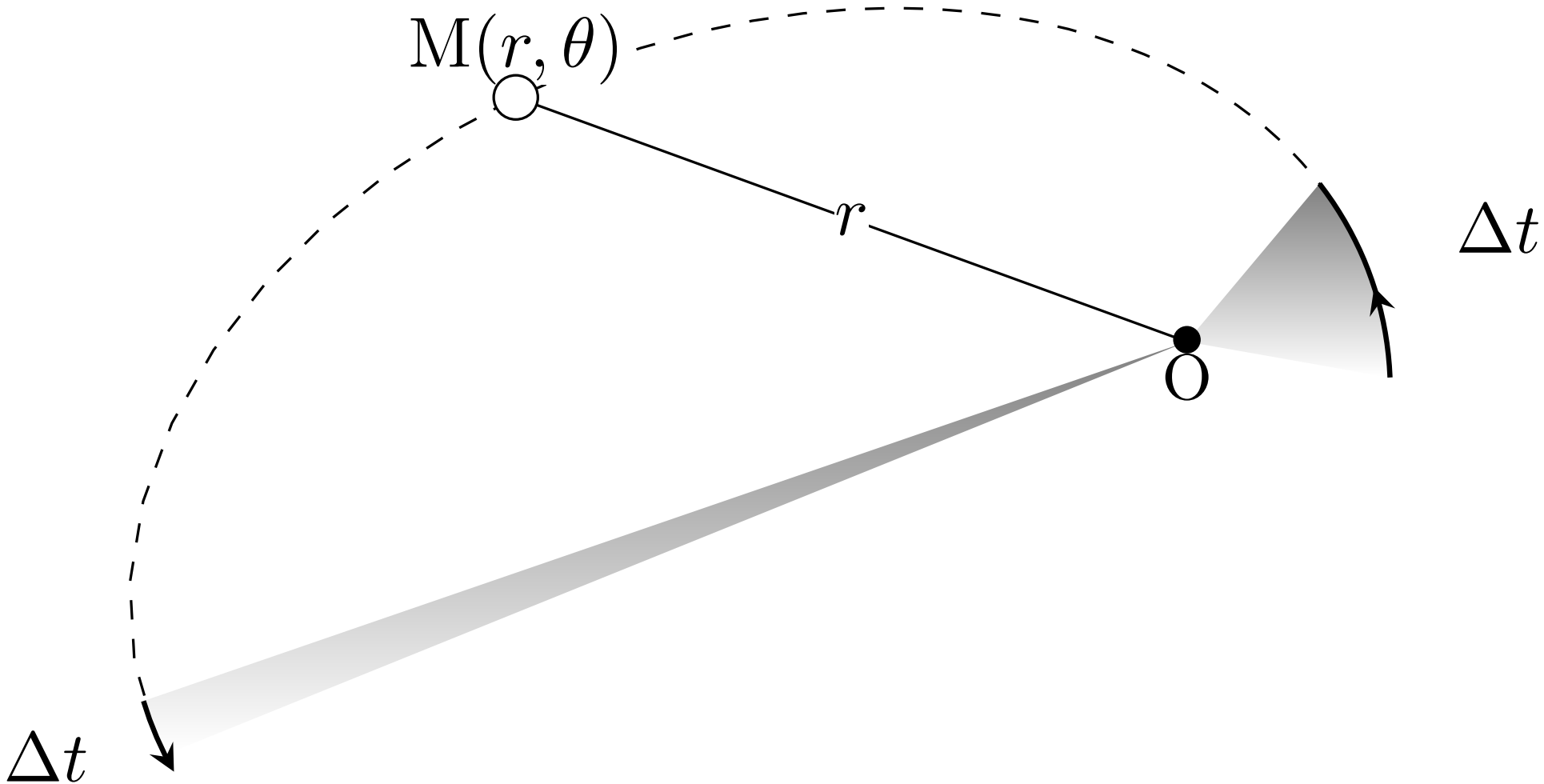
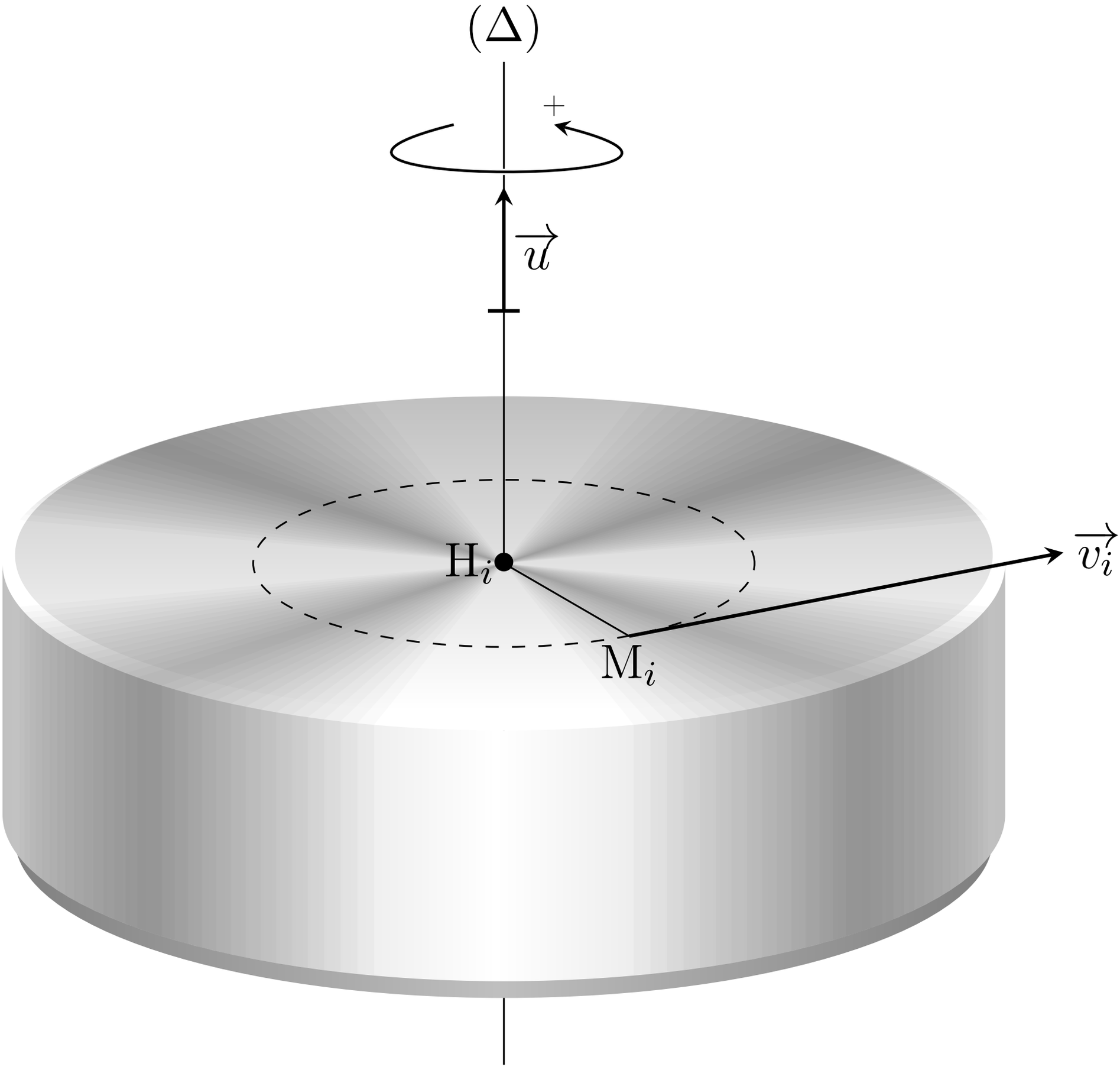
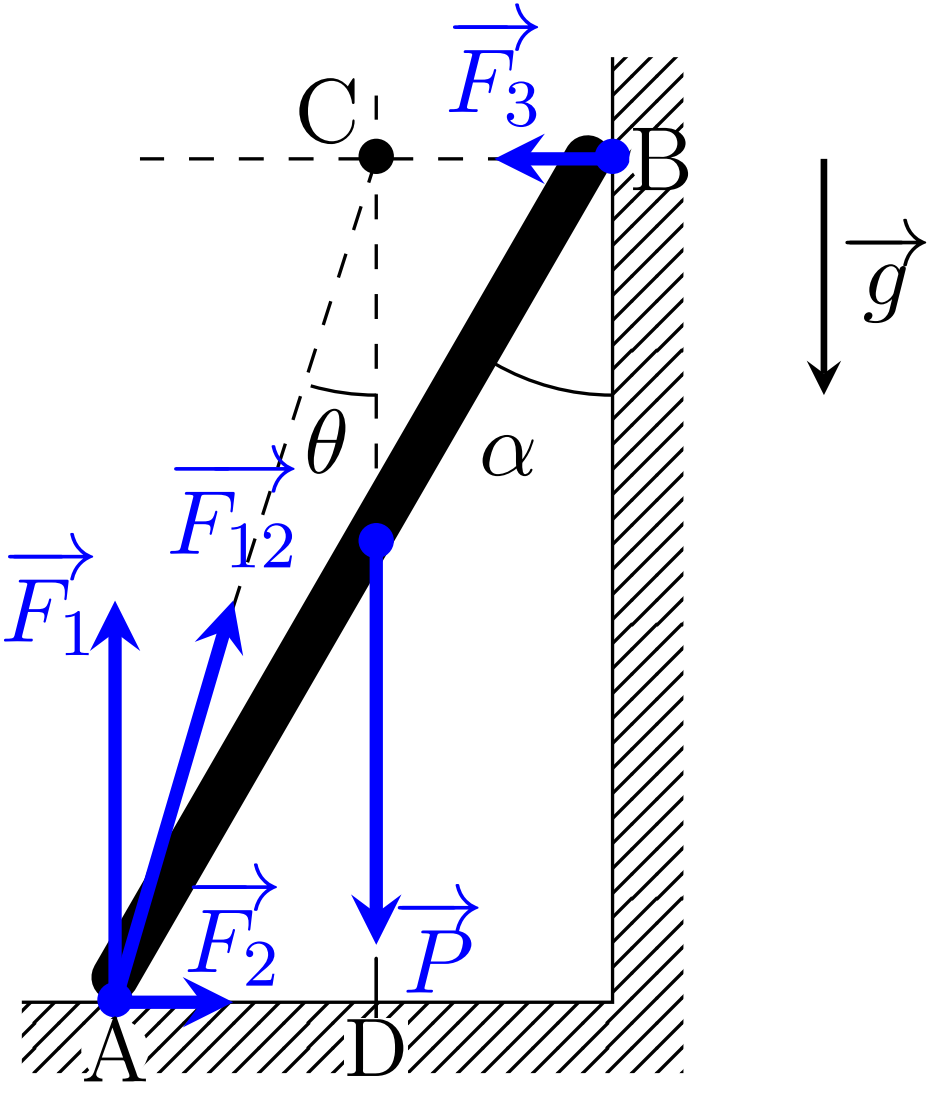

+
$\overrightarrow{u}$
A
d
M
$\overrightarrow{f}$

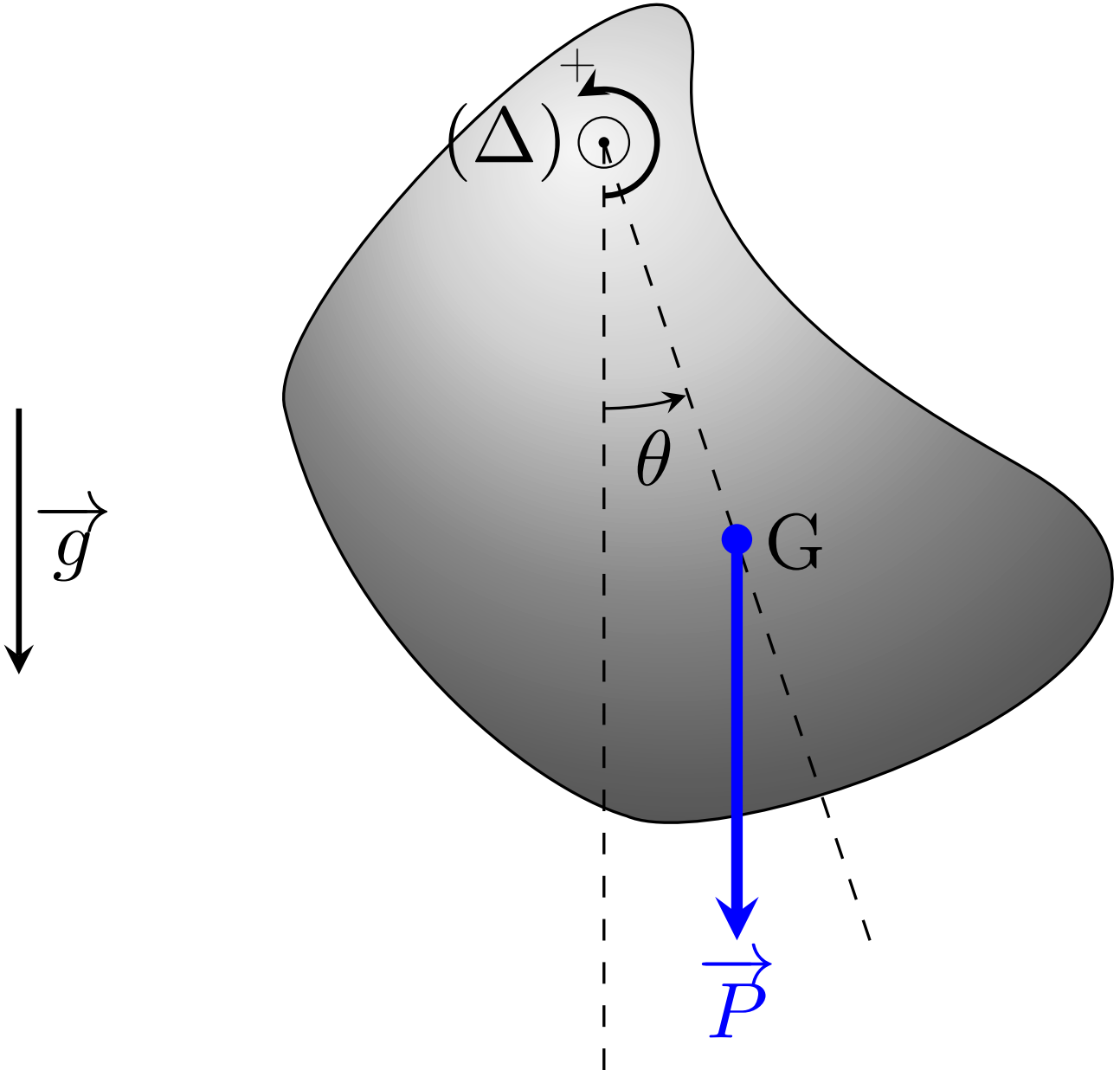

$\overrightarrow{f_1}$
$\overrightarrow{f_2}$
A
$\overrightarrow{f_3}$


$\overrightarrow{f_1}$
A
B
$-\overrightarrow{f_1}$


M(r, θ)
r
O
Δt
Δt


(Δ)
$+$
$\overrightarrow{u}$
H_i
$\overrightarrow{v_i}$
M_i


$\overrightarrow{F_3}$
C
B
$\overrightarrow{g}$
θ
α
$\overrightarrow{F_{12}}$
$\overrightarrow{F_1}$
$\overrightarrow{F_2}$
$\overrightarrow{P}$
A
D


(Δ)
+
θ
G
$\overrightarrow{g}$
$\overrightarrow{P}$