

**From:** [Ronald Bolvent](#)  
**To:** [Division 721](#)  
**Subject:** Fwd: Sigma Xi Katharine B. Gebbie Young Investigator Lecture: Stephen Jordan on March 30th  
**Date:** Thursday, March 16, 2017 2:11:40 PM  
**Attachments:** [Stephen Jordan \(YI poster\).pdf](#)

---

Mark your calendars for a special NIST lecture by our own Stephen Jordan. - Ron

---

**NIST Chapter of Sigma Xi**  
**Katharine B. Gebbie Young Investigator Award**

“Computational Complexity of Quantum Field Theory”

*Dr. Stephen P. Jordan*

Applied and Computational Mathematics Division

ITL

Thursday, March 30<sup>th</sup> 2017

2:30PM

Green Auditorium

Numerical simulation of quantum dynamics is a notoriously difficult problem, which can take exponential time and memory in the worst case. In contrast, quantum computers promise to solve this problem with resources scaling polynomially in the number of particles. In this talk I will describe recent theoretical work with Keith Lee, John Preskill, and Hari Krovi showing that quantum computers, once built, will also have exponential advantage over classical computers for simulating relativistic quantum field theories. Prior knowledge of computational complexity and quantum field theory will not be assumed.

A brief reception will follow the lecture.

For more information, please contact M. Lorna De Leoz at 301-975-6731 or [lorna.deleoz@nist.gov](mailto:lorna.deleoz@nist.gov).