

Sing Poh Toh

The University of Nottingham Malaysia Campus Faculty of Engineering Jalan Broga
43500 Semenyih - Selangor Darul Ehsan, Malaysia
singpoh@gmail.com

Kochen-Specker theorem: A state-independent proof with 30 rank-2 projectors

S.P. Toh

The Kochen-Specker (KS) theorem states that no non-contextual hidden variable theory can reproduce the predictions of quantum mechanics. Usually the parity proof of the KS theorem is demonstrated by using a set of rank-1 projectors. We present a proof for a three-qubit system that uses only rank-2 projectors, and the number of the projectors required is 30.