

# Semidefinite Programming in Ground State Energy Calculation

## Goemans-Williamson Algorithm and Bootstrap Method

Yusheng Zhao

HKUST(GZ)

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# MaxCut Problem

# Classical Ising Model

# Goemans-Williamson Algorithm

Probabilistic Algorithm whose answer is within 0.878 of the optimal solution.

# Variable Relaxation

# Change of Variable and Semidefinite Programming Formalism

# Project back

# Bounding the Ground State



# Bootstrap Quantum Anharmonic Oscillator

# E and $\langle x^2 \rangle$ as unknown

# Recursive Relation

# Search for Consistent E and $\langle x^2 \rangle$