

# Abstract

With my experience in the French Navy, it occurred to me to link the theoretical aspect of the static and dynamic courses to something concrete and useful for nautical sciences students destined to become officer of the watch. In this thesis, I suggest one way among many others to achieve this. The objective will then be to create an educational and fun computer tool allowing the calculation and representation of environmental forces on a docked ship and her mooring lines. We will see in particular, through an accident report, that it is not a safe situation and that it is essential for an officer to understand its various mechanisms. After studying the forces that are applicable to a docked vessel, we will look at the design of the tool itself. We will see that this one presents certain functional limits but that they can be circumvented in a certain measure. The realization of a scenario will allow us to become aware of the usefulness of the tool at school and to conclude that the main objective is achieved.