```matlab
function tau_body_cmd = attitude_pd_torque(q, w, q_des,
h_w,p)

% Quaternion error
qc = quat_conj(q);
q_e = quat_mul(q_des, qc);

% Enforce shortest rotation
if q_e(1) < 0
    q_e = -q_e;
end

e_vec = q_e(2:4); % small angle error vector
approximation
w_des = [0; 0; 0];
e_w = w - w_des;


Km_unload = 0.00001;
tau_unload = -Km_unload * h_w;

tau_pd = -p.Kp_att * e_vec - p.Kd_att * e_w;

% Combined commanded body torque
tau_body_cmd = tau_pd + tau_unload;

% saturate to wheel torque limits
tau_body_cmd = max(-p.tau_w_max_Nm, min(p.tau_w_max_Nm,
tau_body_cmd));

end
```