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## **QIS for the High School Student: An Exploration of “Spin First” Methodologies**

*Saturday, October 23, 2021 10:00 AM (15 minutes)*

Quantum Information Science (QIS) and applied technologies such as quantum computing and quantum communication are emerging technologies deemed critical to the future technical workforce and economy [1]. Generally, the concepts of QIS are outside the contents of study in most high school physics classes, however, recent progress has been made in developing high school accessible curricula. High School Physics Teacher John J. Schiller, Jr., and US Naval Academy Associate Professor of Physics Dr. Peter G. Brereton will share their recent experience piloting a “spin first” style high school primer into QIS. Utilizing materials and texts available via open source [2], Mr. Schiller and Dr. Brereton, have implemented an introduction to QIS based on developing the concepts of qubits, entanglement and quantum communication.

[1] National Strategic Overview For Quantum Information Science, Office of the Science and Technical Advisor to the President, September 2018 ([https://www.quantum.gov/wp-content/uploads/2020/10/2018\\_NSTC\\_National\\_Strategic\\_Overview](https://www.quantum.gov/wp-content/uploads/2020/10/2018_NSTC_National_Strategic_Overview))

[2] Anastasia Perry, et al. Quantum Computing as a High School Module, arXiv:1905.00282v2 (2020).

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