P.U.R.E. Research Plan Form

Mentee Information
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Fall 2016 Research Plan

1.) Write a brief outline of your research plan:
   1. Create parametric CAD model for a metal cavity test structure
   2. Use Monte-Carlo or Sparse-Grid based sampling technique to determine sets of input parameters
   3. Perform full-wave Electromagnetic simulation
   4. Extract Electromagnetic field statistics
   5. Compare the result with those predicted by Random Coupling Theory
   6. Explore ways to separate the universal and non-universal field statistics

2.) What do you hope to learn and achieve by the end of the semester?
   1. Explore the forefront research in the field of statistical electromagnetic analysis in wave-chaotic systems
   2. Be able to perform Electromagnetic analysis using ANSYS HFSS
   3. Familiarize myself with various software tools related to electromagnetic researches
   4. Gain knowledge about the Monte Carlo method and different engineering methods to estimate probability
   5. Know how to analyze electromagnetic field statistics
   6. prepare myself for further study in ECE 313 and ECE 329

Mentee Signature:  Yinan Hu  Date:  Sep. 21, 2016
Mentor Signature:  Xiao Ma  Date:  9/21/2016