

**Intel Parallel Studio
Training Agenda
NCAR, NOAA, NREL and other agencies
NCAR Boulder Colorado
August 16th, 2017**

NCAR Foothills Lab
Main Seminar Room (FL2-1022)
3450 Mitchell Lane
Boulder, CO 80301

8:30 – 10:00 Intel Compilers; Applied, Practical, Systematic approach

- **Introduction to Intel Compilers**
- **Optimization Essentials with the Intel Compiler**
 - Optimization basics
 - Compiling for KNL
- **Forcing/Controlling Vectorization with pragma SIMD**
- **Multi-Core, and OpenMP**

10:00 – 10:15 Break

10:15 – 12:00 Analysis Tools for Performance and Correctness (continues after lunch)

- **Introduction to Intel® VTune™ Amplifier**
 - **Types of Analysis**
 - **Software Collections**
 - **Hardware Collections**
 - **Understanding the Results**
 - **Additional Features**
 - **Command Line Collections**
 - **Remote Data Collections**
 - **Application Performance Snapshot**
- **Introduction to Intel® Inspector**
 - **Types of Analysis**
 - **Memory Checking Analysis**
 - **Threading Analysis**
 - **Managing Results**
 - **Advanced Features**
- **Introduction to Intel® Advisor**
 - **Vectorization Advisor**
 - **Roofline Modeling**

12:00 – 1:00 Lunch

1:00 – 2:00 Analysis Tools for Performance and Correctness (continuation from before lunch)

- **Introduction to Intel® VTune™ Amplifier**
 - **Types of Analysis**

**Intel Parallel Studio
Training Agenda
NCAR, NOAA, NREL and other agencies
NCAR Boulder Colorado
August 16th, 2017**

NCAR Foothills Lab
Main Seminar Room (FL2-1022)
3450 Mitchell Lane
Boulder, CO 80301

- **Software Collections**
 - **Hardware Collections**
 - **Understanding the Results**
 - **Additional Features**
 - **Command Line Collections**
 - **Remote Data Collections**
 - **Application Performance Snapshot**
 - **Introduction to Intel® Inspector**
 - **Types of Analysis**
 - **Memory Checking Analysis**
 - **Threading Analysis**
 - **Managing Results**
 - **Advanced Features**
 - **Introduction to Intel® Advisor**
 - **Vectorization Advisor**
 - **Roofline Modeling**
- 2:00 – 2:45 Intel® Cluster Tools**
- **Intel® MPI Library**
 - **Overview**
 - **Usage**
 - **Intel® Trace Analyzer and Collector**
 - **Overview**
 - **Collecting MPI Performance Data**
 - **Viewing MPI Performance Data**
 - **Additional Analysis Tools**
- 2:45 – 3:15 Intel® Distribution for Python***
- 3:15 – 3:30 Break**
- 3:45 – 4:30 Intel® Performance Libraries**
- **Intel® Math Kernel Library (Intel® MKL)**
 - **Intel® Data Analytics Acceleration Library (Intel® DAAL)**
 - **Intel® Integrated Performance Primitives (Intel® IPP)**
 - **Intel® Threading Building Blocks (Intel® TBB)**