

Morning Discussion: **Applications**

Tuesday, August 30, 2016

The recent years have seen a lot of interest in Applications of Algebraic Geometry, outside of core pure mathematics. An influential event was a research year 2006-07 at the IMA in Minneapolis. These interactions with the sciences and engineering have been greatly enhanced by the interplay with Combinatorics and Computation seen here at the Fields Institute. Also, the term “Algebraic Geometry” has to be understood now in a broad sense.

Today we form groups. Each group will get familiar with one field of application, and they will select one paper in Applied Algebraic Geometry that represent an interaction with that field. Read your paper and then present your findings. Here are some suggested fields, listed alphabetically:

- Approximation Theory
- Bayesian Statistics
- Chemical Reaction Networks
- Coding Theory
- Combinatorial Optimization
- Computer Vision
- Cryptography
- Game Theory
- Geometric Modeling
- Machine Learning
- Maximum Likelihood Inference
- Neuroscience
- Phylogenetics
- Semidefinite Programming
- Systems Biology
- Quantum Computing