The semidirect product in a variety of right Ω-loops

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Let $\mathbf{C}$ be a fixed variety of universal algebras which has among its operations a binary $+$, a binary $-$, and a nullary 0 satisfying the identities $x + 0 = x$, $0 + x = x$, $(x - y) + y = x$ and $(x + y) - y = x$. In this talk we construct the semidirect product (see [2]) in $\mathbf{C}$ as the set-theoretical (cartesian) product equipped with the Ω-algebra structure. This construction helps to develop the theory of crossed modules in $\mathbf{C}$ independently of the definition given in [3].

References

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