Mar. 19, 2023

Akihito Yoneyama

Research Fellow (DC2) at Japan Society for the Promotion of Science
Institute of Physics, Graduate School of Arts and Sciences, the University of Tokyo
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Education

- Apr. 2020 - Mar. 2023
  Doctoral Course
  Institute of Physics, Graduate School of Arts and Sciences, the University of Tokyo
  Supervisor: Prof. Atsuo Kuniba
- Apr. 2018 - Mar. 2020
  Master Course
  Institute of Physics, Graduate School of Arts and Sciences, the University of Tokyo
  Supervisor: Prof. Atsuo Kuniba
- Apr. 2014 - Mar. 2018
  Department of Physics, the University of Tokyo

Academic Work Experience

- Apr. 2021 - Mar. 2023
  Research Fellow (DC2) at Japan Society for the Promotion of Science
  The University of Tokyo, Tokyo, Japan
- Sep. 2020 - Jan. 2021
  Teaching assistant for the course *Electromagnetics B*
  The University of Tokyo, Tokyo, Japan

Award

- Mar. 2023
  Ichiko Memorial Award (一高記念賞), Graduate School of Arts and Sciences, the University of Tokyo
- Mar. 2020
  Encouragement Award (広域科学専攻奨励賞), Graduate School of Arts and Sciences, the University of Tokyo

Grant

- Apr. 2021 - Mar. 2023
  Grant-in-Aid for Japan Society for the Promotion of Science Research Fellow (DC2)
  Project/Area Number: 21J11742
  Research Title: "Exploring the nature of promise problems that allows an exponential speedup in quantum computation"

Paper

5. A.Kuniba, S.Matsuike, A.Yoneyama, "New solutions to the tetrahedron equation associated with quantized six-vertex models", arXiv:2208.10258
4. A.Yoneyama, "Boundary from bulk integrability in three dimensions: 3D reflection maps from tetrahedron maps", Math. Phys. Anal. Geom. **24** 21 (2021), arXiv:2103.01105
3. A.Yoneyama, "Tetrahedron and 3D reflection equation from PBW bases of the nilpotent subalgebra of quantum superalgebras", Commun. Math. Phys. **387** 481-550 (2021), arXiv:2012.13385
2. A.Kuniba, M.Okado and A.Yoneyama, "Reflection K matrices associated with an Onsager coideal of $U_p(A^{(1)}_{n-1}), U_p(B^{(1)}_n), U_p(D^{(1)}_n)$ and $U_p(D^{(2)}_{n+1})$", J. Phys. A: Math. Theor. **52** 375202 27pages (2019), arXiv:1904.05653
1. A.Kuniba, M.Okado and A.Yoneyama, "Matrix product solution to the reflection equation associated with a coideal subalgebra of $U_q(A^{(1)}_{n-1})$", Lett. Math. Phys. **109** 2049-2067 (2019), arXiv:1812.03767

Oral Presentation at International Conference

3. Mar. 4-8, 2023 @ Osaka Metropolitan University (Invited)
   "Tetrahedron equations associated with quantized six-vertex models", Integrable Systems and Quantum Groups —In Honor of Masato Okado's 60th Birthday—
2. Jul. 18-22, 2022 @ University of Strasbourg
   "Tetrahedron and 3D reflection equation from PBW basis of the nilpotent subalgebra of quantum superalgebras", The 34th International Colloquium on Group Theoretical Methods in Physics
1. Mar. 5-7, 2019 @ the University of Tokyo (Invited)
   "Matrix product solution to the reflection equation associated with a coideal subalgebra of $U_q(A^{(1)}_{n-1})$", Infinite Analysis 19 Quantum Symmetries and Integrable Systems

Invited Seminar

2. Jan. 14, 2021 @ the University of Tokyo (Online) (Host: Ralph Willox)

"Tetrahedron and 3D reflection equation from PBW bases of the nilpotent subalgebra of quantum superalgebras", Discrete Mathematical Modelling Seminar

1. Apr. 10, 2019 @ Rikkyo University (Host: Jimbo Michio)
   "Review about tetrahedron equation and technical details about [KOY18]"

Oral Presentation at Domestic Conference

6. Mar. 15-18, 2023 @ Chuo University
   "New solutions to the tetrahedron equation associated with quantized six-vertex models", Mathematical Society of Japan Spring Meeting 2023
5. Oct. 18-22, 2021 @ Online
   "3D reflection maps from tetrahedron maps", Combinatorial Representation Theory and Connections with Related Fields (RIMS Workshop), RIMS Kôkyûroku
4. Sep. 14-17, 2021 @ Chiba University (Online)
   "3D reflection maps from tetrahedron maps", Mathematical Society of Japan Autumn Meeting 2021
3. Jun. 25-28, 2021 @ Online
   "3D reflection maps from tetrahedron maps", Algebraic Lie Theory and Representation Theory
2. Mar. 15-18, 2021 @ Keio University (Online)
   "Tetrahedron and 3D reflection equation from PBW basis of the nilpotent subalgebra of quantum superalgebras", Mathematical Society of Japan Spring Meeting 2021
1. Feb. 10-14, 2021 @ Online
   "Tetrahedron equation from PBW bases of the nilpotent subalgebra of quantum superalgebras", Mathsci Freshman Seminar 2021

Skill

Python, Mathematica, C