Harnessing the Power of Computer Science and Engineering to
Support Data-Intensive Research Projects in Nevada

Keynote talk

ABSTRACT This talk will present research and development work pertaining to a couple of NSF-funded projects aimed at improving Nevada’s cyberinfrastructure for scientific research and education. The need for computing infrastructure improvements in Nevada will be discussed and the challenges associated with creating two key components of the cyberinfrastructure system, the network of environmental monitoring stations (NevCAN) and the Nevada Research Data Center (NRDC), will be examined. Architectural details will be provided, and related computer science and engineering research activities will be described. Such activities include work in software engineering, computer networks, data processing, and database systems. Aspects of interdisciplinary collaboration involving environmental scientists, hydrologists, renewable energy engineers, and computer scientists will also be discussed.