Contribution ID: **37**   Type: **not specified**

ITensor

Friday, October 26, 2018 1:30 PM (1h 30m)

ITensor is a library for creating high-performance codes for tensor network algorithms. ITensor facilitates rapid prototyping as well as long-term maintainability. After reviewing many-body quantum physics from a tensor mathematics perspective, I will introduce ITensor and what distinguishes it from most other tensor libraries. Then I will discuss good and less good design decisions made through the course of ITensor's development and draw some general lessons. These decisions touch on areas such as choice of language, interface design, and documentation. To conclude, I will highlight future goals and topics where we could benefit from the expertise of others at Flatiron.

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Session Classification: Projects