

SUGIL LEE

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EDUCATION

Ph.D. in Mathematics Aug 2020
Michigan State University, East Lansing
Dissertation title: “Projective Euler characteristic over weakly ramified Galois covers”
Advisor: Dr. Georgios Pappas

B.S. in Mathematics 2013
State University of New York at Stony Brook, Stony Brook

B.S. in Business and Statistics, dual degree 2010
Sungkyunkwan University, Seoul

RESEARCH

Doctoral Researcher in Arithmetic Geometry 2020
Department of Mathematics, Michigan State University

- Showed the canonical existence of an equivariant sheaf with projective Euler characteristic on weakly ramified Galois covers of curves over integers, generalizing the work of T. Chinburg, B. Köck, B. Erez, and E. Noether.

Industrial Mathematics Researcher in Data Science 2019
Michigan State University and QED Environmental Systems

- Data analyst role in “Predictive Modeling of Shipping Weights and Cost”, designing and building a shipping cost model based on the nationwide company sales history data.
- Joint project of MSU Industrial Mathematics Program and QED Environmental Systems.

NON-ACADEMIC PROFESSIONAL EXPERIENCE

Data Analyst Internship 2009
ECRA Group

- Assisted analyzing K-12 education data to find correlations in student achievement in different subjects and performance indicators.

TECHNICAL SKILLS & LANGUAGES

Programming languages: Python, C++, JavaScript, MATLAB, Octave, R
Other assets for data visualization: HTML, Processing, SDL, Unity, DaVinci Resolve, GIMP

Spoken languages: Korean, English

- Have taught college mathematics for 16 semesters at MSU.

HONORS AND AWARDS

TA Award for Excellence in Teaching

2018

Department of Mathematics, Michigan State University

- Awarded to 5 out of about 100 graduate TAs in the department for high performance in teaching and contributing calculus curriculum designs.

Dissertation Completion Fellowship

2018

Department of Mathematics, Michigan State University

TEACHING

For 16 semesters of teaching at MSU, I have enjoyed being a science communicator inspiring students in: differential equations, all levels of calculus, calculus for non-engineering majors, calculus for AP students, introduction to formal mathematical proofs, and more proto-type calculus courses using technology in education.

Instructor & Teaching Assistant

2013 – 2019

Department of Mathematics, Michigan State University

- Survey on Calculus (2014 – 2015)
- Calculus I (2014)
- Calculus II (2015, 2019)
- Calculus III (2013, 2015, 2016, 2017, 2018)
- Differential Equations (2015, 2016, 2018)
- Introduction to Mathematical Proofs (2016 – 2017)

OTHER SERVICES AND MENTORING

Tutor at Math Learning Center

2013 - 2019

- Helped students visiting MLC learning math and solving problems by listening to their progress and providing tailored, student-focused 1-1 advice.

Lead TA at Math Learning Center

2015

- General management to keep MLC functioning during semesters such as constantly checking tutor/student population ratio, monitoring changes in different rooms of MLC for better tutoring environment, mentoring new tutors, and occasionally helping difficult mathematical problems that the general MLC tutors are not usually suited for.
- Public review sessions for exams with 200 students.

Hair Donations

2008, 2013, 2018

- Three donations made for children under cancer treatment.

Military Service

2005 - 2007

- Republic of Korea Air Force