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Education

Mar 2021 **Doctor of Science**, *Department of Mathematical and Computing Science, Tokyo Institute of Technology*
Thesis: Difference equations arising from cluster algebras
Supervisor: Yuji Terashima and Sakie Suzuki

Mar 2018 **Master of Science**, *Department of Mathematical and Computing Science, Tokyo Institute of Technology*
Supervisor: Yuji Terashima

Mar 2016 **Bachelor of Science**, *Department of Information Science, Tokyo Institute of Technology*

Teaching

Fall 2021 Part-time lecturer, Tokyo University of Agriculture and Technology, Calculus

Fellowships

2024–present Postdoctoral Researcher, University College Dublin

2021–2024 JSPS Research Fellow (PD), Japan Society for the Promotion of Sciences

2018–2021 JSPS Research Fellow (DC1), Japan Society for the Promotion of Sciences

Preprints

Divisibility by p for Markoff-like Surfaces, joint work with Matthew de Courcy-Ireland and Matthew Litman, *arXiv preprint arXiv:2509.02187*, 2025.

Periodic y-systems and nahm sums: the rank 2 case. *arXiv preprint arXiv:2301.13239*, 2023.

Publications

Remarks on nahm sums for symmetrizable matrices. *Ramanujan J.*, 66, 62, 2025.

q-Painlevé equations on cluster Poisson varieties via toric geometry. *Sel. Math. New Ser.*, 30, 19, 2024.

Difference equations arising from cluster algebras. *J. Algebraic Combin.*, 54(1):295–351, 2021.

Exponents associated with Y-systems and their relationship with q-series. *SIGMA Symmetry Integrability Geom. Methods Appl.*, 16:028, 42 pages, 2020.

Jacobian matrices of Y-seed mutations, Advances in Applied Mathematics, 115:101987, 2020.

Quiver mutation sequences and q-binomial identities, joint work with Akishi Kato and Yuji Terashima, International Mathematics Research Notices, 2018(23):7335–7358, 2018.