

Curriculum Vitae

Full name. Kazuya Kawasetsu

Education and appointments.

Education.

- Graduate School of Mathematical Sciences, The University of Tokyo, Ph.D. in Mathematical Sciences, March 2016.
Dissertation Title: “ \mathcal{W} -algebras, free vertex algebras, and the Deligne exceptional series”,
Advisor: Atsushi Matsuo
- Graduate School of Mathematical Sciences, The University of Tokyo, MSc in Mathematical Sciences, March 2013
Thesis Title: “The intermediate vertex subalgebras of the lattice vertex operator algebras”,
Advisor: Atsushi Matsuo
- The University of Tokyo, BSc in Mathematics, March 2010

Appointments.

- Priority Organization for Innovation and Excellence, Kumamoto University, Associate Professor (November 2019–Present).
- Japan Society for the Promotion of Science, Research fellowship for Young Scientists PD (April 2019–October 2019). Host Institution: Research Institute for Mathematical Sciences, Kyoto University. Supervisor: Tomoyuki Arakawa
- School of Mathematics and Statistics, Faculty of Science, the University of Melbourne, Research Fellow (April 2017–March 2019). Supervisor: David Ridout
- Institute of Mathematics, Academia Sinica (Taiwan), Postdoctoral Fellow (April 2016–March 2017). Supervisor: Ching Hung Lam
- Japan Society for the Promotion of Science, Research fellowship for Young Scientists DC2 (April 2014–March 2016). Host Institution: Graduate School of Mathematical Sciences, University of Tokyo. Supervisor: Atsushi Matsuo

Honors and Awards.

- Excellent Young Researcher, MEXT Japan (Ministry of Education, Culture, Sports, Science and Technology Japan) (2019)
- Prize of the Dean of Graduate School of Mathematical Sciences, University of Tokyo (2016).

Teaching experiences.

- (University of Melbourne) Guest lecturing, (for 2nd year undergraduates, 3 times, July 2018), Subject: Differential Equation.
- (University of Tokyo) Teaching Assistant, (for undergraduates, 2010–2013 (year-round), 2014 (winter term)), Subjects: Calculus, Linear Algebra, Multivariable Calculus, Set Theory and Topology, and Rings and Modules

Grants.

- MEXT Japan, *Leading Initiative for Excellent Young Researchers (LEADER)*, Period: 11/2019–03/2023. Amount JPY22million (Sole PI)
- JSPS (Japan Society for the Promotion of Science), *Fund for the Promotion of Joint International Research (Fostering Joint International Research (B))*, Grant number 19KK0065. Period: 10/2019–03/2025. JPY18.33million (Co-Investigator)
- JSPS, *Grant-in-Aid for JSPS Fellows*, Grant number 19J01093. Period: 04/2019–03/2020. Amount: JPY1.56million (Sole PI)
- JSPS, *Grant-in-Aid for JSPS Fellows*, Grant number 14J09236. Period: 04/2014–03/2016. Amount: JPY1.9million (Sole PI)

Selected seminar/conference presentations. (*All presentations below are oral presentations.)

Seminars and Colloquia.

- “Quasi-lisse vertex algebras and modular linear differential equations” Group Theory, Combinatorics and Representation Theory Seminar, November 2019, Kumamoto University (Invited)
- “Relaxed highest-weight modules over affine VOAs” Representation Theory Seminar, April 2019, Kyoto University (Invited)
- “Modular linear differential equations of fourth order and minimal W -algebras” Seminar on Algebra, November 2018, University of Zagreb, Croatia. (Invited)
- “The characters of relaxed highest-weight modules over affine Kac-Moody algebras” Séminaire d’Algèbre, May 2018, University of Lyon, France. (Invited)
- “The characters of relaxed highest-weight modules over affine Kac-Moody algebras” Geometry, Algebra, Mathematical Physics and Topology Seminar, December 2017, Cardiff University, Wales. (Invited)
- “Quasi-lisse vertex algebras and modular linear differential equations” Geometry, Algebra and Physics Seminar, November 2017, University of Alberta, Canada. (Invited)
- “The intermediate vertex subalgebras of the lattice vertex operator algebras” Pure Mathematics Seminar, August 2017, University of Melbourne, Australia.
- “Quasi-lisse vertex algebras and modular linear differential equations” Algebra and Logic Theory, February 2017, University of Denver, USA. (Invited)
- “Uniqueness of a class of holomorphic vertex operator algebras of central charge 24” Taipei Postdoc seminar, October 2016, Academia Sinica, Taiwan. (Invited)
- “ W -algebras with non-admissible levels and the Deligne exceptional series” Waseda University number theory seminar, January 2016, Waseda University. (Invited)
- “Structure of a W -algebra with a non-admissible level” Finite groups Komaba seminar, February 2014. (Invited)
- “The intermediate vertex subalgebras of the lattice vertex operator algebras” Colloquium, October 2013, Ehime University. (Invited)
- “The intermediate vertex subalgebras of the lattice vertex operator algebras” Modular forms & VOA seminar, July 2013, Kyusyu University. (Invited)
- “The intermediate vertex subalgebras of the lattice vertex operator algebras” Combinatorics seminar, April 2013, Tohoku University. (Invited)

Non-Japanese conferences.

- “Relaxed highest-weight modules over affine VOAs” Workshop on Vertex Operator Algebras and Related Topics, August 2019, Sichuan University, China. (Invited)
- “Modular linear differential equations of fourth order and minimal W -algebras” conference “Geometric and automorphic aspects of W -algebras”, May 2019, University of Lille, France. (Invited)
- “The intermediate vertex subalgebras of the lattice vertex operator algebras” Workshop “Vertex algebras and related topics”, May 2018, University of Zagreb, Croatia. (Invited)
- “The characters of relaxed highest-weight modules over affine Kac-Moody algebras” AN-ZAMP 2018, January 2018, New Zealand.
- “The characters of relaxed highest-weight modules over affine Kac-Moody algebras” INdAM Workshop “Affine, Vertex and W -algebras”. December 2017, INdAM, Italy. (Invited)
- “The intermediate vertex subalgebras of the lattice vertex operator algebras” IGA/AMSI Workshop “String Geometries and Dualities”, September 2017, The University of Adelaide, Australia.
- “Quasi-lisse vertex algebras and modular linear differential equations” MATRIX Workshop “Integrability in Low-Dimensional Quantum Systems”, June 2017, Australia.

- “Quasi-lisse vertex algebras and modular linear differential equations” Tensor Categories and Field Theory, June 2017, University of Melbourne, Australia. (Invited)
- “Quasi-lisse vertex algebras and modular linear differential equations” Geometry and Representation Theory, January 2017, Erwin Schrödinger International Institute for Mathematics and Physics, Austria. (Invited)
- “W-algebras with non-admissible levels and the Deligne exceptional series” Vertex Operator Algebras and Related Topics, September 2015, China. (Invited)
- “W-algebras with non-admissible levels and the Deligne exceptional series” The mathematics of conformal field theories, July 2015, Australia. (Invited)
- “W-algebras with non-admissible levels and the Deligne exceptional series” Representation Theory XIV, June 2015, Croatia. (Invited)
- “Structure of a W-algebra with a non-admissible level” Lie Theory and Its Applications in Physics, June 2015, Bulgaria. (Invited)
- “Structure of a W-algebra with a non-admissible level” Taitung Workshop on finite groups, VOA and algebraic combinatorics, March 2015, Taiwan.

Japanese conferences.

- “Quasi-lisse vertex algebras and modular linear differential equations” Featured Invited Talks, MSJ Autumn Meeting 2019, September 2019, Kanazawa University. (Invited)
- “Relaxed highest-weight modules over affine vertex algebras” Algebra Symposium, September 2019, Tohoku University. (Invited)
- “Relaxed highest-weight modules over affine vertex operator algebras” Vertex algebras, factorization algebras and applications, July 2018, Tokyo University. (Invited)
- “Relaxed highest-weight modules over affine vertex operator algebras” RIMS Gasshuku-style Seminar “Vertex Operator Algebras and Conformal Field Theory”, July 2018, Kyoto University. (Invited)
- “ \mathbb{Z}_2 -orbifold construction associated with (-1) -isometry and uniqueness of holomorphic vertex operator algebras of central charge 24” RIMS Workshop “Finite Groups, Algebraic Combinatorics and Vertex Operator Algebras”. December 2016. Kyoto University. (Invited)
- “Modular invariant W-algebras, intermediate vertex algebras, and the Deligne exceptional series” The Workshop on Algebras, Groups, and Modular Forms. May 2016. Tokyo University. (Invited)
- “W-algebras with non-admissible levels and the Deligne exceptional series” Perspectives from vertex algebras. July 2015. Kyoto University. (Invited)
- “Structure of a W-algebra with a non-admissible level” Algebraic Lie Theory and Representation Theory. June 2014. Okayama. (Invited)
- “The free generalized vertex algebras and intermediate vertex subalgebra” String, Lattice, and Moonshine. December 2014. Rikkyo University. (Invited)
- “The intermediate vertex subalgebras of the lattice vertex operator algebras” RIMS Camp-Style Seminar “Beyond the Moonshine”. July 2013. Sendai. (Invited)