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Stephen L. Hobbs* (steve.hobbs@navy.mil), 6391 Caminito Del Pastel, San Diego, CA 92111.
A Mathematical Modeling Perspective on the US Navy, Humanitarian Aid, and International Relations.

Modern US Navy engagements are carefully planned operations, with an attempt to optimize the desired outcome given resource and cost considerations. Given the cost of military conflicts between nations, perhaps we in the DoD should put more emphasis on optimizing long-term goals of world peace and economic growth, avoiding settling disputes by military means.

In this talk I will present a model to help optimize the US Navy's response to disaster relief, and discuss the added work required for implementing it. I may also discuss other models that address assistance to populations in situations where failure to assist might lead to a humanitarian crisis or armed conflict. In presenting these applications I will point out the large scope of mathematics that is required to create a significant capability in today's Navy. (Received September 21, 2018)