Hanul Jeon

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Education

Ph.D. **Mathematics**
Cornell University, Advisor: Justin Moore and James Walsh *Aug 2021 –*

Visiting Scholar
Vienna University of Technology, Supervisor: Juan P. Aguilera *Jan 2025 – Jul 2025*

M.Sc. **Mathematics**
Seoul National University, Advisor: Otto van Koert *Mar 2017 – Feb 2021*
Thesis: *Constructive Ackermann's interpretation*

B.Sc. **Mathematics**
Sunkyunkwan University *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. *On a cofinal Reinhardt embedding without Powerset*. 2024. arXiv: 2406.10698 [math.LO].

[4] Hanul Jeon. "On Separating Wholeness Axioms". To appear in: *Journal of Symbolic Logic*.

[5] Hanul Jeon. *The behavior of higher proof theory I: Case* Σ^1_2. 2024. arXiv: 2406.03801 [math.LO].

[6] Hanul Jeon. "The proof-theoretic strength of Constructive Second-order set theories". To appear in: *Notre Dame Journal of Formal Logic*.

[7] Hanul Jeon and Richard Matthews. "Very large set axioms over constructive set theories". To appear in: *Bulletin of Symbolic Logic*.

[8] Hanul Jeon and James Walsh. *Generalized ordinal analysis and reflection principles in set theory*. 2023. arXiv: 2312.12859 [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

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? **Seoul National University**
Madmathematics Seminar *Nov 2015*

A Short introduction to mathematical logic **Sogang University**
Madmathematics Seminar *Jan 2014*