

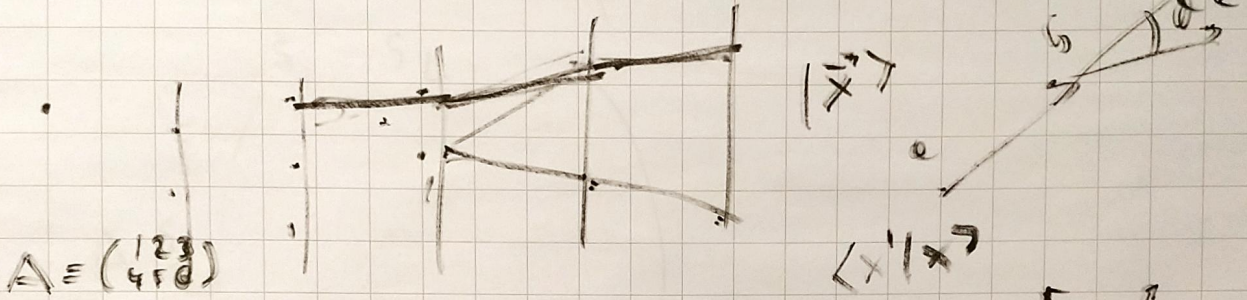
# ALGO/HHL/QSVD/PDE'S/\*

$$A\vec{x} = \vec{b} \Rightarrow A^{-1}\vec{b} = \vec{x}$$

$O(\log N)$   
 Best. Case  
 $O(N)$

ISSUES

• JTB. STATE. PREP.  $\rightarrow O(N \log N)$



$$H = -\frac{1}{2} \left[ \sum_{a,b,c} \frac{\cos^2(\theta_{abc})}{r_{ab} + r_{bc}} s_{ab} s_{bc} \right]$$

$$- \alpha \left( \sum_{b \neq c} s_{ab} s_{ac} + \sum_{a \neq e} s_{ab} s_{cb} \right)$$

$$- \beta \left( \sum_{a,b} s_{ab} - N \right)^2$$

$$2N \sum \dots$$

$\nabla H$

$$|x\rangle = \sum_{i=0}^{N-1} x_i |i\rangle$$