

How Topology will save Moore's Law

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Michael H. Freedman is known for his work on the Poincaré conjecture, one of the most famous problems of the 20th century. In 1986 he was awarded a Fields Medal for his proof of the Poincaré conjecture in four dimensions.

He works at Microsoft Corporation, where he has founded Station Q in Santa Barbara, California. There Freedman and his collaborators work on the interface between mathematics, quantum physics and computer science. They study topological properties of strange states of matter at very low temperatures and investigate their application in novel computing paradigms.

The innovation initiative QSIT at ETH Zürich was founded in 2004 as a center for quantum science and technology and involves 12 research groups from the departments of

physics, chemistry, information technology and electrical engineering, and computer science within ETH Zürich and 3 external research groups from other Swiss institutions.