



Development of a Research Statement

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Definition of a Research Statement

■ What *is* a research statement?

- ◆ Articulation of **your research field**
 - † Key directions
 - † Promising lines of inquiry
- ◆ Articulation of **your own research**
 - † Motivation
 - † Long term goals
 - † Short term goals
 - † Key approaches
 - † Results to date
 - † Specific research proposals
- ◆ The **importance** of the field, and of your research to it



The Key Elements of a Research Statement. I

■ Content

- ◆ **Clear Statement of the Problem (Set)**
 - † Broad and inclusive
 - † Is this a single issue, or a potential new field?
- ◆ **Summary of the State of the Art**
- ◆ **Discussion of Research Methodologies and Approaches**
 - † Theoretical
 - † Experimental
 - † Computational or Numerical Simulation



The Key Elements of a Research Statement. II

■ Content (cont.)

- ◆ **Discussion of Research Methodologies and Approaches (cont.)**
 - † Observational
 - † Cataloguing
 - † Design-Oriented
 - † Hypothesis-Driven (*e.g.*, NIH)
 - † Area-defining (new intellectual territory)
- ◆ **Uniqueness of the Problem and Approach**
- ◆ **Progress to Date**
 - † Summary of Ph.D. Thesis
 - † Summary of major publications



The Key Elements of a Research Statement. III

■ Content (cont.)

- ◆ **Impact** on the State of the Art to Date
- ◆ **Proposed Research Initiatives**
 - Near Term
 - Mid Term
 - Far Term
- ◆ **The End Goals**
 - If all of this works out, what can one envision as the result?
- ◆ **Incorporation of this Research in the Classroom**
 - Exploration of research methodologies
 - Problem statements and related research projects