

Curriculum Vitae – Sang-Jin Lee

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Personal Information

Last Name : Lee
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Nationality : Korea
Date of birth : 11 January 1971 (born at Chungnam Province, Korea)
Affiliation : Associate Professor, Department of Mathematics, Konkuk University
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Research Interest

Braid group
Low dimensional topology
Geometric group theory

Education

- **1994 – 2000:**
Ph.D. in mathematics, KAIST(Korea Advanced Institute of Science and Technology).
Thesis title: Algorithmic solutions to decision problems in the braid groups.
Advisor: Professor Ki Hyoung Ko.
- **1992 – 1994:**
M.S. in mathematics, KAIST(Korea Advanced Institute of Science and Technology).
Thesis title: Homology boundary links.
Advisor: Professor Ki Hyoung Ko.
- **1988 – 1992:**
B.S. in mathematics, KAIST(Korea Advanced Institute of Science and Technology).

Professional History

Sep. 2007 – present : Associate Professor, Konkuk University, Seoul, Korea.
Sep. 2003 – Aug. 2007 : Assistant Professor, Konkuk University, Seoul, Korea.
Mar. 2002 – Aug. 2003 : Research Fellow, KIAS, Seoul, Korea.
Apr. 2001 – Feb. 2002 : Research Fellow, CMI, Univ. Provence, France.
Mar. 2000 – Mar. 2001 : Research Fellow, KAIST, Daejeon, Korea.

Publications

1. E.-K. Lee and S.-J. Lee, *Notes on periodic elements of Garside groups*, preprint, arXiv:0808.0308.
2. E.-K. Lee and S.-J. Lee, *Injectivity on the set of conjugacy classes of some monomorphisms between Artin groups*, preprint, arXiv:0802.2314.
3. E.-K. Lee and S.-J. Lee, *Uniqueness of roots up to conjugacy for some affine and finite type Artin groups*, preprint, arXiv:0711.0091.
4. E.-K. Lee and S. J. Lee, *Dual presentation and linear basis of the Temperley-Lieb algebras*, preprint, arXiv:math.GR/0403429, to appear in Journal of KMS.
5. E.-K. Lee and S. J. Lee, *A Garside-theoretic approach to the reducibility problem in braid groups*, J. Algebra **320** (2008), no. 2, 783–820.
6. E.-K. Lee and S. J. Lee, *Abelian subgroups of Garside groups*, Comm. Algebra **36** (2008), no. 3, 1121 – 1139.
7. E.-K. Lee and S. J. Lee, *Some power of an element in a Garside group is conjugate to a periodically geodesic element*, Bull. Lond. Math. Soc. **40** (2008), no. 4, 593–603.
8. E.-K. Lee and S. J. Lee, *Translation numbers in a Garside group are rational with uniformly bounded denominators*, J. Pure Appl. Algebra **211** (2007), no. 3, 732–743.
9. E.-K. Lee and S. J. Lee, *A Counter-based MAC Revisited: Weakening the Underlying Assumption*, J. Appl. Math. & Computing **24** (2007), no. 1-2, 461–470.
10. S. J. Lee, *Garside groups are strongly translation discrete*, J. Algebra **309** (2007), 594–609.
11. S. J. Lee and W. T. Song, *The kernel of $Burau(\mathbf{4}) \otimes \mathbb{Z}_p$ is all pseudo-Anosov*, Pacific J. Math. **219** (2005), no. 2, 303-310.
12. S. J. Lee and E. K. Lee *Potential weaknesses of the commutator key agreement protocol based on braid groups*, Advances in cryptology—EUROCRYPT 2002, 14–28, Lecture Notes in Comput. Sci., 2332, Springer, Berlin, 2002.
13. J. S. Birman, K. H. Ko and S. J. Lee, *The infimum, supremum and geodesic length of a braid conjugacy class*, Adv. Math. **164** (2001), no. 1, 41–56.
14. J. C. Cha, K. H. Ko, S. J. Lee, J. W. Han and J. H. Cheon, *An efficient implementation of braid groups*, Advances in cryptology—ASIACRYPT 2001, 144–156, Lecture Notes in Comput. Sci., 2248, Springer, Berlin, 2001.
15. E. K. Lee, S. J. Lee and S. Hahn, *Pseudorandomness from braid groups*, Advances in cryptology—CRYPTO 2001, 486–502, Lecture Notes in Comput. Sci., 2139, Springer, Berlin, 2001.
16. K. H. Ko, S. J. Lee, J. H. Cheon, J. W. Han, J. Kang and C. Park *New Public-key Cryptosystem using Braid Groups*, Advances in cryptology—CRYPTO 2000, 166–183, Lecture Notes in Comput. Sci., 1880, Springer, Berlin, 2000.
17. K. H. Ko and S. J. Lee, *Flypes of closed 3-braids in the standard contact space*, J. Korean Math. Soc. **36** (1999), no. 1, 51–71.
18. J. S. Birman, K. H. Ko and S. J. Lee, *A New Approach to the Word and Conjugacy problems in the Braid Groups*, Adv. Math. **139** (1998), no. 2, 322–353.
19. E. S. Kang, K. H. Ko and S. J. Lee, *Band-generator presentation for the 4-braids*, Topology Appl. **78** (1997), no. 1-2, 39–60.
20. K. H. Ko and S. J. Lee, *Genera of some closed 4-braids*, Topology Appl. **78** (1997), no. 1-2, 61–77.