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*Translation surfaces of finite type in Sol<sub>3</sub>*

Comment.Math.Univ.Carolin. 61,2 (2020) 237–256.

**Abstract:** In the homogeneous space Sol<sub>3</sub>, a translation surface is parametrized by  $r(s, t) = \gamma_1(s) * \gamma_2(t)$ , where  $\gamma_1$  and  $\gamma_2$  are curves contained in coordinate planes. In this article, we study translation invariant surfaces in Sol<sub>3</sub>, which has finite type immersion.

**Keywords:** Laplacian operator; homogeneous space; invariant surface; surfaces of coordinate finite type

**AMS Subject Classification:** 53C30, 53B25

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