Introduction to Scientific Computing

SDS 322/392 (#56335)
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Ritu Arora (rauta@tacc.utexas.edu)
Charlie Dey (charlie@tacc.utexas.edu)

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TACC

THE UNIVERSITY OF TEXAS AT AUSTIN

Welcome

- The Course
  - We start at a basic level
  - By the end of the course, we expect that you would have developed basic skills in C and Fortran programming along with some experience in Linux
- First step to use Supercomputers – you will get access to one of the fastest supercomputers in the world named Stampede
- Other classes:
  - Scientific/Technical Computing
  - Parallel Computing for Science And Engineering
  - Visualization and Data Analysis
- Canvas will be used as a repository for all class material
- To find out more about TACC, www.tacc.utexas.edu

Introduction

Ritu Arora, Ph.D. (Computer & Information Science)

Ritu works as a High Performance Computing (HPC) researcher and consultant at the Texas Advanced Computing Center (TACC). She is also an associated faculty member at the Department of Statistics and Data Sciences at the University of Texas at Austin. The key areas of her interest and expertise are HPC, fault-tolerance, domain-specific languages, generative programming techniques, workflow automation, and Big Data management.

Charlie Dey (Computer Science and Biology)

Charlie is a software developer and researcher with the Business and Information Systems group at the Texas Advanced Computing Center (TACC). Charlie has worked in many facets of computer science and its applications - health care, banking, manufacturing, education, gaming, and HPC; his current areas of interest are numerical analysis, mathematical modeling, scientific visualization, and education and training.

What you can do to make this class a success?

- **Participate actively! Make the class more interactive!**
- **Ask questions**

From the Syllabus

Office Hours:

11:30 PM– 12:30 PM, on Tuesdays & Thursdays in FAC outside the class, and with appointment

TA: TBD

First Steps

- **Step 1: Please take the entry quiz**

- **Step 2**
  - **You will need an account on TACC systems**
  - **It is very important that you start the process right away**
  - **Without the account you won't be able to access Stampede should you need to use it for classwork and homework**
    - **Pros: It has the C and Fortran compilers already installed and hence, you will have a ready environment to work**
    - **Cons: working over the network**

Grading Policy

4 Quizzes: 20% of the grade

Mid-Term Exam: 10% of the grade

4 Homework Assignments: 50% of the grade

1 Project: 10% of the grade

Final exam: 10% of the grade

Class Participation: 2.5% extra credit

Note: We will be using the plus and minus grading system for the final course grades.

Portal Accounts

- **Immediately:**
  - **Please create a "TACC Account" (login name) at portal.tacc.utexas.edu**
  - **You will get an email that contains a link**
  - **Confirm your account through this link**
  - **Send us an email with your account name**
    - **rauta@tacc.utexas.edu and charlie@tacc.utexas.edu**
    - **Please do not forget to add ISP to the subject line**
  - **We will then do some processing at our end so that you can access Stampede using your login name you created on the portal**