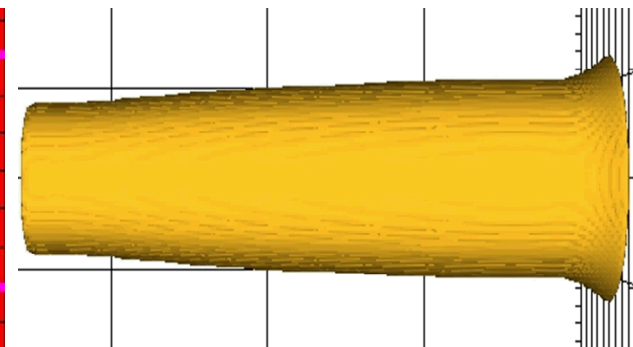
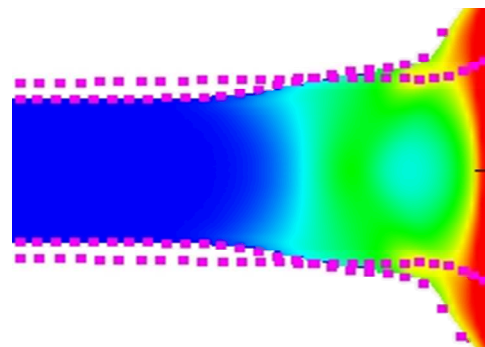
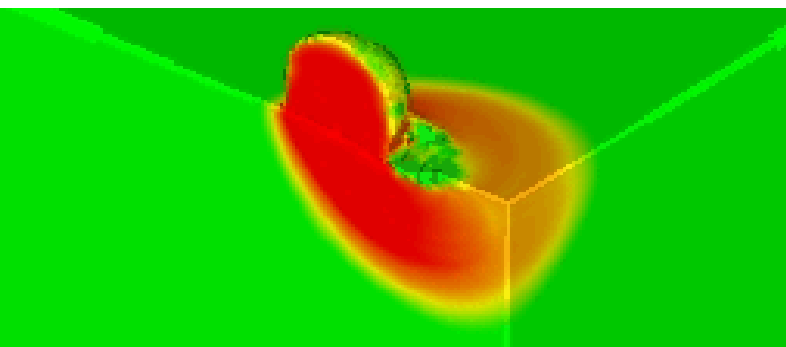


Exceptional service in the national interest



Brian Ferri

Org - 1555/Manager - John Pott/Mentor - Eric Harstad

Personal Background

- School - Georgia Tech
- Master's Mechanical Engineering
 - Interests
 - Shock Physics
 - Mechanics of Materials
- Why Sandia?
 - Overlap with Research Area
 - Talked with Sandians at Career Fair
- Hobbies
 - Hanging with my cat
 - Fishing
 - Travel
 - Photography



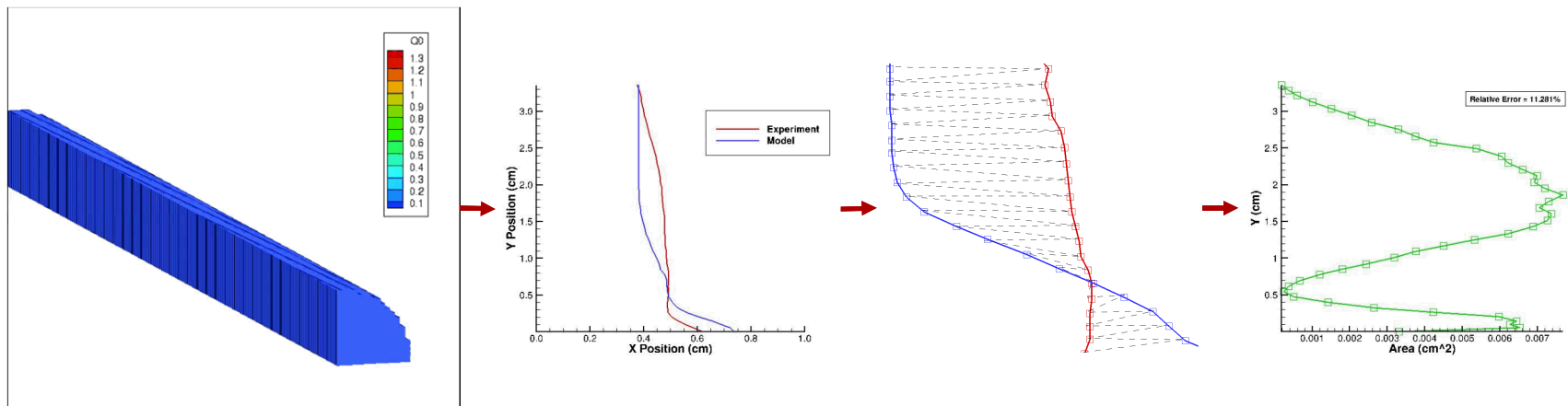
Benchmarking using Strength Models in CTH

■ Background

- CTH built-in strength models
- Combined with EOS describe material response to dynamic loading

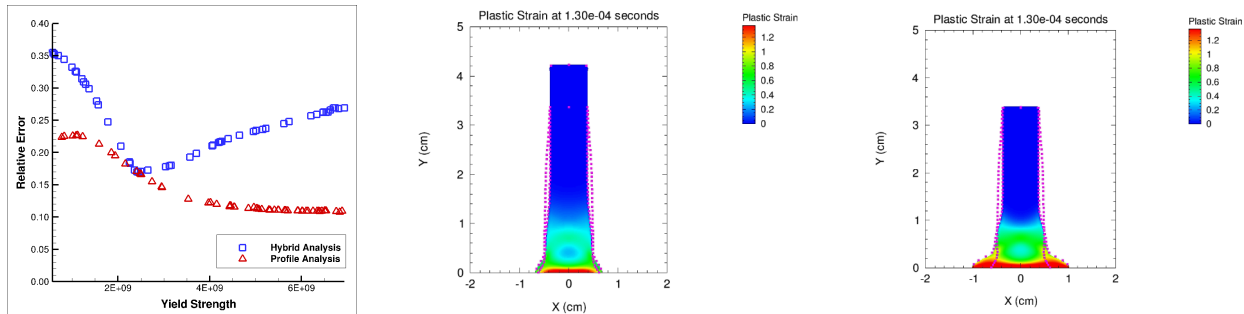
■ Objective

- Quantitatively describe the model deviation
 - Deviation to different builds of the code
 - Deviation to Taylor Cylinder experimental data



Results

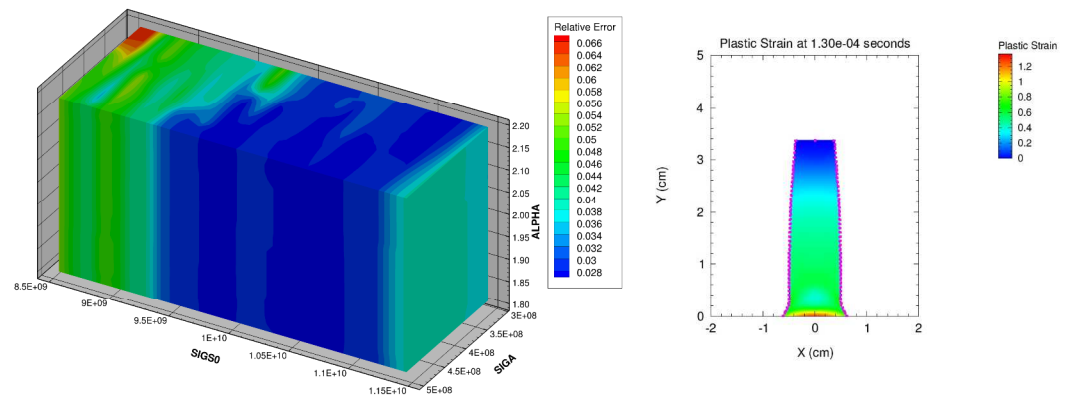
■ EPP Model Optimization with 1D Parameter Control



■ MTS Model Optimization with 3D Parameter Control

■ Key Tools and Takeaways

- CTH – Eulerian Hydrocode
- Aprepro
- Scripting in BASH
- Python – NumPy
- Tecplot



My Experience

- Challenging Work
- Tours
- Networking
- Southwestern Environment
- The one thing I will most remember about my Sandia experience is:

