

Sang-hyun Kim

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Education

- Ph.D. Mathematics, Yale University, May 2007. (Advisor: Andrew J. Casson)
- B.S. Mathematics, Seoul National University, August 1997.

Fields of Interest

Geometric group theory, low-dimensional topology.

Academic Positions

- Professor, Korea Institute for Advanced Study (KIAS), 2019 – present.
- Adjunct Professor, KAIST, 2019 – present.
- Associate Professor, Seoul National University, 2014 – 2019.
- Assistant Professor, Associate Professor, KAIST, 2013 – 2014.
- Norbert Wiener Assistant Professor, Tufts University, 2010 – 2011.
- R. H. Bing Instructor, the University of Texas at Austin, 2008 – 2010.
- Post-doctoral Fellow, Mathematics Sciences Research Institute (MSRI), 2007.

Selected Publications

Published

10. Sang-hyun Kim and Thomas Koberda. Diffeomorphism groups of critical regularity. *Inventiones mathematicae*, 221(2), 421-501 (2020).
9. Sang-hyun Kim, Thomas Koberda and Mahan Mj, Flexibility of Group Actions on the Circle, Springer Lecture Notes in Mathematics 2231 (2019).
8. Sang-hyun Kim, Thomas Koberda and Yash Lodha, Chain groups of homeomorphisms of the interval and the circle, *Annales Scientifiques de l'École Normale Supérieure, Series 4, Volume (52)*, 2019, 797-820.
7. Hyunryul Baik, Sang-hyun Kim and Thomas Koberda. Unsmoothable group actions on compact one-manifolds, *Journal of European Mathematical Society*, Volume 21, Issue 8, 2019, pp. 2333-2353
6. Sang-hyun Kim, Cheol-Hyun Cho, Hansol Hong and Siu-Cheong Lau, Lagrangian Floer potential of orbifold spheres, Volume 306 (14 January 2017), Pages 344-426, *Advances in Mathematics*.

5. Sang-hyun Kim and Thomas Koberda, Anti-trees and right-angled Artin subgroups of braid groups, *Geometry & Topology* 19-6 (2015), 3289–3306.
4. Sang-hyun Kim and Genevieve Walsh, Coxeter groups, hyperbolic cubes, and acute triangulations, *Journal of Topology* (2016) 9 (1): 117–142.
3. Sang-hyun Kim and Sang-il Oum, Hyperbolic Surface subgroups of one-ended doubles of free groups, *Journal of Topology* (2014) 7 (4): 927–947.
2. Sang-hyun Kim and Thomas Koberda, Embedability between right-angled Artin groups, *Geometry & Topology* 17 (2013) 493–530.
1. Sang-hyun Kim and Henry Wilton, Polygonal words in free groups, *Quarterly Journal of Mathematics* (2012) 63(2), 399–421.

Honors and Awards

The Scientist and Engineer of the Month, awarded by Korean Ministry of Science and ICT, and by National Research Foundation of Korea, July 2020.

Y-KAST Member (Young Korean Academy of Science and Technology), 2018 - 2021.

Research Excellence Award (2017) and Teaching Excellence Award, (2015), College of Natural Sciences, Seoul National University.

Excellent Research Paper Award (2016) and Sang-San Prize for Young Mathematicians (2012), Korean Mathematical Society (2016).

Creative Teaching Grand Award, KAIST (2013).

R. H. Bing Fellowship, the University of Texas at Austin, 2008–2010.

Silver medal, the 34th International Mathematical Olympiad, Turkey (1993).

Grants

Samsung Science & Technology Foundation Research Grant, 2014–2018, 2019–2023.

National Research Foundation Grant, Korean Government.

Basic Science Research Program, 2010–2013, 2013–2016.

Mid-Career Researcher Program, 2010–2013 (joint with Suhyoung Choi and Kihyoung Ko).

Mid-Career Researcher Program, 2018–2021.

Professional Activities

Journals

Editor, *Journal of Korean Mathematical Society*, 2019 – present.

Editor, *KIAS Expositions*, 2020 – present.

Services

Steering Committee, AI Center for Basic Sciences, KIAS, 2020 – present.

Task Force for Women Scientists, KIAS, 2021 – present.

Review Board, National Research Foundation of Korea, 2018 – present.

Research Output Analysis Committee, National Research Foundation of Korea, 2020 – present.

Conferences organized

East Asian School of Geometric Topology, 2018 – (annual).

One-dimensional actions of 3-manifold groups, Dijon, France (2019)

Combinatorial and algebraic aspects of geometric structures, Thailand (2019)

yGGT-2019, Spain (2019)

GAGTA-2018, Seoul, Korea (2018)

Workshop on Groups, Geometry and Dynamical System (ICM 2018 satellite), Montevideo, Uruguay (2018)

IBS Undergraduate Mathematics Festival (2015)

East Asian Conference on Algebraic Topology 6 (EACAT-6), Daejeon, Korea (2015)

Geometric Group Theory Workshop, Seaes Hotel, Jeju Island, Korea Dates January 22 - 24 (2015)

Geometry on Groups and Spaces (ICM 2014 Satellite), Daejeon, Korea (2014)

KAIST Geometric Topology Fair (2011 - 2013)

Personal

Citizenship: Republic of Korea.

Public Service: Korean Augmentation to the US Army, December 1998 – February 2001.