

Curriculum Vitae

- **NAME:** Satoh, Takao
- **AFFILIATION:** Department of Mathematics, Faculty of Science Division II,
Tokyo University of Science
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- **NATIONALITY:** Japan
- **EDUCATION:**
 - 1998-2002: BA, Tokyo Metropolitan Univerity
(Adviser: Prof. Nakamura, Hiroaki)
 - 2002-2004: Master Course, The University of Tokyo
(Adviser: Prof. Kawazumi, Nariya)
 - 2004-2006: Doctor Course, The University of Tokyo
(Adviser: Prof. Kawazumi, Nariya)
- **DEGREE:** Ph.D. (March 2006, The University of Tokyo)
- **CAREER:**
 - 2006-2007: JSPS Research Fellowship (PD), The University of Tokyo
 - 2007-2008: JSPS Research Fellowship (PD), Osaka University
 - 2008-2011: Program Specific Assistant Professor (Global COE), Kyoto University
 - 2011-2015: Junior Associate Professor, Tokyo University of Science
 - 2015- : Associate Professor, Tokyo University of Science
- **MEMBERSHIPS:**
 - 2004- : Mathematical Society of Japan
 - 2014- : American Mathematical Society

- **RESEARCH PAPERS:**

- **SELECTED PAPERS**

1. Naoya Enomoto and Takao Satoh; New series in the Johnson cokernels of the mapping class groups of surfaces, Algebraic and Geometric Topology 14 (2014), no. 2, 627-669.
2. Takao Satoh; On the lower central series of the IA-automorphism group of a free group, Journal of Pure and Applied Algebra, 216 (2012), 709-717
3. Takao Satoh; New obstructions for the surjectivity of the Johnson homomorphism of the automorphism group of a free group, Journal of the London Mathematical Society, (2) 74 (2006), 341-360.

- **SUB-SELECTED PAPERS**

1. Takao Satoh; On the Andreadakis conjecture restricted to the "lower-triangular" IA-automorphism groups of free groups, to appear in Journal of Algebra and its Applications.
2. Takao Satoh; The Johnson-Morita theory for the ring of Fricke characters of free groups, Pacific Journal of Mathematics, 275 (2015), 443-461.
3. Takao Satoh; First cohomologies and the Johnson homomorphisms of the automorphism group of a free group, Journal of Pure and Applied Algebra, 217 (2013), 137-152.
4. Takao Satoh; The kernel of the Magnus representation of the automorphism group of a free group is not finitely generated, Mathematical Proceedings Cambridge Philosophical Society, 151 (2011), 407-419.
5. Naoya Enomoto and Takao Satoh; On the derivation algebra of the free Lie algebra and trace maps, Algebraic and Geometric Topology, 11 (2011), 2861-2901.
6. Takao Satoh; The cokernel of the Johnson homomorphisms of the automorphism group of a free metabelian group, Transactions of American Mathematical Society, 361 (2009), 2085-2107.

- **OTHERS**

1. Takao Satoh; On the universal SL_2 -representation rings of free groups, to appear in Proceedings of the Edinburgh Mathematical Society.
2. Takao Satoh; On the basis-conjugating automorphism groups of free groups and free metabelian groups, Mathematical Proceedings Cambridge Philosophical Society, 158 (2015), 83-109.
3. Eri Hatakenaka and Takao Satoh; On the graded quotients of the ring of Fricke characters of a free group, Journal of Algebra, 430 (2015), 94-118.

4. Eri Hatakenaka and Takao Satoh; On the rings of Fricke characters of free abelian groups, *Journal of Commutative Algebra*, vol. 7, No. 4, Winter 2015, 545-565.
5. Michihiko Fujii and Takao Satoh; The growth series of pure Artin monoids of dihedral type, *RIMS Kokyuroku Bessatsu*, B48 (2014), 111-130.
6. Michihiko Fujii and Takao Satoh; A necessary condition for geodesic representatives of elements of Artin groups of dihedral type to be geodesic, *Hiroshima Mathematical Journal*, 43, No.2 (2013), 139-147.
7. Takao Satoh; On the augmentation quotients of the IA-automorphism group of a free group, *Algebraic and Geometric Topology*, 12 (2012) 1239-1263.
8. Takao Satoh; On the Johnson filtration of the basis-conjugating automorphism group of a free group, *Michigan Mathematical Journal*, 61 (2012), 87-105.
9. Takao Satoh; The Johnson filtration of the McCool stabilizer subgroup of the automorphism group of a free group, *Proc. of Amer. Math. Soc.* 139 (2011), 1237-1245.
10. Takao Satoh; On the lower central quotients of the free groups of finite rank of a certain variety, *Journal of Algebra* 331 (2011), 449-465.
11. Takao Satoh; A reduction of the target of the Johnson homomorphisms of the automorphism group of a free group, *Transactions of American Mathematical Society*, 363 (2011), 1631-1664.
12. Takao Satoh; On the image of the Burau representation of the IA-automorphism group of a free group, *Journal of Pure and Applied Algebra*, 214 (2010), 584-595.
13. Takao Satoh; On the fourth Johnson homomorphism of the automorphism group of a free group, *Journal of Algebra*, 323 (2010), 3182-3201.
14. Takao Satoh; The abelianization of the congruence IA-automorphism group of a free group, *Mathematical Proceedings Cambridge Philosophical Society*, 142 (2007), 239-248.
Corrigendum: *Math. Proc. Cambridge Philos. Soc.* 143 (2007), no. 1, 255-256.
15. Takao Satoh; Twisted second homology groups of the automorphism group of a free group, *Journal of Pure and Applied Algebra*, 211 (2007), 547-565.
16. Takao Satoh; Twisted first homology groups of the automorphism group of a free group, *Journal of Pure and Applied Algebra*, 204 (2006), 334-348.

• SELECTED INVITED TALKS

1. Takao Sato; On the Johnson homomorphism of the automorphism groups of free groups, Workshop on Automorphism groups of free groups, University of Copenhagen, Denmark, 9 November, 2015.
2. Takao Sato; The Johnson-Morita theory for the rings of Fricke characters, Glances at Manifolds, Uniwersytet Jagiellonski, Krakow, Poland, 18 July 2015.
3. Takao Sato; Some problems on the Johnson homomorphisms and related topics, Workshop on Algebraic Topology and Its Applications, Dalian University of Technology, China, 7 August 2014.
4. Takao Sato; On the Johnson homomorphisms of automorphism groups of free groups, Workshop on Algebraic Topology and Its Applications, Dalian University of Technology, China, 6 August 2014.
5. Takao Sato; The Johnson-Morita theory for the rings of Fricke characters of free groups, New Trends in Teichmüller Theory and Mapping Class Groups, Mathematisches Forschungsinstitut Oberwolfach, Germany, 14 February 2014.
6. Takao Sato; A representation theoretic approach to the Johnson cokernels I, Workshop: Johnson homomorphisms, The University of Tokyo, Japan, 3rd June, 2013.
7. Takao Sato; On the Johnson cokernels of the mapping class group of a surface, Group actions and applications in geometry, topology and analysis, Kunming University of Science and Technology, China, 26 July 2012.
8. Takao Sato; On the Johnson homomorphisms of the automorphism group of a free group, Teichmüller Theory, Mathematisches Forschungsinstitut Oberwolfach, Germany, 4 December 2010.
9. Takao Sato; On the Johnson homomorphisms of the automorphism group of a free metabelian group, JAMI conference 2008, Geometric Group Theory, Geometric Analysis, and Mapping Class Groups, Johns Hopkins University, USA, 4 May 2008.