

*Abstract—*

*Keywords—*

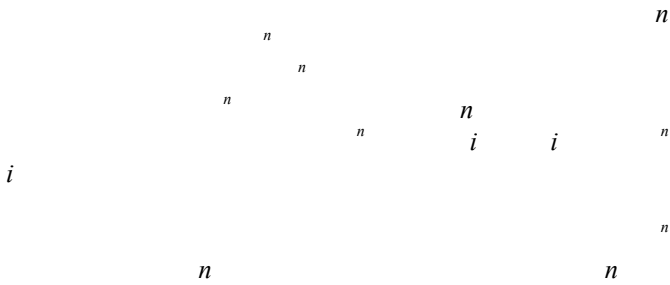
$f$

$y$

D. Interference

A. Superposition

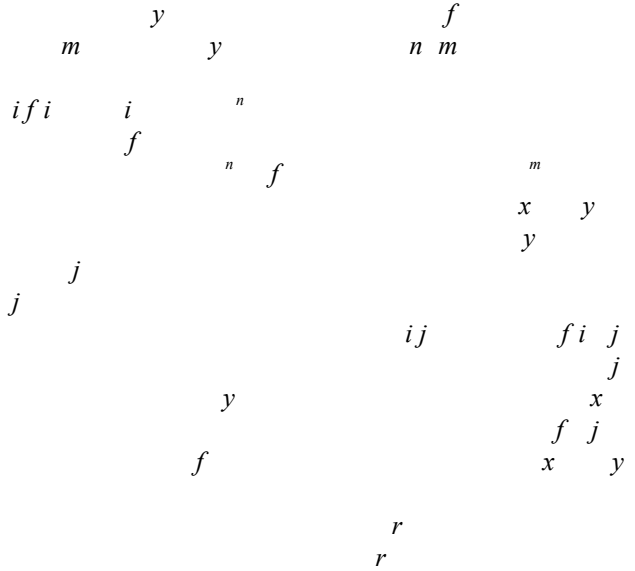
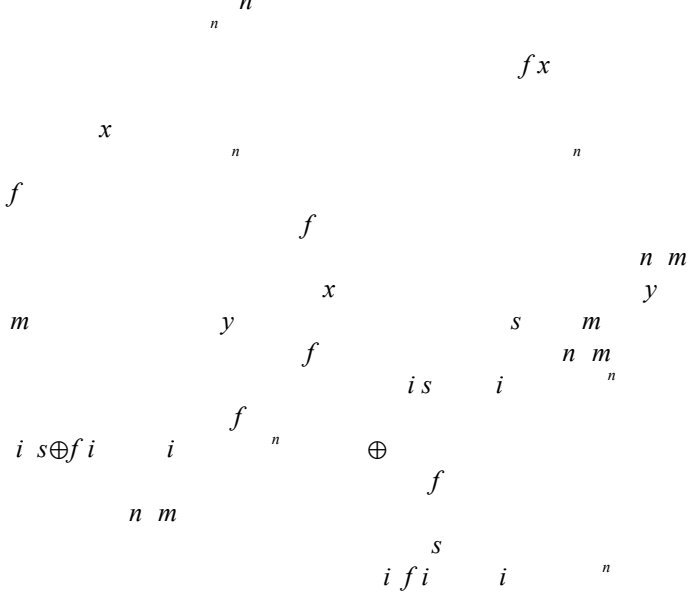
$f$



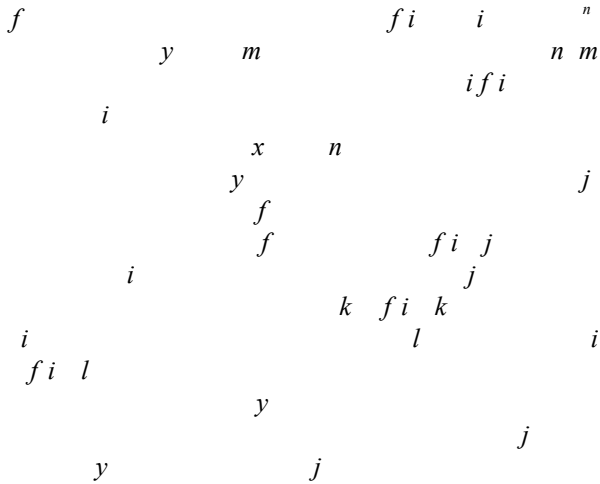
B. Quantum Parallelism and Deterministic Computation

$f$   $n$   $n$   $m$   $x$

E. Entangled States



C. Probabilistic Measurement and Output of a Result



F. No-Cloning



*O N*

*N* *A* *B* *a* *b* *a* *A*  
*B* *B* *a* *a* *A*  
*B* *a* *a*

*a* *b*

*a* *b* *a*  
*a*

*N*  
*ON*

*ON*

*N*





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[31] Advanced Research and Development Activity (ARDA): A Quantum Information Science and Technology Roadmap, \_\_\_\_\_, (2004).