

Math fact of the week

April 15, 2024

Consider the following statement:

If S is a set of holomorphic functions on \mathbb{C} such that
for every $z \in \mathbb{C}$ the set $\{f(z) \mid f \in S\}$ is countable, (*)
then S is countable

Theorem ([Erd64]). (*) holds if and only if the Continuum Hypothesis is false.

REFERENCES

- [Erd64] P. Erdős. “An interpolation problem associated with the continuum hypothesis.” In: *Michigan Mathematical Journal* 11.1 (1964).