

- RYOTA AKIYOSHI AND ANDREW ARANA, *On Gaisi Takeuti's philosophy of mathematics*.

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Gaisi Takeuti (1926-2017) is one of the most distinguished logicians in proof theory after Hilbert and Gentzen. He furthered the realization of Hilbert's program by formulating Gentzen's sequent calculus for higher-order logics, conjecturing the cut-elimination theorem holds for it (Takeuti's conjecture), and obtaining several stunning results in the 1950–60's towards the solution of his conjecture. Though he has been chiefly known as a great mathematician, he wrote many papers in English and Japanese [2, 3, 4] where he expressed his philosophical thoughts.

In this talk, we aim to describe a general outline of our project to investigate Takeuti's philosophy of mathematics. In particular, we point out that there is a crucial difference between Takeuti's program and Hilbert's program, which is based on the fact that Takeuti's philosophical thinking goes back to Nishida's philosophy in Japan.

[1] RYOTA AKIYOSHI AND ANDREW ARANA, *Takeuti's proof theory in the context of the Kyoto School*, *Jahrbuch für Philosophie das Tetsugaku-Ronso*, Kyoto University, to appear.

[2] ——— *Keishikisyugi No Tachiba Kara II (From the point of view of formalism II)*, *Kagakukisoron Kenkyu (Annals of the Japan Association for Philosophy of Science)*, 2(3):295–299, 1956.

[3] ——— *Suugaku Ni Tsuite (About mathematics, Kagakukisoron Kenkyu (Annals of the Japan Association for Philosophy of Science))*, (4):170–174, 1972.

[4] ——— *Proof-Theory*, North-Holland, Amsterdam, 2nd edition, 1987.