

# Finite-sheeted covering maps over Klein bottle weak solenoidal spaces

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Let  $\mathbf{p} = (p_i)$ ,  $\mathbf{q} = (q_i)$  and  $\mathbf{r} = (r_i)$  be sequences of integers such that  $p_i \neq 0$  and  $r_i$  odd for each  $i$ . Klein bottle weak solenoidal space  $\Sigma(\mathbf{p}, \mathbf{q}, \mathbf{r})$  is the inverse limit of an inverse sequence, where each term is Klein bottle  $K$  and each bonding map  $f_{i+1} = f_{(p_i, q_i, r_i)} : K \rightarrow K$  is a finite-sheeted covering map. Spaces  $\Sigma(\mathbf{p}, \mathbf{q}, \mathbf{r})$  were introduced and classified up to homeomorphism by C. Tezer ([2]). Using shape-theoretic techniques we classified finite-sheeted covering maps over  $\Sigma(\mathbf{p}, \mathbf{q}, \mathbf{r})$  (both pointed and unpointed case) and answered a related question under which conditions 2-dimensional compact connected Abelian group covers Klein bottle weak solenoidal space.

- [1] V.Matijević: *Finite-sheeted covering maps over Klein bottle weak solenoidal spaces*, preprint  
[2] C.Tezer: *Shape classification of Klein-bottle-like continua*, Quart. J. Math. Oxford (2) **40** (1989), 225-243.

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