

Research Problems and Projects

1. Hamiltonian cycles in graphs and digraphs.
2. Create online database of Hamiltonian regular graphs and digraphs
3. Convert and improve program for enumerating all non-isomorphic graphs of size n and degree d . Convert the C++ program into a java script program that generates all non-isomorphic regular graphs for a specified n and degree d .
4. Develop animation and tutorial materials for algorithms and data structures. This project would include contributing to the [JHAV'E](#) project as well as developing knowledge of the two algorithm animation scripting languages [POLKA](#) and [SAMBA](#).
5. Developing Linux Applications using [Glade](#).
6. Developing a Java based web application called cyber grader.
7. Beowulf clusters and their use in enumeration of combinatorial problems.
Development of algorithms for using Beowulf clusters to find Hamiltonian cycles in digraphs.