

# GRADUATE SEMINAR

Kerry Cox

## On Counting Subspaces and Ranks

*MSc Student supervised by Professor Don Stanley*

**April 2, 2018**

**3:30 PM**

**Math and Stats Lounge(CW 307.20)**

### **Abstract:**

This seminar shall be a continuation of seminar one. Having looked at the rank of a single linear map between finite dimensional vector spaces over a finite field and laying the platform in seminar one, we shall focus our attention on the set of all linear maps between two fixed finite dimensional vector spaces over a finite field. We shall discuss how to compute the number of subspaces of a prescribed dimension of a finite-dimensional vector space over a finite field, give a formula for the number of linear maps of a fixed rank and present an experimental result about the ranks of the set of all linear maps mentioned.

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