

Turkish Journal of Mathematics

Turkish Journal

of

Mathematics



On Certain Varieties of Semigroups

Andreas TIEFENBACH

Middle East Technical University,

Department of Mathematics,

06531, Ankara-TURKEY

 [Keywords](#)
 [Authors](#)



math@tubitak.gov.tr

[Scientific Journals Home Page](#)

Abstract: In this paper we generalize the class of completely regular semigroups (unions of groups) to the class of local monoids, that is the class of all semigroups where the local subsemigroups $\langle aSa \rangle$ are local submonoids. The sublattice of this variety $\mathbf{L}(\mathbf{caL}(\mathbf{cam}))$ covers another lattice isomorphic to the lattice of all bands $\langle [x^2 = x] \rangle$. Every band variety \mathbf{cau} has as image the variety $\langle \Phi - \mathbf{cau} \rangle$ which is the class of all semigroups, where $\langle \Phi \rangle$ is a \mathbf{cau} -congruence $\langle a \Phi b \Leftrightarrow aSa = bSb \rangle$. It is shown how one can find the laws for $\langle \Phi - \mathbf{cau} \rangle$ for a given band variety \mathbf{cau} . The laws for $\langle \Phi - \mathbf{cab} \rangle$ are given and it is shown that $\langle \Phi - \mathbf{car} \mathbf{cab} - \mathbf{caL}(\mathbf{cag}) \mathbf{caL}(\mathbf{cav}) := \{S : aSa \in \mathbf{cav} \text{ for all } a \in S\} \rangle$.

Turk. J. Math., **22**, (1998), 145-152.

Full text: [pdf](#)

Other articles published in the same issue: [Turk. J. Math., vol.22, iss.2.](#)