

1 Introduction

$$|\Psi\rangle = \sum_{i_1=1}^{d_1} \sum_{i_2=1}^{d_2} \cdots \sum_{i_N=1}^{d_N} \Psi_{i_1, i_2, \dots, i_N} |i_1\rangle \otimes |i_2\rangle \otimes \cdots \otimes |i_N\rangle \quad (1)$$