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**(54) Title (EN):** NOISE AND CALIBRATION ADAPTIVE COMPILATION OF QUANTUM PROGRAMS

**(54) Title (FR):** COMPILATION ADAPTATIVE AU BRUIT ET À L'ÉTALONNAGE DE PROGRAMMES QUANTIQUES

**(57) Abstract:**

**(EN):** A method includes executing a calibration operation on a set of qubits, in a first iteration, to produce a set of parameters, a first subset of the set of parameters corresponding to a first qubit of the set of qubits, and a second subset of the set of parameters corresponding to a second qubit of the set of qubits. The method further includes selecting the first qubit, responsive to a parameter of the first subset meeting an acceptability criterion. The method further includes forming a quantum gate, responsive to a second parameter of the second subset failing to meet a second acceptability criterion, using the first qubit and a third qubit.

**(FR):** L'invention porte sur un procédé qui comprend l'exécution d'une opération d'étalonnage sur un ensemble de bits quantiques, dans une première itération, pour produire un ensemble de paramètres, un premier sous-ensemble de l'ensemble de paramètres correspondant à un premier bit quantique de l'ensemble de bits quantiques, et un second sous-ensemble de l'ensemble de paramètres correspondant à un deuxième bit quantique de l'ensemble de bits quantiques. Le procédé en outre à sélectionner le premier bit quantique lorsqu'un paramètre du premier sous-ensemble remplit un critère d'acceptabilité. Le procédé comprend en outre la formation d'une porte quantique lorsqu'un second paramètre du second sous-ensemble ne parvient pas à remplir un second critère d'acceptabilité, à l'aide du premier bit quantique et d'un troisième bit quantique.

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