Mentee: Sam Feizi  
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Year (F, S, J, Sr): F  
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Department: Mechanical Science and Engineering  
Faculty Advisor:

Spring 2016 Research Plan

1. Write a brief outline of your research plan:
   I intend to learn and conduct research on nanoscale optimization of thermoelectric energy conversion, specifically using the Boltzmann Equation implemented by the Monte Carlo method. This is structured around the idea that wasted energy in the form of heat by the second law of thermodynamics can be minimized or rather optimized through this research. Therefore the efforts of myself and my fellow peers will be to run the Monte Carlo program and simulate the effects on phonon and electron transports in their nanostructures. It is apparent that through the remainder of the semester my task will be to assist in building the code for the Monte Carlo program and eventually execute it to actually conduct our research.

2. What do you hope to learn and achieve by the end of the semester?
   By the end of the semester I hope to learn a greater understanding of python, simulation of quantum concepts using the Monte Carlo method and further develop my research and tech based knowledge and experience.

Mentee Signature: ___________________________ Date: 02/17/16
Mentor Signature: ___________________________ Date: 02/17/16