

1125-C1-1688      **Joshua Hallam\*** (hallamjw@wfu.edu). *Definitions and Asimov's Three Laws of Robotics.*

Understanding the importance of definitions in mathematics is an important skill for undergraduates to develop. Last spring, during a discrete mathematics course, my students did a project intended to help them understand this importance. The project was based on Asimov's three laws of robotics:

1. A robot may not harm a human, or through inaction allow a human to come to harm.
2. A robot must obey orders given to it by humans unless it conflicts with the first law.
3. A robot must protect its own existence unless doing so conflicts with the first and second law.

The students created a short story in which one of the laws is "violated" because of a faulty definition. The students also had to discuss how their faulty definition could be fixed and whether this new definition led to unintended consequences. In my talk, I will discuss the outcomes of the project. (Received September 18, 2016)