

Quantum Recursive Functions in Recursive Analysis

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Turing introduced the ‘computable reals’ in 1936. The subject of recursive analysis was then opened and studied by researchers through different approaches.

The filter approach to recursive topology, when applied to recursive analysis, serves to shed new light helping to unify those varied schools.

We examine the works of Ceitin, Goodstein, Grzegorzczuk, Kreisel–Lacombe–Shoenfield, Kushner, Lacombe, Myhill, Orevkov, Pour-El–Richards, Šanin, Specker, Weihrauch, Zaslavskii and others in general, and some theorems of Specker’s and Orevkov’s in specific.