

# Donggyu Kim

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CONTACT INFORMATION	Department of Mathematical Science KAIST 291 Daehak-ro Yuseong-gu Daejeon 34141 South Korea <a href="mailto:donggyu@kaist.ac.kr">donggyu@kaist.ac.kr</a> <a href="https://dimag.ibs.re.kr/home/donggyu/">https://dimag.ibs.re.kr/home/donggyu/</a>	Discrete Mathematics Group Institute for Basic Science (IBS) 55 Expo-ro Yuseong-gu Daejeon 34126 South Korea
RESEARCH INTERESTS	Graph Theory and Matroid Theory: Structural graph theory, spectral graph theory, factor theory, vertex-minors, delta-matroids, isotropic systems, etc.	
EDUCATION	07/2019-	<b>Discrete Mathematics Group, Institute for Basic Science (IBS)</b> , Daejeon, Korea. Training student.
	03/2019-	<b>KAIST</b> , Daejeon, Korea. M.S./Ph.D integrated program in Mathematics. Advisor: Sang-il Oum.
	03/2015-02/2019	<b>KAIST</b> , Daejeon, Korea. B.S. in Mathematics with <i>Cum Laude</i> .
	03/2012-02/2015	<b>KOREA SCIENCE ACADEMY OF KAIST</b> , Busan, Korea.
SUBMITTED PAPERS	<ol style="list-style-type: none"><li>1. <b>Donggyu Kim</b> and Sang-il Oum. “Prime vertex-minors of a prime graph”. Submitted, arXiv:2202.07877, 2022.</li><li>2. <b>Donggyu Kim</b> and Suil O. “Eigenvalues and parity factors in graphs”. Submitted, arXiv:2111.12966, 2021.</li><li>3. Jungho Ahn, Kevin Hendrey, <b>Donggyu Kim</b> and Sang-il Oum. “Bounds for the twin-width of graphs”. Submitted, arXiv:2110.03957, 2021.</li></ol>	
REFEREED CONFERENCE PAPERS	<ol style="list-style-type: none"><li>4. <b>Donggyu Kim</b>, Duksang Lee, and Sang-il Oum. “<math>\Gamma</math>-graphic delta-matroids and their applications”. In: <i>Proceedings of the 32nd International Symposium on Algorithms and Computation (ISAAC2021, December 6–8, 2021, Fukuoka, Japan)</i>. Accepted, 2021.</li></ol>	
RESEARCH TALKS		

- Apr 28, 2022 A stronger version of Tutte's wheel theorem for vertex-minors, *2022 KMS Spring Meeting*, Online, South Korea.
- Feb 21, 2022 A stronger version of Tutte's wheel theorem for vertex-minors, *Discrete Math Seminar*, IBS Discrete Mathematics Group, Daejeon, South Korea.
- Nov 25, 2021 Eigenvalues and parity factors in graphs, *KAIST Math Graduate student Seminar*, Online, KAIST, South Korea.
- Nov 14, 2021 Eigenvalues and parity factors in graphs, *2021 China-Korea Young Scholars' Symposium on Discrete Mathematics, Statistics and Optimization*, Online, South Korea and China.
- Oct 26, 2021  $\Gamma$ -graphic delta-matroids and their applications, *Discrete Math Seminar*, IBS Discrete Mathematics Group, Daejeon, South Korea.
- Oct 21, 2021  $\Gamma$ -graphic delta-matroids and their applications, *2021 KMS Annual Meeting*, Online, South Korea.

TEACHING EXPERIENCE	Fall	2021	TA, Probability and Statistics (CC511), <i>KAIST</i> . TA, Introduction to Linear Algebra (MAS109), <i>KAIST</i> .
	Spring	2021	TA, Differential Equations and Applications (MAS201), <i>KAIST</i> . TA, Discrete Mathematics (MAS275), <i>KAIST</i> .
	Fall	2020	TA, Calculus I (MAS101), <i>KAIST</i> . TA, Introduction to Graph Theory (MAS477), <i>KAIST</i> .
	Spring	2020	TA, Introduction to Linear Algebra (MAS109), <i>KAIST</i> . (Excellent TA Award) TA, Discrete Mathematics (MAS275), <i>KAIST</i> .
	Fall	2019	TA, Introduction to Linear Algebra (MAS109), <i>KAIST</i> . TA, Linear Algebra (MAS212), <i>KAIST</i> .
	Spring	2019	TA, Calculus I (MAS101), <i>KAIST</i> .
RELEVANT SKILLS	Languages:	Korean and English	
	Design:	KAIST 45th Anniversary Emblem Contest - Prize winner (Jan. 6th, 2016) KAIST Dept. of Mathematical Sciences Logo Design Contest - 2nd award (Nov. 29th, 2021)	
	Live stream- ing system:	Familiar with YouTube Live, ATEM, and OBS Studio.	
(Last Updated: April 29, 2022)			