

### **Priyanga Ganesan - Quantum Graphs**

TBA

### **Ka Ho Wong - An introduction to knot polynomials**

In this talk, I will discuss an elementary definition of the famous Jones polynomial of knot and its generalization.

### **Quyuan Lin - Well-posedness, Ill-posedness, and finite-time blowup**

In the mathematical analysis of PDEs, people usually care about the well-posedness/ill-posedness of the equation and the global existence/finite-time blowup of solutions. I will briefly talk about the definition of these concepts, and give some examples related to Navier-Stokes equations and Primitive equations.

### **Matthew Faust - Bernstein's Other Theorem**

A short exposition of Bernstein's theorem and Bernstein-Kushnirenko theorem on sparse polynomial systems.

### **Angelique Morvant - Modeling the Bending of Prestrained Plates**

A prestrained plate is a thin sheet of material that deforms from the flat configuration to minimize its energy. In this talk we will give an overview of how to derive and minimize the energy of a prestrained plate, and we will also give some ideas on how to model the behavior of such a plate in a Stokes fluid.

### **Jordy Lopez Garcia - What is a Scheme?**

I will introduce the audience to the concept of a scheme in algebraic geometry and also in algebraic combinatorics, the latter formally known as an association scheme.

### **Tushar Pandey - Art to mathematics to quantum**

There are triangles with angle sum 0 and infinite perimeter, interesting right? Or infinitely many lines through a point and parallel to a fixed line. Various artistic images and coral reefs are related to hyperbolic geometry. And for people who have seen these, there will be something on quantum invariants and knot theory to make it look fancy.

