

# THE XPERT NETWORK

WORKSHOP AT THE INTERNAL CONFERENCE ON SUPERCOMPUTING 2019  
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<https://sites.udel.edu/xpert-cdi/>



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# WHY HAVE WE INVITED YOU HERE?



You are a representative of one of these groups:

- ECSS, Research Software Engineer, Research Facilitators – Xperts
- Domain scientist using computational or data-intensive methods
- Tool designer

What we would like to hear from you:

- • Who are you and what helps you succeed in your project
- • How can Xperts best help you be more productive?
- • How can your tools accelerate computational and data-intensive (cdi) application development?



gave us funds to create synergy among these groups

# WHY IS ALL THIS IMPORTANT ?

Computational and Data-intensive (CDI) Domain Science & Engineering is at the forefront

XSEDE ECSS is key to improving CDI science - we can do even better

- Create synergy :
  - There are many Xpert groups, but not much exchange of ideas and experience
- Improve toolbox:
  - Potential not yet achieved – more feedback from users will make a difference





# WHAT DO WE WANT TO MAKE HAPPEN IN THIS WORKSHOP AND HOW?

- Get your "knee-jerk reactions" to a number of topics – in world cafe style:



- 4 tables @ 4-5 attendees. One topic per table.
- Scribes for each topic and “scribble sheet”
- Change table every 30 minutes – discuss each of the themes once
- At the beginning of every 30-minute session: introduce your project in 1 minute
- 5-minute summary presentation on each topic at the end
- **Workshop report that will guide future activities**

# TOPIC 1: BEST PRACTICES FROM YOUR *USE CASES*

What has worked best in your work with CDI applications?

- Try to stay away from best practices that you *think* are good. Mention a use case you have worked on and tell us what has made a big difference.
- A summary of Best Practices mentioned in the position papers are in your “handouts”.



# TOPIC 2: CHAPTERS OF BEST PRACTICES GUIDE

## What chapters should be there?

- This should not just be about technology (programming model that has worked best for us).
- Think of topics, such as:
  - How do you overcome the terminology barrier between those with computer and domain scientists?
  - How do you pick projects to get involved in?
  - How do you identify outside experts (e.g., AI)?
  - What should be in a tools catalog?



# TOPIC 3: HOW CAN WE COORDINATE OUR PROJECTS?

## **BENEFITS OF COORDINATION:**

- Avoid overlap
- Avoid additional meetings
- Cover the areas of needs – no single project can do it all
- Identify a joint follow-on project



## **COORDINATION IDEAS/QUESTIONS:**

- How to become aware of each project, their goals and contribution to the CI ecosystem?
- Become aware of related efforts driven by other sponsors, industry, and organizations
- Open project meetings to this group (host "who we are" meetings)
- Joint activities at major conferences, SC, PEARC...
- Can we and should we propose a joint follow-on project?
  - Professionalization (CaRCC),
  - Skill development (ECSS, CyVerse, software institutes)
  - People network across campuses and projects (Xpert, CaRCC, Campus Champions, US-RSE)

# TOPIC 4: INTERACTION WITH TOOL DESIGNERS

- How can interaction among tool designers, Xperts, and domain scientists be orchestrated beneficially?
- Tools can increase productivity significantly but are underused. How can we fix this?
- How can we best take advantage of this opportunity:
  - Xperts are the primary tools users. Getting feedback from xperts will help the developers improve tools. Process?





# WORKSHOP REPORT

- **Starting point: Summary presentations of scribes**
- **Let us know if you are interested in co-authoring the workshop report**



# Thank you!

<https://sites.udel.edu/xpert-cdi/>

Questions, comments, discussions:

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