

Hyunwoo Will Kwon

Full-time lecturer and Lieutenant
Republic of Korea Air Force Academy
Republic of Korea
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Employment

Full-time Lecturer and Lieutenant
Republic of Korea Air Force Academy
– To be completed on May 31th, 2022.

Cheongju, Korea
Aug. 2019 – Present

Education

Sogang University
M.S. in Mathematics (Advisor: Prof. Hyunseok Kim)

Seoul, Korea
Feb. 2017 – Feb. 2019

Thesis: Dirichlet and Neumann problems for elliptic equations with singular drifts on Lipschitz domains

Sogang University
B.S. in Mathematics, *Summa Cum Laude*

Seoul, Korea
Feb. 2013 – Feb. 2017

Research Interests

Partial differential equations, Real variable methods in harmonic analysis

Publication and Preprints

1. *Elliptic equations in divergence form with drifts in L^2* , [arXiv:2104.01300 \[math.AP\]](#), to appear in Proc. Amer. Math. Soc, [doi:10.1090/proc/15828](#).
2. *Existence and uniqueness of weak solution in $W^{1,2+\varepsilon}$ for elliptic equation with drifts in weak- L^n spaces*, [J. Math. Anal. Appl. 500\(1\) \(2021\) 125165](#), [arXiv:2011.07524 \[math.AP\]](#)
3. *Dirichlet and Neumann problems for elliptic equations with singular drifts on Lipschitz domains*, with H. Kim, [arXiv:1811.12619 \[math.AP\]](#), revision submitted to Trans. Amer. Math. Soc.

Awards, Grants & Honours

BK Plus Scholarship, Sogang University	2017
Albatross Fellowship (full funding support, 2 years), Sogang University	2017
President prize for highest achievement in academic(1%), Sogang University	2015
Dean's List of Natural Science, Sogang University for highest achievement in academic	2014
Full Funding Scholarship(7 semesters) from Hyundai Chung Mong-Koo Foundation	2013

Teaching

Lecturer

Republic of Korea Air Force Academy

Cheongju, Korea
Sep. 2019 – Present

- 2021-2 Linear Algebra (Humanities, 2 class), (Science, 1 class)
- 2021-1 Calculus (Science, 2 classes), Engineering Mathematics I
- 2020-2 Linear Algebra (Humanities), Engineering Mathematics I, Engineering Mathematics II
- 2020-1 Calculus (Humanities), Engineering Mathematics I (2 classes)
- 2019-2 Linear Algebra (Science, 3 classes), Engineering Mathematics I

Coordinator of Undergraduate Seminar in Sogang Math Honors Club

Sogang University

Seoul, Korea
Apr. 2017 – Aug. 2017

- 2017-1 Introduction to Hilbert Spaces

Recitation Instructor and Grader

Sogang University

Seoul, Korea
Mar. 2017 – Feb. 2019

- 2018-2 Advanced calculus II (Recitation instructor, Grading)
- 2018-1 Advanced calculus I, Theory of complex variable I (Grading)
- 2017-2 Advanced calculus II (Recitation instructor, Grading)
- 2017-1 Advanced calculus I (Recitation instructor)

Mathematics Tutor

Sogang University

Seoul, Korea
Mar. 2016 – Dec. 2016

- Worked as a tutor at Sogang Mathematics Learning Center
- Helped several subjects which use mathematics

Talks in Mathematics

$W^{1,2+\varepsilon}$ -results for elliptic equations with singular drifts in weak L^n -spaces

Contribution talks in Analysis session, 2021 Spring Meeting of KMS

Apr. 2021

$W^{1,2+\varepsilon}$ -results for elliptic equations with drifts in weak L^n -spaces

KIAS Analysis, PDE & Probability Seminar

Jan. 2021

Elliptic equations with singular drifts on Lipschitz domains

HA-GMT-PDE seminar at University of Minnesota

Sep. 2020

Elliptic equations with singular drifts on Lipschitz domains

KIAS Analysis, PDE & Probability Seminar

Dec. 2019

Neumann problems for elliptic equations with singular drifts on Lipschitz domains Contribution talks in Analysis session, 2019 Spring Meeting of KMS	Oct. 2019
Elliptic equations with singular drifts on Lipschitz domains IBS-CGP Seminar	Jan. 2019
L^2-boundedness of the Cauchy integral operator on Lipschitz curves KIAS Analysis&PDE Learning seminar	Oct. 2018
Dirichlet problems for elliptic equations with singular drifts in Lipschitz domains Contribution talks in Analysis session, 2018 Joint Meeting of KMS and DMV	Oct. 2018
Dirichlet problems for elliptic equations with singular drifts in Lipschitz domains Graduate student seminar, Yonsei University	Sep. 2018
The resolution of Hilbert's 19th problem Graduate student seminar, Sogang University	Sep. 2018
Elliptic equations with singular drifts on Lipschitz domains Workshop for students in Analysis and PDE	Jul. 2018

Work Experience

L^AT_EX Technician

Freelancer

Seoul, Korea

Mar. 2014 – Feb. 2019

- Made several books with Kyungmoon Publisher and the others
- Technical Editor for Publication of ICM 2014 Seoul, Korea

Academic Services

Organizer of workshop

Workshop for students in Analysis and PDE

Seoul, Korea

Jul. 2018

Co-organized with H. Kim (Sogang Univ.), Y.-R. Lee (Sogang Univ.) and S. W. Ryoo (SNU) : [homepage](#)

Founder and Organizer of Undergraduate Mathematics Seminar

United Mathematics club in Korea : [Stupid Mathematics Seminar](#)

Seoul, Korea

Feb. 2014 – Feb. 2016

Conference and Workshop Attended (will attend)

- Intensive lectures on the Cauchy problems for quasilinear PDEs by Prof. Sung-Jin Oh, Online via Zoom, Jul. 26, 2021 – Jul. 30, 2021.
- Yonsei Ewha Sogang Seminar on Analysis & PDEs, Online via Zoom, Jan. 20, 2021.
- Workshop on Harmonic Analysis Techniques for PDEs, JBNU, Jeonju, Korea, Feb. 13, 2019 – Feb. 14, 2019.
- The 3rd meeting of Young PDE researchers in PDEs, KIAS, Seoul, Korea, Dec. 13, 2018 – Dec. 14, 2018.
- Workshop for students in Analysis and PDE(as a organizer and speaker), Sogang Univ., Seoul, Korea, Jul. 12, 2018 – Jul. 13, 2018.
- Dynamics of partial differential equations, KAIST, Daejeon, Jun. 27, 2018 – Jun. 29, 2018.
- 2018 Korea PDE School #8, NIMS, Daejeon, Jan. 29, 2018 – Feb. 02, 2018.
- Minicourse: General relativity in spherical symmetry, KIAS, Apr. 07, 2017 – Apr. 28, 2017.
- Lecture Series on various topics in PDEs, KIAS, Seoul, Korea, Feb. 13, 2017 – Feb. 17, 2017 / Feb. 20, 2017 – Feb. 24, 2017.
- 2017 Korea PDE School #7, NIMS, Daejeon, Jan. 16, 2017 – Jan. 20, 2017.
- 2016 CMC Foundations for Mathematical Challenge: Solitons in the Korteweg-de Vries equations, inverse scattering approaches, KIAS, Seoul, Korea, Aug. 22, 2016 – Aug. 26, 2016.
- IBS-CGP Mathematics Festival 2016, IBS Center for Geometry and Physics, Pohang, Jul. 18, 2016 – Jul. 22, 2016.
- 7th Workshop on PDEs of Mathematical Physics, UNIST, Ulsan, Jan. 14, 2016 – Jan. 16, 2016.

Updated: November 20, 2021