

# Fossil Energy Workshop on Quantum Information Science & Technology

NATIONAL ENERGY TECHNOLOGY LABORATORY  
PITTSBURGH, PA  
NOVEMBER 19-20, 2019

## WORKSHOP CHARGE/SCOPE:

Quantum Information Science (QIS) is expected to profoundly change the practice of science and engineering in the coming decades. It is a rapidly progressing field, fueled by large investments from the private sector and governments. Its importance to the U.S. economy and national security is underscored by the National Quantum Initiative Act passed in December 2018. QIS includes quantum sensing, quantum communications, quantum simulation experiments, and quantum computation. QIS Technology exploits quantum phenomena for performing tasks that are impossible to do today, such as finding prime factors of large numbers or elucidating reaction mechanisms in complex chemical systems.

The opportunities for applying QIS to problems encountered in fossil energy technology development are not known today. This workshop aims to bring together, for the first time, experts in these fields to exchange information and explore potential research opportunities for QIS to advance fossil energy. The goal of the workshop is to develop a set of priority research opportunities that can inform future research efforts in QIS and build a community of next-generation researchers at the intersection of QIS and fossil energy.

## WORKSHOP ORGANIZING COMMITTEE:

Madhava Syamlal (co-chair), Jeremy Levy (co-chair), Regis Conrad, Yuhua Duan, Coriana Fitz, Christopher Matranga, Darren Molloy, Michael Nowak, Paul Ohodnicki, Hari Paudel, Massood Ramezan, Jennifer Stein, Ke Xu.

Workshop registration page: <https://netl.doe.gov/events/19QIS>

National Energy Technology Laboratory: <https://netl.doe.gov/>

Pittsburgh Quantum Institute: <https://www.pqi.org/>

For meeting logistics questions please contact:  
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