

1163-I1-1169 **Debbie Yuster*** (dyuster@ramapo.edu), Ramapo College of New Jersey, 505 Ramapo Valley Rd., Mahwah, NJ 07430. *Stopping terrorists, saving the environment, and keeping network traffic flowing: Undergraduate research using industry-supplied problems.*

With funding and training from the MAA's PIC Math program, I taught an upper-division Math elective in Spring 2017. Students were divided into three groups, each of which researched a problem of interest to a partner company, using math and coding. I will give an overview of forming the corporate partnerships and running the course, and will discuss the three research partners and projects: 1) A financial company that must check account holder names against a terrorist watch list, who asked students to evaluate the performance of their name-matching algorithm, 2) A company whose ships lay undersea communications cables, who asked students to create a model that estimates their fleet's toxic emissions, and 3) A digital forensics company, who asked students to analyze a control method used to avoid computer network congestion. (Received September 14, 2020)