

Fall 2014 Projects

Maggie Miller	Low-Dimensional Handlebodies
Daniel Kalaj	Riemann Surfaces
James Dix	Van Kampen's Theorem Using Category Theory
Daniel Chupin	What is a Connection?
Feng Ling	Cohomology of Projective Spaces
Surya Raghavendran	Rational Homotopy Theory
William Waller	Skein Modules on 3-Manifolds
Sultan Kulakhmetov	Deformation Quantization
Nick Bhattacharya	Using Harmonic Analysis in Markov Chains
Rafael	Calculus on Manifolds
Anna Panyu Peng	The process of making a 3D wave equation in Matlab and python
Cody Freitag	An Introduction to Mathematical Cryptography
Erik Dubec	Field Theory and Roots of Unity
Souparna Purohit	Infinite Galois Theory - Motivated
Jacob Caudell	Ax-Grothendieck, or Why We Study Logic
Billy Swartworth	Picturing Representations
Brett Bishop	The Group Extension Problem via Group Cohomology
Dai Yanyan	Limsup and Liminf of Sets
Rose Nguyen	Discrete Time Markov Chains in Genetic Models
Jesse Dohmann	Estimating Pi Using Monte Carlo Methods
Jayna Yoo	Pricing a European call option in a log-normal model
Joseph Lubars	Introduction to Machine Learning
Moiz Rizvi	Numerical Methods for Heat Equation
Dylan Airey	Putting high-dimensional pigeons into high-dimensional holes
Valerie Roth	Eulerian Graphs
Kishan Patel	Basic Applications of Graph Theory in Alkanes
Biraj Pandey	Orange Is The New Black: Analysis of Prison Social Dynamics using Basic Graph Theory
Rohan Ramchand	Reflection Groups
KaCee Dobbins	Just Shy of Life Changing: The Orbit Stabilizer Theorem
Parth Adhia	Come play with surfaces!
Greg Lyons	Planes and Spheres, What's the Difference?
Noah Ledbetter	Isometries of the Plane
Victoria Levy	Introduction to knot polynomial
Patricia O'Brien	Knot Theory and HOMFLY Polynomial
David Hamilton	Differential Forms: A Compact Representation of Electromagnetism