Experiences and issues assisting researchers in developing and using computational and data-intensive (CDI) applications

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XSEDE (the Extreme Science and Engineering Discovery Environment) is a socio-technical platform that integrates and coordinates advanced digital services within the national ecosystem to support contemporary science. The Extended Collaborative Support Service (ECSS) improves the productivity of the XSEDE user community through meaningful collaborations and well-planned training activities. The objective is to optimize applications, improve work and data flows, increase effective use of the XSEDE digital infrastructure, and broadly expand the XSEDE user base by engaging members of underrepresented communities and domain areas. The ECSS program provides professionals who can be part of a collaborative team—dedicated staff who develop deep, collaborative relationships with XSEDE users—helping them make the best use of XSEDE resources to advance their work. These professionals possess combined expertise in many fields of computational science and engineering. They have a deep knowledge of underlying computer systems and of the design and implementation principles for optimally mapping scientific problems, codes, and middleware to these resources. ECSS includes experts in not just the traditional use of advanced computing systems but also in data-intensive work, workflow engineering, and the enhancement of scientific gateways. ECSS experts work closely with user support staff at the XSEDE service providers and with Campus Champions, and are establishing a community of practice with the Xpert Network and with CaRCC.

At the Workshop, I would like to exchange experiences and ideas in addressing the following challenges:

- Making contact with researchers, identifying who needs help
- Needs analysis, recommended actions: who does what?
- Short-term vs. long-term assistance: escalation strategies
- Local vs. distributed expertise
- Efficient, sustained collaboration with research teams
- Workforce development, skills (re)training - of users and of support staff.