



Productive Programming in Chapel: A Computation-Driven Introduction

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Cray Inc,
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What is Chapel?

- **An emerging parallel programming language**
 - Design and development led by Cray Inc.
 - in collaboration with academia, labs, industry; domestically & internationally
- **An open-source (Apache license) project on GitHub**
- **A work-in-progress**
- **Goal:** Improve productivity of parallel programming



Today's Goals

- **Provide context for Chapel**
- **Introduce you to Chapel via sample computations**
 - base language with n-body
 - data parallelism with Jacobi
- **Try Chapel in a Hands-On**
- **Point you toward resources for future reference**
- **Get your feedback on Chapel**



Ground Rules

- **Please feel encouraged to ask questions as we go**
 - not to mention during the break and afterwards
- **Feel free to ask to see features demonstrated**
- **Please fill out surveys**
 - We have a paper one for feedback on Chapel and the tutorial
 - SC15 has a general quality-of-tutorial one as well



1:30: Welcome

Chapel Background and Motivation

Base Language with n-Body

Short Introduction to Task Parallelism

2:45: Hands-On 1: Run Hello World

3:00: Break

3:30: Short Introduction to Locality

Data Parallelism with Jacobi

4:00: Hands-On 2: Mandelbrot

4:50: Project Status, Next Steps

5:00: Done!



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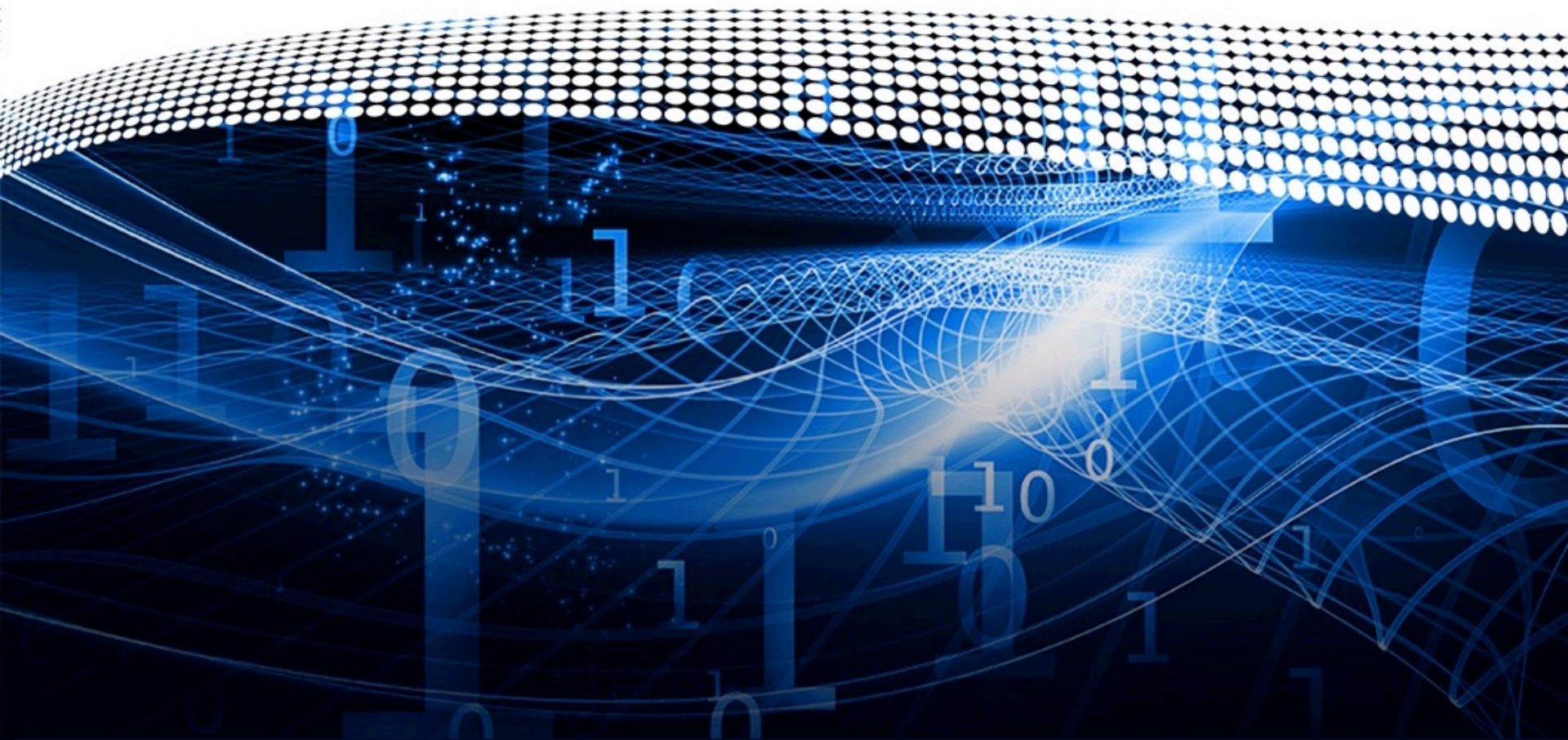
COMPUTE

|

STORE

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ANALYZE



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<http://github.com/chapel-lang/chapel/>