

CS 4390/5353
Quantum Computing
Home Assignment 14

14. Write a recursive program that, given the coefficients of two polynomials $A(x)$ and $B(x)$, uses Fast Fourier transform (FFT) to compute the coefficients of the product

$$C(x) = A(x) \cdot B(x)$$

of these two polynomials. Turn in a printout of the program's code and a printout of the test result.

Due:

- a) implementation of complex numbers by October 29, 2009;
- b) implementation of FFT by November 3, 2009;
- c) the full program by November 5, 2009.