CIF21 CDS&E Working Group

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Computational and Data-Enabled Science and Engineering (CDS&E) Working Group

Members:

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• Daryl Hess - MPS/DMR
• Pedro Marronetti - MPS/PHYS
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• Almadena Chctchelkanova - CISE & GEO/OAD
• Vasant Hanaver – CISE/IIS
• Sumanta Acharya - ENG/CBET
• Clark Cooper - ENG/CMMI
• Doris Carver – EHR/DGE
• Richard Smith – EHR/HRD
• Eva Zanzerkia – GEO/EAR
• Gabrielle Allen – OD/OCI (co-Chair)
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• (SBE member: TBD)
Background

• The ACCI’s Task Force on Grand Challenges provide this recommendation “It is recommended that permanent programmatic activities in *Cyber Science and Engineering (CS&E)* be established within NSF. These activities should range from division- and directorate-level programs for discipline-specific aspects of CS&E, to permanent NSF-wide crosscutting CS&E programs possibly managed by OCI. Interdisciplinary projects could be co-funded between cross-cutting and relevant disciplinary programs. The permanent NSF programmatic activities in CS&E would play a significant role in incentivizing universities to expedite the creation of CS&E research and educational programs, which in turn would go a long way in addressing the immense shortage of well-trained computational scientists and engineers in the workforce.”

• NSF is planning a cross-directorate “core” program on CDS&E (i.e. CS&E), following the ACCI Task Force on Grand Challenges’ recommendation.

Questions for ACCI

• If the CDS&E cross-directorate “core” program is created, what should be the appropriate balance between disciplinary and multi-disciplinary research? And what should be the balance between research and prototyping and infrastructure? And support for traditional faculty careers and professional staff?

• What other CDS&E activities would support the careers of CDS&E researchers?

• How do we encourage research and education in CDS&E? How do we encourage universities to develop and support career paths for CDS&E researchers?