

**Ilya Feschenko**

**Title: IBM quantum computing: realization of Maxwell's demons and qutrit quantum channels**

**Abstract:**

We propose an implementation of the Quantum Maxwell Demon (QMD) via the original quantum computing algorithms that decrease Shannon's entropy of the system while preserving its energy and demonstrate their work on the IBM Quantum Experience computer. We design and explore the qutrit realization of the Landau-Streater and Werner-Holevo channels built on the on their Steinspring representations on the IBM Quantum Experience.