

BYEONGSU YU

Texas A&M University - Department of Mathematics

@byeongsu.yu@tamu.com

📍 BLOC 506B

🌐 byeongsuyu.github.io

🐦 @yoo99101

EDUCATION

Ph.D. in Mathematics

Advisor: Dr. Laura Felicia Matusevich

Texas A&M University

📅 May 2022(expected)

M.Sc. in Mathematics

Advisor: Dr. Woong Kook and Dr. Hyuk Kim (Co-advising)

Seoul National University

📅 Aug 2017

B.B.A. in Business Administration

B.Sc. in Mathematics

B.A. in Philosophy

Yonsei University

📅 Aug 2015

PUBLICATIONS

1. *Standard pairs of monomial ideals over non-normal affine semigroups in SageMath*

👤 Byeongsu Yu

Submitted



2. *Standard pairs for monomial ideals in semigroup rings*

👤 Laura Felicia Matusevich and Byeongsu Yu

Submitted.



3. *A study on establishing legal causation of collective hazardous substances cases in a statistical viewpoint*

👤 Dohyun Park and Byeongsu Yu

공익과 인권 (en: Public Interest and Human Rights), Vol. 15, pp. 209-261, 2015



SOFTWARE

1. *StdPairs: Library for symbolic computation over a monomial ideal of an affine (non-normal) semigroup with SageMath*

👤 Byeongsu Yu



2. *TDakit: Toolkit for Topological Data Analysis with R*

👤 Kisung You and Byeongsu Yu



AWARDS & HONORS

➤ *Best Prize in Undergraduate Research*

📍 Yonsei Univ. (Computational Science and Engineering)

📅 Sep 2014

➤ *Award of Excellence in Economics Dissertation Contest*

📍 Maeil Business Newspaper (Seoul, South Korea)

📅 Nov 2009

TALKS AND PRESENTATIONS

POSTERS

📄 *Standard pairs for monomial ideals in semigroup rings*

• Algebra, Geometry and Combinatorics Day - XVIII

📍 UIUC

📅 Mar 07, 2020



TALKS

➤ *Monomial ideals in affine semigroup rings*

• CombinaTexas 2021

📍 Texas A&M Univ.

📅 Feb 2021



➤ *Monomial ideals in affine semigroup rings*

• Graduate Algebra Symposium

📍 (Online)

📅 Oct 2020



- *Universal Property via Yoneda Lemma*

 - Graduate Student Seminar

📍 Texas A&M Univ.

📅 Nov 2019
- *Generalized Ishida Complex*

 - Algebra and Combinatorics Seminar

📍 Texas A&M Univ.

📅 Nov 2019
- *Integrate $|xy(x+y)|$ over \mathbb{Z}_p with Haar measure*

 - Gathering in Graduate Expository Mathematics (GIGEM)

📍 Texas A&M Univ.

📅 Feb 2019

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- *Topological Data Analysis on Single-Nucleotide Polymorphism data*

 - Graduate Student Seminar

📍 Texas A&M Univ.

📅 Nov 2018
- *Effective Resistance Preserving Isomorphism*

 - Graduate Student Seminar

📍 Texas A&M Univ.

📅 Oct 2017

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TEACHING & MENTORING

- *Explorations in Mathematics (MATH 167) – Instructor*

Gave lectures via face-to-face and online simultaneously, wrote lecture notes and 4 exams, wrote weekly quizzes, held weekly office hours.

📍 Texas A&M Univ. 📅 Fall 2020
- *Business Calculus (MATH 142) – Instructor*

Gave lectures via face-to-face and online, wrote/graded 3 midterm exams and a final exam, wrote weekly quizzes, held weekly office hours.

📍 Texas A&M Univ. 📅 Summer(1st) 2020, Spring 2020
- *AWM Peer Mentor*

Peer-mentor for the first-year mathematics graduate students to help them adapt to new environment and responsibilities.

📍 Texas A&M Univ. 📅 Fall 2019 – present

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- *Directed Reading Program Mentor*

Discussed weekly with an undergraduate mentee to study mathematical topics outside of the undergraduate coursework.

📍 Texas A&M Univ. 📅 Spring 2020, Fall 2019

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- *Engineering Calculus I/II (MATH 151/152)*

– *Teaching Assistant*

Wrote/graded weekly Python lab assignments and solution sets, and weekly quizzes.

📍 Texas A&M Univ. 📅 Summer(2nd) 2020, Fall 2019, Summer(2nd) 2018
- *Functions, Trigonometry and Linear Systems (MATH 150)*

– *Teaching Assistant*

Lead weekly recitation, wrote and graded biweekly quizzes.

📍 Texas A&M Univ. 📅 Spring 2021, Spring 2019, Fall 2018
- *Engineering Mathematics III (MATH 251) & Business Calculus (MATH 142) & Applied Algebra (MATH 433) – Grader*

Graded (bi)weekly assignments or quizzes.

📍 Texas A&M Univ. 📅 Summer 2019, Summer(1st) 2018, Spring 2018
- *Linear Algebra (MATH 304/311/323) – Help Session*

Tutoring undergraduate students about junior-level linear algebra courses.

📍 Texas A&M Univ. 📅 Fall 2017

SERVICES & OUTREACH

- CombinaTexas 2021

Session Chair

📅 Feb 20-21, 2021

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- Student Working Seminar for Algebra and Geometry

CO-Organizer (w. Pablo Ocal)

📅 Fall 2020

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- American Mathematical Society Graduate Student Chapter

Vice Preseident

📅 Fall 2019 - Spring 2020
- Student Working Seminar for Category Theory

Organizer

📅 Summer 2019 – Fall 2019

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- CombinaTexas 2019

Session Moderator

📅 Mar 23, 2019

📅 Fall 2017 – Spring 2018

