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*Susie Zhao, Ph.D.    Email: [Xiang.zhao@aamu.edu](mailto:Xiang.zhao@aamu.edu)*

*Alabama A&M University*

Research areas/projects:

Numerical modeling and simulation, data mining, scientific visualization

Roles:

Professor in Computer Science,

Director of Laboratory of Advanced Modeling & Simulations,

Principle Investigator

Problems & Algorithms:

Multi-phase flows, fluid-structure interaction, CNT-enhanced materials

Grid adaptation

Status & Experience:

- Already doing supercomputing;my codes are serial and parallel together
- HPC and data analysis are very critical to the goals of my projects
- Developed my own software and also use community codes
- Use databases for project management
- Data generated from simulation are large and well formatted

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### Computational Challenges:

- Communication overhead
- Dynamic load balance
- Data visualization and analysis

### My Plan & Expectation:

- Understand the latest HPC advancement and available tools
- Gain hands-on HPC skills using the resources at SDSC
- Network with the professionals in HPC community
- Identify new ideas for grant proposals and/or curriculum enhancement