## Centre for High Performance Computing 2020 National Conference



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## **Stitch-IO for Additive Manufacturing Simulation**

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Simulating Additive Manufacturing (AM) has been difficult because simulation domains can be extremely large and the computational load is minimal. With the way that AM works, only a small part of the simulation domain is required at any time. Stitch-IO offers a way to decompose AM simulations into a series of short runs over short time and space scales and then enables stitching together the output into a lossless, coherent form. The data storage requirement drops dramatically while requiring as little as a laptop and runs the whole simulation in the same wall clock time as if it were on a large supercomputer with the whole simulation domain in RAM. With native Python and C APIs, Stitch-IO offers flexible analysis interfaces as well.

## **Student?**

No

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