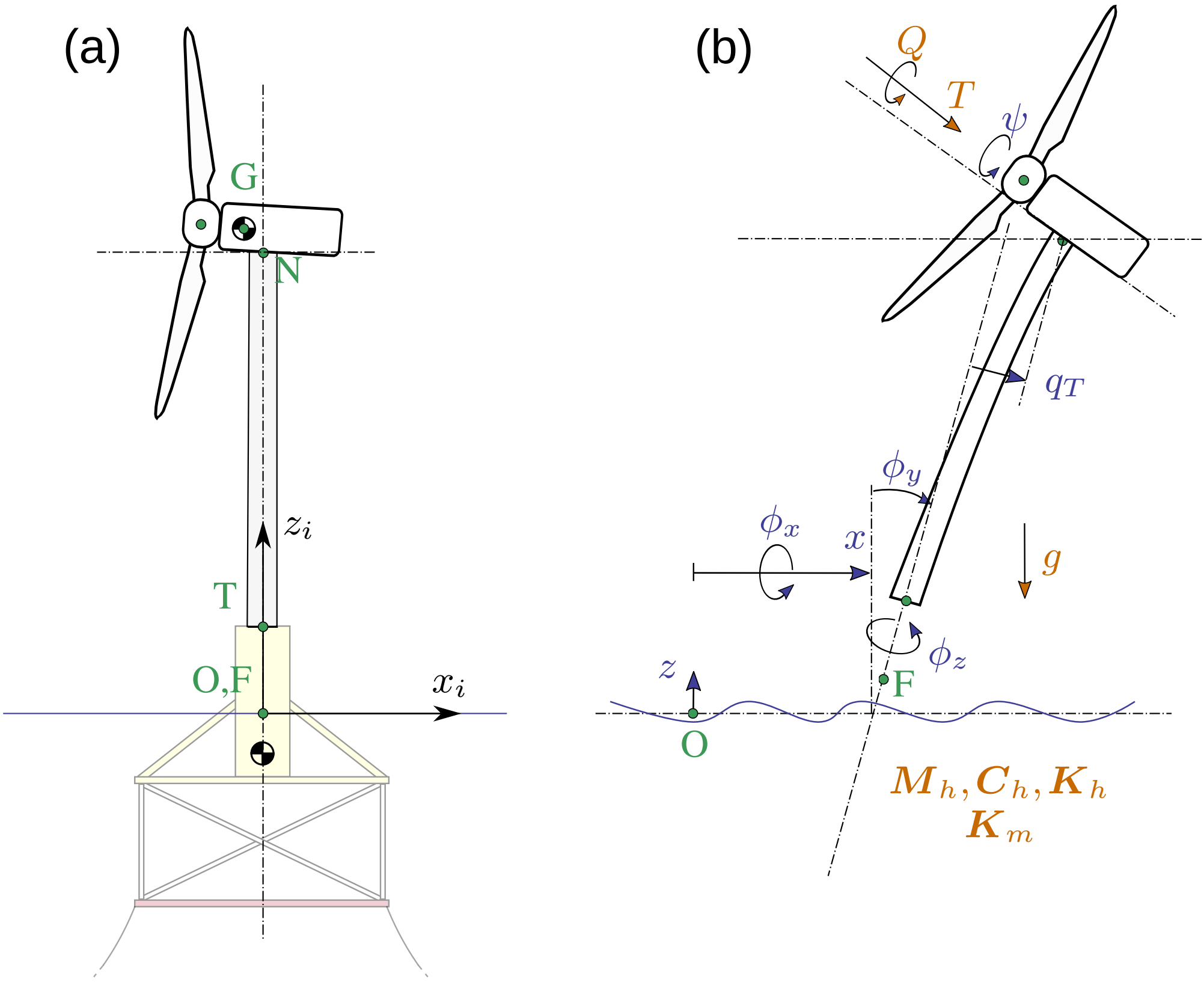
(a)
G
N
z_i
T
O,F
x_i
(b)
Q
T
ψ
q_T
ϕ_y
ϕ_x
x
g
ϕ_z
z
F
O
$\boldsymbol{M}_h, \boldsymbol{C}_h, \boldsymbol{K}_h$
$\boldsymbol{K}_m$