

# Jeonghwan Lee

SENIOR UNDERGRADUATE, MATHEMATICAL SCIENCES, KAIST

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| EDUCATION                | <p><b>Korea Advanced Institute of Science and Technology</b>, Daejeon, Republic of Korea.<br/><i>Bachelor of sciences</i>, Mathematical sciences. <i>Mar. 2015 - Feb. 2022 (Expected)</i><br/>Enrolled in Honor Program.<br/><b>GPA:</b> 4.09/4.3 (Overall), 4.2/4.3 (Major).<br/><br/>Temporarily left school due to mandatory military service. <i>Oct. 2018 - Aug. 2020</i></p> <p><b>Gyeongnam Science High School</b>, Jinju, Republic of Korea.<br/><i>High school education</i>, One year early graduation with honor. <i>Mar. 2013 - Feb. 2015</i></p>   |
| RESEARCH<br>INTERESTS    | <p>Statistical inference in networks, Information-theoretic methods in statistics,<br/>Theoretical and algorithmic aspects of high-dimensional statistics, Optimization theory,<br/>Probability theory and stochastic processes.</p>   |
| PUBLICATIONS             | <p><b>Jeonghwan Lee</b>, Daesung Kim, Hye Won Chung, “<a href="#">Robust Hypergraph Clustering via Convex Relaxation of Truncated MLE</a>”, IEEE Journal on Selected Areas in Information Theory (JSAIT), Volume 1, Issue 3, pp. 613–631, Nov, 2020.</p>   |
| AWARDS &<br>SCHOLARSHIPS | <p><b>KAIST Math Problem of the Week</b>, Department of Mathematical Sciences, KAIST.<br/>Excellence award. <i>Jun. 2019</i></p> <p><b>National Undergraduate Mathematics Competition</b>, Korean Mathematical Society.<br/>Silver prize, for majors. <i>Dec. 2017</i></p> <p><b>Dean’s List</b>, College of Natural Sciences, KAIST. <i>Sep. 2017</i></p> <p><b>Honor Student</b>, KAIST. <i>Aug. 2017 - Present</i></p> <p><b>National Excellence Scholarship for Natural Science and Engineering</b>, Korea Student Aid Foundation. <i>Mar. 2017 - Jun. 2021</i></p> <p><b>Department Honors Scholarship</b>, Department of Mathematical Sciences, KAIST.<br/>Awarded to the top undergraduate student in a previous semester. <i>Mar. 2017 - Jun. 2017</i></p> |
| RESEARCH<br>EXPERIENCES  | <p><b>Undergraduate Researcher</b><br/><i>Supervisor : Prof. <a href="#">Hye Won Chung</a></i> <i>Jun. 2018 - Present</i></p> <ul style="list-style-type: none"><li>- Crowdsourced labeling under worker-task type specialization model (in preparation for submission to a journal).</li><li>- Role of social graph side information in multi-valued rating matrix estimation problem.</li><li>- Robust and efficient clustering algorithms in hypergraphs (<a href="#">Paper #1</a>).</li><li>- Statistical limits for recovering a single hidden community.</li></ul>   |

## Individual Study (MAS495)

Supervisor : Prof. [Ji Oon Lee](#)

Dec. 2017 - Feb. 2018

- The applications of random matrix theory in the study of MIMO communication schemes.

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## COURSE PROJECTS

### The existence of generalized $f$ -factors in graphs

Course : *Combinatorics (MAS575)* | Advisor : Prof. [Sang-il Oum](#)      May. 2021 - Jun. 2021

- Extended existing results regarding the existence of generalized  $f$ -factors in graphs to the case of hypergraphs via the combinatorial nullstellensatz.

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## COMPUTER SKILLS

Languages: C, C++, Python, JAVA.

Software/Tools: MATLAB, R,  $\text{\LaTeX}$ , Excel.

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## MISCELLEANEA

[Summer School 2021 on Random Structures in Optimizations and Related Applications](#), The School of Mathematics, University of Minnesota, Twin Cities Campus.      Jun. 2021

Republic of Korea Air Force.

Worked as a charge of quarters.

Oct. 2018 - Aug. 2020

Weekly Mathematics Reading Seminar.

Topics: Information theory, Theory of Riemann surfaces.

Sep. 2017 - Jun. 2018

[17th KIAS Combinatorics Workshop](#), Korea Institute for Advanced Study.

A special event as “Summer School for Combinatorics”.

Aug. 2017

[Undergraduate Mathematics Colloquium](#), Department of Mathematical Sciences, KAIST.

Worked as a seminar organizer.

Sep. 2016 - Jun. 2018

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## REFERENCES

Last updated July 4, 2021