ME 596 Spacecraft Dynamics: Homework Assignment 2

Your submission must be submitted as a report, by which I mean your work must be written out as it would be in a report, showing and explaining all your work, and clearly stating your answers using complete sentences and references as appropriate, and the entire assignment must be neatly written or typeset.

You must include your name, course number, and assignment number at the top of the first page.

You must upload your work as a *single* pdf file by 11:59 PM on the due date.

1. Develop the rotation matrix for a "1-2-1" rotation from $\mathcal{F}_a$ to $\mathcal{F}_b$. Your result should be a single matrix in terms of θ_1, θ_2, and θ_3.

   Check your work using a numerical example of your choice.

2. Develop the exact and linearized rotation matrices for a "2-1-3" rotation from $\mathcal{F}_a$ to $\mathcal{F}_b$. Each of your results should be a single matrix in terms of θ_1, θ_2, and θ_3.

   Check your results using numerical examples of your choice.