

# VECTOR FIELDS IN THE PLANE WITH THE REFLECTION PROPERTY

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## ABSTRACT

The classical Schwarz Reflection Principle may be stated as follows:

- *Let  $\gamma_1$  and  $\gamma_2$  be real analytic curves in  $\mathbb{C}$ . Then every holomorphic function  $f(z)$  defined on a side of  $\gamma_1$  that extends continuously up to  $\gamma_1$  and maps  $\gamma_1$  into  $\gamma_2$  has a holomorphic extension across  $\gamma_1$ .*

We discuss necessary and sufficient conditions for the validity of the analogue of the Schwarz Reflection Principle for homogeneous solutions of complex vector fields in the plane. This is joint work with S. Berhanu.

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