

# POSITIVE REPRESENTATIONS AND ORDERED FIELDS

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## ABSTRACT

Positive representations have been introduced by Guichard-Wienhard in the study of higher Teichmüller spaces. We discuss a notion of positive representation from the fundamental group of a general hyperbolic surface to the  $k$ -points of an algebraic group, where  $k$  is an ordered field. This notion provides a unifying framework generalising at the same time the case when the surface is closed and when  $k$  is the field of real numbers. We emphasise on the non-Archimedean case and relate such representations to limits of real representations. This is joint work with Nicolas Tholozan, Tianqi Wang and Tengren Zhang.