List of Publications

Articles:

1. *Convex real projective structures on closed surfaces are closed*, Proc. Amer. Math. Soc. 118 (1993), 657–661 (with W. M. Goldman).
2. *Real projective manifolds developing into an affine space*, Internat. J. Math. 4 (1993), no. 2, 179–191 (with Chae, Younki).
3. *i-convexity of real projective manifolds*, Proc. Amer. Math. Soc. 122 (1994), 545–548.
4. *Convex decompositions of real projective surfaces.* I: *π-annuli and convexity*, J. Differential Geometry 40 (1994), 165–208.
5. *Convex decompositions of real projective surfaces.* II: *Admissible decompositions*, J. Differential Geometry 40 (1994), 239–283.
6. *The Margulis lemma and the thick and thin decomposition for convex real projective surfaces*, Advances in Math. 122 (1996), 150–191.
7. *Convex decompositions of real projective surfaces.* III: *For closed or nonorientable surfaces*, J. Korean Math. Soc. 33 (1996), no. 4, 1139–1171.
8. *The classification of real projective structures on compact surfaces*, Bull. Amer. Math. Soc. 34 (1997), 161–171 (with W. M. Goldman).
9. *Geometric structures on manifolds and holonomy-invariant metrics*, Forum Math. 9 (1997), no. 2, 247–256 (with Hyunkoo Lee).
10. *The universal cover of an affine three-manifold with holonomy of discompactedness two*, Geometry, topology and physics (Campinas, 1996), 107–118, de Gruyter, Berlin 1997.
11. *Convex and Concave decomposition of manifolds with real projective structures*, Mem. Soc. Math. France vol. 78, pp. 1–106, 1999.
12. *The universal cover of an affine three-manifold with holonomy of infinitely shrinkable dimension ≤ 2*, International Journal of Mathematics 11 (2000), 305–365. dg-ga/9706011.
13. *The decomposition and classification of radiant affine 3-manifolds*, Mem. Amer. Math. Soc. vol. 730 (2001), 1–122, (with an appendix by Thierry Barbot and Suhyoung Choi).
14. *The Chern conjecture for affinely flat manifolds using combinatorial methods*, Geometriae Dedicata 97 (2003), 81–92.
15. *Geometric structures on low-dimensional manifolds*, Journal of Korean Mathematical Society 40 (2003), 319–340.
16. *The deformation spaces of convex $\mathbb{RP}^2$-structures on 2-orbifolds*, Amer. J. Math. 127 (2005), 1019–1102 (with William Goldman).
17. *The deformation spaces of projective structures on 3-dimensional Coxeter orbifolds*, Geom. Dedicata 119 (2006) 69–90.
18. *Maximal tubes under deformations of three-dimensional hyperbolic cone manifolds*, Sibirsk. Mat. Zh. 47 (2006), 1167–1192 (with Jungeun Lee).
19. *Spherical triangles and the two components of the $SO(3)$-character space of the fundamental group of a closed surface of genus 2.* Internat. J. Math. 22 (2011), no. 9, 1261–1364.
20. *Projective deformations of hyperbolic Coxeter 3-orbifolds*, Geom. Dedicata 159 (2012), 125–167 (with Craig Hodgson, Gye-Seon Lee).
21. *The definability criterion for cocompact convex projective polyhedral reflection groups*, Geom. Dedicata 175, no. 1, (2015) 323–346 (with Kanghyun

Choi)
22. *Projective deformations of weakly orderable hyperbolic Coxeter orbifolds*, Geometry & Topology 19, no.4 (2015) 1777-1828 (with Gye-Seon Lee)
23. *The convex real projective orbifolds with radial or totally geodesic ends*: *The closedness and openness of deformations*, 1–128. arXiv:1011.1060.
24. *Topological tameness of Margulis spacetimes,* American Journal of Mathematics 139 no 2. (2017), 297–345 (with Bill Goldman)
25. A classification of radial or totally geodesic ends of real projective orbifolds I: a survey of results, Advanced Studies in Pure Mathematics, Vol. 73 (2017), 69-134, MSJ, Tokyo, Japan, arXiv:1501.00348
26. Convex real projective orbifolds with radial or totally geodesic ends: a survey of some partial results, Contemp. Math. 696 (2017), 51- 86. arXiv:1601.06952
27. Convex and concave decompositions of affine 3-manifolds, arXiv:1411.1273.
28. Convex projective generalized Dehn fillings, arXiv:1611.02505, to appear in Les Annales de l'ENS. (with Gye-seon Lee, Ludovic Marquis)
29. Tameness of Margulis space-times with parabolics, arXiv:1710.09162 (with Todd Drumm, William Goldman)
30. Deformations of convex real projective structures on manifolds and orbifolds, arXiv:1605.02548 (with Gye-Seon Lee, Ludovic Marquis), to appear in the Handbook of Group Actions, (L. Ji, A. Papadopoulos, S.-T. Yau, eds.) Higher Education Press and International Press, Boston

Books:

1. *Topology, the proceedings of conference held in honor of Professor Jaepill Kim*, editor 1995 (with Hyuk Kim and Hyunkoo Lee).
2. *The proceedings of the conference on geometric structures*, editor, GARC-Lecture Notes No 46. 1999 (with Hyuk Kim and Hyunkoo Lee).
3. Geometric structures on 2-orbifolds: exploration of discrete symmetry, *MSJ Memoirs*, vol. 27, Mathematical Society of Japan, Tokyo, 2012. xii+171 pp. ISBN: 978-4-931469-68-6.
4. Real projective orbifolds with ends and their deformation theory, in preparations, plan to be approximately 330 pages.

Selected Invited Talks:

1. Amer. Math. Soc. Meeting, Lawrence, Kansas, Special Session, October, 1988.
2. The first joint meeting of the Amer. Math. Soc. and the London Math. Soc., Cambridge, UK., Special Session, July, 1991.
3. Amer. Math. Soc. Meeting, Boston, MA, Special Session, October, 1994.
4. Conference on Geometry, Topology, and Physics, Campinas, Brazil, July 1996.
5. Combinatorial problems arising in knots and 3-manifolds, MSRI, January 1997.
6. Amer. Math. Soc. Meeting, College Park, MD. Special Session, April, 1997.
7. Cone-manifolds and hyperbolic geometry, MSJ Regional Workshop, Tokyo,

Japan 1998.
8. Deformation spaces of Kleinian groups and Teichmuller spaces, Osaka, Japan 1998.
9. Conference on group actions on manifolds, Oberwolfach, February 1998.
11. Crystallographic groups and their generalizations II, Kortrijk, Belgium May 1999.
12. Amer. Math. Soc. Meeting, Washington, DC. Special Session, January 2000.
13. Conference on Differential Geometry and Lie groups, Korea Institute of Advanced Studies, October 2000.
14. New techniques in Lorentzian geometry, Banff, Canada, November 2004.
15. Discrete Groups and Geometric Structures, with Applications, Oostende Belgium, June 2005.
16. East Asian School of Knot theory and Related Topics in Geometric Topology, August 2005.
17. Manifolds at Melbourne, Melbourne, January 2006.
18. Colloquium, October 1, 2008, Tokyo Institute of Technology.
19. Melbourne Geometry Seminar Talk, May 18, 2009.
20. Spherical triangles and the two components of the SO(3)-character space of the fundamental group of a closed surface of genus 2, Geometry, Topology and Dynamics of Character Varieties, IMA, NUS Singapore July, 2010.
21. Deforming convex real projective 3-orbifolds, MOS, Newton Institute Workshop, March 17, 2011, Oxford University,
22. Open problems in real projective structures on low-dimensional orbifolds, The MRC special session on real projective structures, January, 2012. AMS joint meeting, Boston.
23. The topological and geometrical finiteness of complete flat Lorentzian 3-manifolds with free fundamental groups, The workshop on Higher Teichmüller-Thurston theory, October 16, 2012, CRM, Montreal, Canada.
24. Compactifications of Margulis space-times, Geometry of Moduli Spaces of Low Dimensional Manifolds, RIMS, Kyoto, Japan, December 14–18, 2015.
25. Deformations of convex real projective structures on orbifolds, AMS-TIMC joint meeting, Banaras Hindu University, December 16, 2016.

Conferences organized:

1. The conference in honor of J. Kim, Seoul, July 1995, organizer (with Hyuk Kim, Hyunkoo Lee).
2. The conference on gauge theory on manifolds, Seoul, June 1997 organizer (survey speakers: C. Herald (Swarthmore), T. Leness (Michigan State Univ)).
3. The conference on geometric topology, Seoul, September 1997, organizer (with Hyuk Kim and Hyunkoo Lee) (principal speakers: B. Apanasov (Oklahoma), T. Barbot (ENS-Lyon), C. Hodgson (Melbourne), S. Kojima (Tokyo Inst. Tech.), F. Labourie (Paris-Sud), A. Zeghib (ENS-Lyon)).
4. The 7th KAIST Geometric Topology Fair, July 9–11, 2007, Gyeongju, organizer (with K. Ko, K. Jin) (survey speakers: W. Goldman (Maryland), S. Lawton (Porto), E. Peterson (West Point)).

5. A NIMS-KIAS workshop "Hyperbolic geometry: algorithmic, number theoretic and numerical aspects" (A graduate student workshop) March 15–19, 2010 at KIAS, Seoul, organizer (with K. Ko, J. Koo) (survey speakers: C. Hodgson (Melbourne), W. Neumann (Columbia), A. Reid (Austin)).
6. The 8th KAIST Geometric Topology Fair, January 10–15, 2010, organizer (with K. Ko, K. Jin) (survey speaker: D. Witte Morris (Lethbridge)).
7. Intensive Lectures on Real Projective Structures, October 25–27, 2010 at KIAS, Seoul, organizer (survey speaker: D. Alessandrini (Strasbourg)).
8. The 11th KAIST Geometric Topology Fair, August 12–16, 2010, organizer (with K. Ko, S. Kim) (survey speaker: M. Bestvina (Utah), D. Witte Morris (Lethbridge), Joan Porti (Barcelona)).
9. Geometry on groups and surfaces, ICM Satellite Conference, August 7–12 2014, local organizer (with K. Ko, S. Kim, I. Kim, S. Lim)
10. Workshop on Geometric Structures, Hitchin Components and Representation Varieties (October 20 - 24, 2015) KIAS, Seoul, Korea
11. Geometric Structures and Character Varieties, (December 28-30, 2015) Jeju National University, South Korea
12. JNU-KAIST Geometric Topology Fair, (June 12-16, 2017) Jeju National University, South Korea
13. The 2nd JNU-KAIST Geometric Topology Fair, (July 8-14, 2018) Jeju National University, South Korea