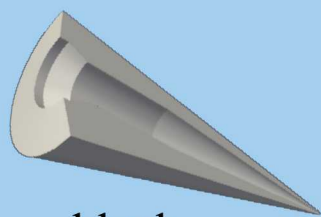


Multigrid on Advanced Architectures

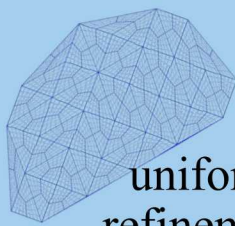
SAND2019-0743C

R. Tuminaro, L. Berger-Vergiat, J. Hu, C. Siefert,
Sandia National Labs
M. Mayr, Bundeswehr University

- ❖ **structured meshes provide significant NGP benefits**
 - HPC: less communication, lower bandwidth, efficient kernels, ...
 - MG: cheaper setup, less dense operators, convergence gains
- ... but ... what about those complex geometries ?
- ❖ **partially structured grids can be tricky to adopt for mature applications**
- ❖ **come see our mathematical approach toward non-invasive partially structured grids & fast multigrid solvers**



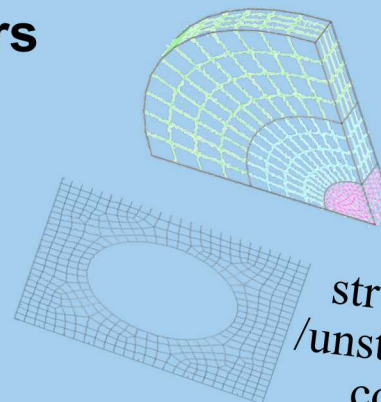
block
structured



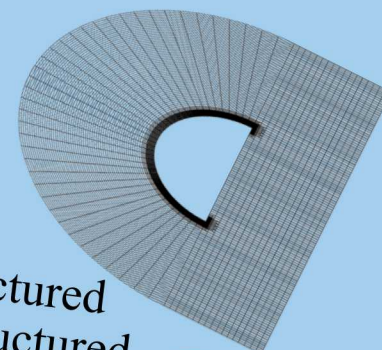
uniform
refinement
(HHG)



vertical
extrusion



structured
/unstructured
combo



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Our inspiration comes from finite element & sub-structures