

ICFO Colloquium CHARLES MARCUS 'Majorana Electronics'

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January 13, 2017

Friday, January 13, 12:00, 2017, ICFO Auditorium

CHARLES MARCUS

Villum Kann Rasmussen Professor, The Niels Bohr Institute$$

Charles Marcus received his Bachelors at Stanford University (1984), his Ph.D. in Physics from Harvard in 1990 and was an IBM postdoctoral fellow at Harvard from 1990-92. He was a member of Physics faculty at Stanford (1992-2000) and Harvard (2000-2011). Since 2012, he serves as the Villum Kann Rasmussen Professor at the Niels Bohr Institute, University of Copenhagen. He is the Director of the Center for Quantum Devices, a Center of Excellence sponsored by the Danish National Research Foundation, and Director of Station Q Copenhagen sponsored by Microsoft Research.

Marcus?s research focuses on quantum mechanically coherent electronics, including confined spins semiconductors, Josephson qubits, fractional quantum Hall systems, and Majorana systems. The long-term research goal is to explore large-scale interconnected

quantum coherent systems with applications in quantum information processing.
In this talk, I?ll discuss the status of Majorana zero modes in semiconductor nanowires, and present future plans for how to go from our present status to topological qubits.
Advances in theory, measurement, and materials have lead to new approaches to topological quantum computing. The path is not easy but not impossible either."

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