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2016 Final Reports from the Los Alamos National Laboratory,

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Computational Physics Student Summer Workshop;- <https://www.osti.gov/scitech/biblio/1327993>

The two primary purposes of LANL's Computational Physics Student Summer Workshop are (1) To educate graduate and exceptional undergraduate students in the challenges and applications of computational physics of interest to LANL, and (2) Entice their interest toward those challenges. Computational physics is emerging as a discipline in its own right, combining expertise in mathematics, physics, and computer science. The mathematical aspects focus on numerical methods for solving equations on the computer as well as developing test problems with analytical solutions. The physics aspects are very broad, ranging from low-temperature material modeling to extremely high temperature plasma physics, radiation transport and neutron transport. The computer science issues are concerned with matching numerical algorithms to emerging architectures and maintaining the quality of extremely large codes built to perform multi-physics calculations. Although graduate programs associated with computational physics are emerging, it is apparent that the pool of U.S. citizens in this multi-disciplinary field is relatively small and is typically not focused on the aspects that are of primary interest to LANL. Furthermore, more structured foundations for LANL interaction with universities in computational physics is needed; historically interactions rely heavily on individuals' personalities and personal contacts. Thus a tertiary purpose of the Summer Workshop is to build an educational network of LANL **researchers, university professors, and emerging students** to advance the field and LANL's involvement in it.

Many Authors works are detailed in this excellent report to download from the government LAB. Runnels, Scott Robert ^[1]; Bachrach, Harrison Ian ^[1]; Carlson, Nils ^[1]; Collier, Angela ^[1]; Dumas, William ^[1]; Fankell, Douglas ^[1]; Ferris, Natalie ^[1]; Gonzalez, Francisco ^[1]; Griffith, Alec ^[1]; Guston, Brandon ^[1]; Kenyon, Connor ^[1]; Li, Benson ^[1]; Mookerjee, Adaleena ^[1]; Parkinson, Christian ^[1]; Peck, Hailee ^[1]; Peters, Evan ^[1]; Poondla, Yasvanth ^[1]; Rogers, Brandon ^[1]; Shaffer, Nathaniel ^[1]; Trettel, Andrew ^[1] more »

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