

# ON THE ARITHMETICAL STRUCTURE OF SOME COMPACT SUBSETS IN THE $P$ -ADIC COMPLEX NUMBER FIELD

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## **ABSTRACT**

We use arithmetical tools (algebraic numbers, valuations, Galois groups) in order to describe the structure of all compact subsets of the  $p$ -adic complex field, which are invariant with respect to the absolute Galois group of the  $p$ -adic number field.

**Keywords and Phrases:** Galois groups, number fields, Banach algebras, compact sets.