MA 399 Intro to Quantum Information Theory

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Abstract

Put an abstract for your document here.

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1 Intro to Linear Algebra

Let's jump right in. This section is an abbreviation of the introduction to linear algebra session.

Definition 1.1 If $|v\rangle \in \mathbb{C}^n$ is a *ket* vector which consists of n complex numbers,

$$|v\rangle = \begin{bmatrix} v_1 \\ v_2 \\ ... \\ v_n \end{bmatrix} v_1, v_2, ..., v_n \in \mathbb{C} \tag{1.1}$$

♦

Definition 1.2 A linear combination of $\{|v_1\rangle, ..., |v_n\rangle\} \subset \mathbb{C}^n$ is a single vector in the form $\lambda_1 |v_1\rangle + \lambda_2 |v_2\rangle + ... + \lambda_n |v_n\rangle$ for some $\lambda_1, \lambda_2, ..., lambda_k \in \mathbb{C}^n$. ♦