

Hanul Jeon

310 Mallot Hall, Cornell University – Ithaca, NY 14853 – United States

✉ hj344@cornell.edu • 🌐 <https://hanuljeon95.github.io/>

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Education

Ph.D.

Cornell University, Advisor: Justin Moore and James Walsh

Mathematics

Aug 2021 – May 2026 (Expected)

Visiting Scholar

Vienna University of Technology, Supervisor: Juan P. Aguilera

Jan 2025 – Jul 2025

M.Sc.

Seoul National University, Advisor: Otto van Koert

Mathematics

Mar 2017 – Feb 2021

Thesis: Constructive Ackermann's interpretation

B.Sc.

Sunkyunkwan University

Mathematics

Mar 2013 – Feb 2017

Experience

Republic of Korea Air Force

Compulsory military service

Aug 2017 – Jul 2019

Publications

- [1] Kinkar Ch Das, Han-ul Jeon, and Nenad Trinajstić. "Comparison between the Wiener index and the Zagreb indices and the eccentric connectivity index for trees". In: *Discrete Applied Mathematics* 171 (2014), pp. 35–41.
- [2] Hanul Jeon. "Constructive Ackermann's interpretation". In: *Annals of Pure and Applied Logic* 173.5 (2022), p. 103086.
- [3] Hanul Jeon and Richard Matthews. "Very large set axioms over constructive set theories". In: *The Bulletin of Symbolic Logic* 30.4 (2024), pp. 455–535.
- [4] Hanul Jeon. "On Separating Wholeness Axioms". To appear in: *Journal of Symbolic Logic*.
- [5] Hanul Jeon. "The proof-theoretic strength of Constructive Second-order set theories". To appear in: *Notre Dame Journal of Formal Logic*.
- [6] Hanul Jeon and James Walsh. *Generalized ordinal analysis and reflection principles in set theory*. 2023. arXiv: 2312.12859 [math.LO].
- [7] Hanul Jeon. *The behavior of higher proof theory I: Case Σ_2^1* . 2024. arXiv: 2406.03801 [math.LO].
- [8] Hanul Jeon. *On a cofinal Reinhardt embedding without Powerset*. 2024. arXiv: 2406.10698 [math.LO].
- [9] Hanul Jeon. *Proof-theoretic dilator and intermediate pointclasses*. 2025. arXiv: 2501.11220 [math.LO].
- [10] Hanul Jeon. *Martin's measurable dilator*. 2025. arXiv: 2503.12713 [math.LO].
- [11] Hanul Jeon et al. *Ranking theories via encoded β -models*. 2025. arXiv: 2503.20470 [math.LO].

Teaching Experiences

Grader

Mathematical Logic

Fall 2024

Grader

History of Mathematics

Spring 2023

Grader

Applied logic

Fall 2023

Grader

Introduction to Analysis

Spring 2023

Grader

Mathematical Logic

Fall 2022

Tutor

Sublime Learning Community Tutoring

Spring, Summer, Fall 2020

Covered Mathematics and its practice (Spring 2020) and Mathematics for biological scientists (Summer 2020, Fall 2020).

Grader

Mathematics for ecologists

Fall 2020

Teaching Assistant and Grader

Advanced Mathematics and its practice II.

Fall 2020

Equivalent to Multivariable Calculus Honors. Managed students' presentation.

Teaching Assistant and Grader

Logic and Set theory

Spring 2020

Teaching Assistant and Grader

Mathematics and its practice II.

Fall 2019, Summer 2020, Winter 2020

Equivalent to Multivariable Calculus. Managed an exercise course.

Teaching Assistant and Grader

Mathematics and its practice I.

Spring 2017, Spring 2019

Equivalent to Calculus. Managed an exercise course.

Tutor

Sunkyun Tutoring for Advanced Algebra

Spring 2016

Covered Chapters 4 and 5 of Hungerford's *Algebra*

Grants and Fellowships

Hutchinson Fellowship 2024–2025:

Fall 2025

OeAD Ernst Mach Grant: 6,250 EUR

Feb 2025 – Jul 2025

Cornell Research Travel Grant: 1100 USD (for Austrian visit)

Oct 2024

The National Scholarship for Science and Engineering:

Mar 2013 - Dec 2016

Talks

Dilators in Descriptive set theory

TU Wien

TU Wien Computational Logic Seminar

April 2025

On proof-theoretic dilator and Pohlers' characteristic ordinals

Changwon University

4th Korea Logic day

January 2025

On a cofinal Reinhardt embedding without Powerset

CUNY Graduate Center

CUNY Set theory seminar

October 2024

On Separating Wholeness Axioms

Iowa State University

2024 North American ASL Annual Meeting

May 2024

Proof theory for higher pointclasses

University of Pennsylvania

UPenn Logic and Computation Seminar

April 2024

On Separating Wholeness Axioms

Virtual

3rd Korean Logic Day

Jan 2024

On Separating Wholeness Axioms

Cornell University

Cornell Logic Seminar

May 2023

Very large set axioms over constructive set theories

Cornell University

Cornell Logic Seminar

Apr 2022

Consequences of the axiom of choice

Cornell University

Olivetti Club

Mar 2022

Goodstein's theorem

Seoul National University

Madmathematics Seminar

Oct 2016

What is forcing?

Madmathematics Seminar

A Short introduction to mathematical logic

Madmathematics Seminar

Seoul National University

Nov 2015

Sogang University

Jan 2014