

Topics for the Computational Project

1. Percolation and its applications
{Languages: Fortran or C++} {Category: Physics, polymer science, and other technologies}
[Rogers, William](#)
2. Differences between object oriented and procedural programming
{Languages: C++} {Category: Physics and software}
[Kirkup, Steven Jeffrey](#)
3. Maximum entropy
{Languages: Fortran or C++} {Category: Physics and computation}
[Rogers, Alexa N](#)
4. Genetic algorithm and optimization program
{Languages: Fortran / C} {Category: Physics, math, and other sciences}
[Makamson, Reed McMinn](#)
5. Chua circuits
{Languages: Fortran / C} {Category: Physics and electronics}
[Vollenweider, Caitlin E](#)
6. Heart physiology and its modeling
{Languages: Fortran or C++} {Category: Math, physics, and physiology}
[Bloor, Erica Faith](#)
7. Game theory and its applications
{Languages: Fortran, C++, or Java} {Category: Math and other analyses}
[Gautrau, Sidney J](#)
8. Symplectic algorithm toward physics simulation
{Languages: Fortran / C++} {Category: Physics and computation}
[Knips, Joseph D](#)
9. Twenty century modern physics: quantum physics, relativity, etc.
{Languages: Fortran / C++} {Category: Physics and computation}
[Ables, Patrick](#)
10. Matrix, the eigenvalues, and its applications
{Languages: Fortran / C++} {Category: Math and computation}
[Barnes, Charles W](#)