

List of Papers

General Arithmetic Geometry :

- [1] S. Mochizuki, The Geometry of the Compactification of the Hurwitz Scheme, *Publ. Res. Inst. Math. Sci.* **31** (1995), pp. 355-441.
- [2] S. Mochizuki, On Semi-Positivity and Filtered Frobenius Crystals, *Publ. Res. Inst. Math. Sci.* **31** (1995), pp. 81-94.
- [3] S. Mochizuki, Correspondences on Hyperbolic Curves, *Journ. Pure Appl. Algebra* **131** (1998), pp. 227-244.
- [4] S. Mochizuki, Extending Families of Curves over Log Regular Schemes, *J. reine angew. Math.* **511** (1999), pp. 43-71.
- [5] S. Mochizuki, Noncritical Belyi Maps, *Math. J. Okayama Univ.* **46** (2004), pp. 105-113.
- [6] S. Mochizuki, Arithmetic Elliptic Curves in General Position, *Math. J. Okayama Univ.* **52** (2010), pp. 1-28.

Intrinsic Hodge Theory :

- [1] S. Mochizuki, The Intrinsic Hodge Theory of p -adic Hyperbolic Curves, *Proceedings of the International Congress of Mathematicians*, Vol. II (Berlin, 1998), *Doc. Math.* 1998, Extra Vol. II, pp. 187-196.
- [2] S. Mochizuki, The intrinsic Hodge theory of hyperbolic curves, *Number Theory and Related Topics (Seoul 1998)*, Yonsei Univ. Inst. Math. Sci. (2000), pp. 1-27.
- [3] S. Mochizuki, The intrinsic Hodge theory of p -adic hyperbolic curves, *Taniguchi Conference on Mathematics, Nara '98*, *Adv. Stud. Pure Math.* **31** (2001), Math. Soc. Japan, pp. 211-233.

p -adic Teichmüller Theory :

- [1] S. Mochizuki, A Theory of Ordinary p -adic Curves, *Publ. Res. Inst. Math. Sci.* **32** (1996), pp. 957-1151.
- [2] S. Mochizuki, *Foundations of p -adic Teichmüller Theory*, AMS/IP Studies in Advanced Mathematics **11**, American Mathematical Society/International Press (1999).
- [3] S. Mochizuki, An Introduction to p -adic Teichmüller Theory, *Cohomologies p -adiques et applications arithmétiques I*, *Astérisque* **278** (2002), pp. 1-49.

Anabelian Geometry, the Geometry of Categories :

- [1] S. Mochizuki, The Profinite Grothendieck Conjecture for Closed Hyperbolic Curves over Number Fields, *J. Math. Sci. Univ. Tokyo* **3** (1996), pp. 571-627.
- [2] S. Mochizuki, A Version of the Grothendieck Conjecture for p -adic Local Fields, *The International Journal of Math.* **8** (1997), pp. 499-506.
- [3] S. Mochizuki, The Local Pro- p Anabelian Geometry of Curves, *Invent. Math.* **138** (1999), pp. 319-423.
- [4] S. Mochizuki, H. Nakamura, A. Tamagawa, The Grothendieck conjecture on the fundamental groups of algebraic curves, *Sugaku Expositions* **14** (2001), pp. 31-53.
- [5] S. Mochizuki, The Absolute Anabelian Geometry of Hyperbolic Curves, *Galois Theory and Modular Forms*, Kluwer Academic Publishers (2004), pp. 77-122.
- [6] S. Mochizuki, The Absolute Anabelian Geometry of Canonical Curves, *Kazuya Kato's fiftieth birthday, Doc. Math. 2003, Extra Vol.*, pp. 609-640.
- [7] S. Mochizuki, Topics Surrounding the Anabelian Geometry of Hyperbolic Curves, *Galois Groups and Fundamental Groups, Mathematical Sciences Research Institute Publications* **41**, Cambridge University Press (2003), pp. 119-165.
- [8] S. Mochizuki, The Geometry of Anabelioids, *Publ. Res. Inst. Math. Sci.* **40** (2004), pp. 819-881.
- [9] S. Mochizuki, Categorical representation of locally noetherian log schemes, *Adv. Math.* **188** (2004), pp. 222-246.
- [10] S. Mochizuki, Categories of log schemes with archimedean structures, *J. Math. Kyoto Univ.* **44** (2004), pp. 891-909.
- [11] S. Mochizuki, Semi-graphs of Anabelioids, *Publ. Res. Inst. Math. Sci.* **42** (2006), pp. 221-322.
- [12] S. Mochizuki, Galois Sections in Absolute Anabelian Geometry, *Nagoya Math. J.* **179** (2005), pp. 17-45.
- [13] S. Mochizuki, A combinatorial version of the Grothendieck conjecture, *Tohoku Math. J.* **59** (2007), pp. 455-479.
- [14] S. Mochizuki, Conformal and quasiconformal categorical representation of hyperbolic Riemann surfaces, *Hiroshima Math. J.* **36** (2006), pp. 405-441.
- [15] S. Mochizuki, Absolute anabelian cuspidalizations of proper hyperbolic curves, *J. Math. Kyoto Univ.* **47** (2007), pp. 451-539.
- [16] S. Mochizuki, The Geometry of Frobenioids I: The General Theory, *Kyushu J. Math.* **62** (2008), pp. 293-400.
- [17] S. Mochizuki, The Geometry of Frobenioids II: Poly-Frobenioids, *Kyushu J. Math.* **62** (2008), pp. 401-460.
- [18] S. Mochizuki, Global Solvably Closed Anabelian Geometry, *Math. J. Okayama Univ.* **48** (2006), pp. 57-71.
- [19] S. Mochizuki, The Étale Theta Function and its Frobenioid-theoretic Manifestations, *Publ. Res. Inst. Math. Sci.* **45** (2009), pp. 227-349.

- [20] S. Mochizuki, A. Tamagawa, The algebraic and anabelian geometry of configuration spaces, *Hokkaido Math. J.* **37** (2008), pp. 75-131.
- [21] S. Mochizuki, Topics in Absolute Anabelian Geometry I: Generalities, *J. Math. Sci. Univ. Tokyo* **19** (2012), pp. 139-242.
- [22] S. Mochizuki, Topics in Absolute Anabelian Geometry II: Decomposition Groups and Endomorphisms, *J. Math. Sci. Univ. Tokyo* **20** (2013), pp. 171-269.
- [23] S. Mochizuki, Topics in Absolute Anabelian Geometry III: Global Reconstruction Algorithms, *J. Math. Sci. Univ. Tokyo* **22** (2015), pp. 939-1156.
- [24] S. Mochizuki, On the Combinatorial Cuspidalization of Hyperbolic Curves, *Osaka J. Math.* **47** (2010), pp. 651-715.
- [25] Y. Hoshi, S. Mochizuki, On the Combinatorial Anabelian Geometry of Nodally Nondegenerate Outer Representations, *Hiroshima Math. J.* **41** (2011), pp. 275-342.
- [26] Y. Hoshi and S. Mochizuki, Topics surrounding the combinatorial anabelian geometry of hyperbolic curves I: Inertia groups and profinite Dehn twists, *Galois-Teichmüller Theory and Arithmetic Geometry*, *Adv. Stud. Pure Math.* **63**, Math. Soc. Japan (2012), pp. 659-811.
- [27] Y. Hoshi, S. Mochizuki, *Topics Surrounding the Combinatorial Anabelian Geometry of Hyperbolic Curves II: Tripods and Combinatorial Cuspidalization*, RIMS Preprint **1762** (November 2012).
- [28] Y. Hoshi, S. Mochizuki, *Topics Surrounding the Combinatorial Anabelian Geometry of Hyperbolic Curves III: Tripods and Tempered Fundamental Groups*, RIMS Preprint **1763** (November 2012).
- [29] Y. Hoshi, S. Mochizuki, *Topics Surrounding the Combinatorial Anabelian Geometry of Hyperbolic Curves IV: Discreteness and Sections*, RIMS Preprint **1788** (September 2013).
- [30] S. Mochizuki, Monomorphisms in Categories of Log Schemes, *Kodai Math. J.* **38** (2015), pp. 365-429.
- [31] Y. Hoshi, A. Minamide, S. Mochizuki, *Group-theoreticity of Numerical Invariants and Distinguished Subgroups of Configuration Space Groups*, RIMS Preprint **1870** (March 2017).

The Hodge-Arakelov Theory of Elliptic Curves :

- [1] S. Mochizuki, *The Hodge-Arakelov Theory of Elliptic Curves: Global Discretization of Local Hodge Theories*, RIMS Preprint **1255, 1256** (October 1999).
- [2] S. Mochizuki, *The Scheme-Theoretic Theta Convolution*, RIMS Preprint **1257** (October 1999).
- [3] S. Mochizuki, *Connections and Related Integral Structures on the Universal Extension of an Elliptic Curve*, RIMS Preprint **1279** (May 2000).
- [4] S. Mochizuki, *The Galois-Theoretic Kodaira-Spencer Morphism of an Elliptic Curve*, RIMS Preprint **1287** (July 2000).
- [5] S. Mochizuki, *The Hodge-Arakelov Theory of Elliptic Curves in Positive Characteristic*, RIMS Preprint **1298** (October 2000).

- [6] S. Mochizuki, A Survey of the Hodge-Arakelov Theory of Elliptic Curves I, *Arithmetic Fundamental Groups and Noncommutative Algebra, Proceedings of Symposia in Pure Mathematics* **70**, American Mathematical Society (2002), pp. 533-569.
- [7] S. Mochizuki, A Survey of the Hodge-Arakelov Theory of Elliptic Curves II, *Algebraic Geometry 2000, Azumino, Adv. Stud. Pure Math.* **36**, Math. Soc. Japan (2002), pp. 81-114.
- [8] S. Mochizuki, Anabelian Geometry in the Hodge-Arakelov Theory of Elliptic Curves, *Communications in arithmetic fundamental groups (Kyoto 1999/2001), RIMS Kōkyūroku* **1267** (2002), pp. 96-111.

Inter-universal Teichmüller Theory :

- [1] S. Mochizuki, *Inter-universal Teichmüller Theory I: Construction of Hodge Theaters*, RIMS Preprint **1756** (August 2012), to appear in *Publ. Res. Inst. Math. Sci.*
- [2] S. Mochizuki, *Inter-universal Teichmüller Theory II: Hodge-Arakelov-theoretic Evaluation*, RIMS Preprint **1757** (August 2012), to appear in *Publ. Res. Inst. Math. Sci.*
- [3] S. Mochizuki, *Inter-universal Teichmüller Theory III: Canonical Splittings of the Log-theta-lattice*, RIMS Preprint **1758** (August 2012), to appear in *Publ. Res. Inst. Math. Sci.*
- [4] S. Mochizuki, *Inter-universal Teichmüller Theory IV: Log-volume Computations and Set-theoretic Foundations*, RIMS Preprint **1759** (August 2012), to appear in *Publ. Res. Inst. Math. Sci.*
- [5] S. Mochizuki, A Panoramic Overview of Inter-universal Teichmüller Theory, *Algebraic number theory and related topics 2012, RIMS Kōkyūroku Bessatsu* **B51**, Res. Inst. Math. Sci. (RIMS), Kyoto (2014), pp. 301-345.
- [6] S. Mochizuki, Bogomolov's proof of the geometric version of the Szpiro Conjecture from the point of view of inter-universal Teichmüller theory, *Res. Math. Sci.* **3** (2016), 3:6.
- [7] S. Mochizuki, *The Mathematics of Mutually Alien Copies: from Gaussian Integrals to Inter-universal Teichmüller Theory*, RIMS Preprint **1854** (July 2016).