

Ban, Katsuma**On Rankin-Cohen-Ibukiyama operators for automorphic forms of several variables.** (English)[Zbl 1137.11034](#)

Comment. Math. Univ. St. Pauli 55, No. 2, 149-171 (2006).

The operators of the title of this paper attach to holomorphic automorphic forms on the upper half-plane or on Siegel half-spaces further automorphic forms on the same spaces but with different weight. The author observes that, as these operators are defined locally, it should be possible to interpret these operators in terms of representation theory. He does this; it turns out that the operators are a manifestation of Howe duality. He also gives analogous constructions in the case of symmetric domains associated with indefinite special unitary groups.

Reviewer: [Samuel James Patterson \(Göttingen\)](#)**MSC:**

- [11F60](#) Hecke-Petersson operators, differential operators (several variables)
- [11F55](#) Other groups and their modular and automorphic forms (several variables)
- [11F27](#) Theta series; Weil representation; theta correspondences
- [11F46](#) Siegel modular groups; Siegel and Hilbert-Siegel modular and automorphic forms

Cited in **5** Documents**Keywords:**[Rankin-Cohen-Ibukiyama operators](#); [automorphic forms Siegel half-space](#); [metaplectic group](#); [special unitary group](#); [Howe duality](#); [tensor products](#)