

Imayoshi, Yoichi; Ito, Manabu; Yamamoto, Hiroshi

On the number of holomorphic mappings between Riemann surfaces of finite analytic type.

(English) [Zbl 1255.30046](#)

Proc. Edinb. Math. Soc., II. Ser. 54, No. 3, 711-730 (2011).

A Riemann surface is said to be of finite analytic type if it is a compact Riemann surface from which a finite set of points is removed. In the paper under review the authors consider the set of non-constant holomorphic mappings between two Riemann surfaces of finite analytic type, and give upper bounds on the cardinality of the set when the Euler-Poincaré characteristic of the target surface is negative. The bounds are described by genera and the numbers of punctures of source and target surfaces. Furthermore the authors treat surfaces whose Euler-Poincaré characteristic is non-negative.

Reviewer: [Gou Nakamura \(Toyota\)](#)

MSC:

[30F99](#) Riemann surfaces

Keywords:

[Riemann surface of finite analytic type](#); [holomorphic mapping](#); [Euler-Poincaré characteristic](#)

Full Text: [DOI](#)

References:

- [1] DOI: [10.1017/S0013091507000223](#) · [Zbl 1163.32006](#) · doi:[10.1017/S0013091507000223](#)
- [2] DOI: [10.1515/crll.1931.165.225](#) · [Zbl 0002.05602](#) · doi:[10.1515/crll.1931.165.225](#)
- [3] Gunning, Princeton Mathematical Notes (1966)
- [4] Griffiths, Wiley Classics Library (1994)
- [5] Forster, Graduate Texts in Mathematics 81 (1991)
- [6] Farkas, Riemann surfaces (1980) · doi:[10.1007/978-1-4684-9930-8](#)
- [7] DOI: [10.1112/blms/10.2.209](#) · [Zbl 0384.14008](#) · doi:[10.1112/blms/10.2.209](#)
- [8] DOI: [10.1090/S0002-9939-99-04858-3](#) · [Zbl 0919.30035](#) · doi:[10.1090/S0002-9939-99-04858-3](#)
- [9] Tanabe, Osaka J. Math. 33 pp 485– (1996)
- [10] Mednykh, Dokl. Akad. Nauk SSSR 424 pp 165– (2009)
- [11] Martens, Proceedings of Symposia in Pure Mathematics 49 pp 531– (1989)
- [12] Lehner, Mathematical Surveys and Monographs 8 (1964)
- [13] DOI: [10.1007/BF03016041](#) · [Zbl 44.0657.02](#) · doi:[10.1007/BF03016041](#)

This reference list is based on information provided by the publisher or from digital mathematics libraries. Its items are heuristically matched to zbMATH identifiers and may contain data conversion errors. It attempts to reflect the references listed in the original paper as accurately as possible without claiming the completeness or perfect precision of the matching.