Overview of Computer Science at the US Army Research Office

The mission of the U.S. Army Research Office (ARO) is to seed scientific and far reaching technological discoveries that enhance Army capabilities. Basic research proposals from educational institutions, nonprofit organizations, and private industry are competitively selected and funded. ARO's research mission represents the most long-range Army view for changes in its technology and is the only Army organization that transcends all of its mission areas. ARO is divided into a number of scientific divisions and programs such as physics, chemistry, mechanical engineering, and mathematics in order to accomplish its mission and to better align with University Departments and interests. An overview of how ARO, in general, and the Computer Science Division of ARO, in particular, are organized will be presented as well as a description of the possible funding mechanisms available to the researcher. Special emphasis will be placed on the Computational Architectures and Visualization program and on Computer Science funding priorities through the presentation and discussion of division vision statements and individual program research thrusts.

Speaker

Dr. Coyle has been a civilian employee of the Army for over thirty years after receiving his Ph.D. in Mathematics (Numerical Analysis) from Rensselaer Polytechnic Institute. He was initially employed as a Mathematician at the Army's Benet Laboratories in Watervliet, NY. Benet Laboratories is the R&D arm of the Watervliet Arsenal, our nation’s cannon manufacturer. While there he worked on and/or managed various projects in the Applied Math and Mechanics branch and the Modeling and Simulation branch such as statistical analysis, finite element and stress analysis, gun and gas dynamics, and cannon barrel erosion. In August of 1999 he transferred to Army Research Office (ARO) to manage the Discrete Mathematics and Computer Science program in ARO’s Mathematics Division. ARO is the Army’s extramural funding agency for basic research. He now manages the Computational Architectures and Visualization program in ARO’s Computing Sciences Division. His program interests are in designs of both hardware and software components that efficiently optimize computational resources as well as algorithms that render massive data sets and perform large scale Army simulations both quickly and accurately. He has served on a number of Army and DoD technical assessment boards for various programs and centers such as the Naval Post Graduate School’s MoVES Institute, the Army’s Institute for Creative Technologies, and the Army’s High Performance Computing Research Center.