The calculations for the dynamic model are mostly built on “Modeling and Simulation of the LAUV Autonomous Underwater Vehicle” written by Jorge Estrela da Silva, Bruno Terra, Ricardo Martins and Joao Borges de Sousa.

The dynamic model consists of the required matrixes and functions to describe the AUV’s dynamic response when sailing a mission. The dynamic model is a solution to the following equation:

Where each of the parameters is as described in “Modeling and Simulation of the LAUV Autonomous Underwater Vehicle”, most of the values for the matrixes are taken from the same report but some are gotten from Simulink model made by Valur Einarsson in 2003 for the Gavia AUV.

Example of usage:

