

Name: Dr. Steven R. Brandt

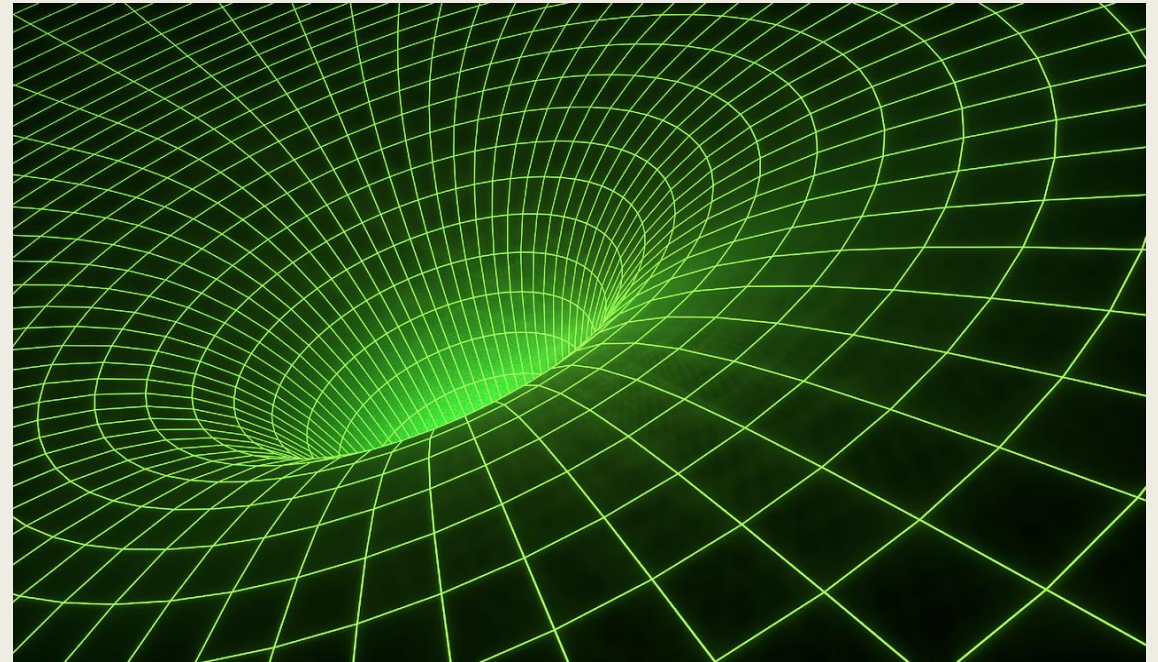


Title: Assistant Director,
Computational Science

Affiliations: Center for Computation and
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Reason for Interest

- Ph.D. for studying rotating black holes
 - Used Mathematica to generate Einstein Equations.
- Ongoing work with Cactus/Einstein Toolkit, a general purpose framework for modeling PDE's
 - Success of toolkit derives from modularization, e.g. I/O, time integrator, etc. decoupled from updates of right-hand-sides of equations.
 - Failure of the toolkit dealing with GPUs



Chemora! (Computational Hierarchy for Engineering Model-Oriented Readjustable Applications)

EAGER award to study going from DSL to C++/CUDA code:

- Idea was to decouple the physics ...
- ... from the numerical methods ...
- ... and low level implementations.

Right approach (we think), but
has not yet become a
production tool.

