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**Bloch-Sobolev Spaces
and Analytic Composition Operators**

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Abstract. We introduce the so-called Bloch-Sobolev function spaces and show that these spaces have nice closure properties. We also characterize the boundedness and compactness of a composition operator C_ϕ (with analytic symbol ϕ between two subdomains $\Omega, \Omega' \subsetneq \mathbb{R}^2$) acting between two Bloch-Sobolev spaces. As a by-product we obtain a characterization of those analytic mappings $\phi: \Omega \rightarrow \Omega'$, which are uniformly continuous with respect to the quasihyperbolic metrics in Ω and Ω' .

Keywords. Bloch-Sobolev spaces, composition operators, analytic mappings.

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