For a commutative ring $S$, a quasigroup $Q$ is said to be $S$-linear if $Q$ has an $S$-module structure, with $x \cdot y = x^R + y^L$ for $S$-automorphisms $R$ and $L$ of $Q$. By definition, homomorphisms of $S$-linear quasigroups are module homomorphisms that respect the quasigroup structure.

Our primary concern is the isomorphism problem for finitely generated $\mathbb{Z}$-linear quasigroups. While finite-dimensional $\mathbb{C}$-linear quasigroups are classified up to isomorphism by ordinary characters, non-isomorphic finitely generated $\mathbb{Z}$-linear quasigroups may complexify to isomorphic $\mathbb{C}$-linear quasigroups. We present a subclass of $\mathbb{Z}$-linear quasigroups where isomorphic complexifications imply a permutational similarity of the $\mathbb{Z}$-linear quasigroups involved. (Received August 08, 2016)