

# Simultaneous linearization of a class of pairs of involutions with normally hyperbolic composition

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In this talk a result on simultaneous linearization for a class of pairs of involutions whose composition is normally hyperbolic is presented. This extends the corresponding result when the composition of the involutions is a hyperbolic germ of a  $2D$ -diffeomorphism (Teixeira, 1982). Inside the class of pairs with normally hyperbolic composition, we obtain a characterization theorem for the composition to be hyperbolic. In addition, related to the class of interest, we present the classification of pairs of linear involutions via linear conjugacy. It is worth to say that the problem of simultaneous behavior of diffeomorphisms have led to several interesting results in different settings. Among such results, we mention the Bochner-Montgomery theorem (see Montgomery-Zippin, 1955) which is a well-known and useful result about linearization of a compact group of transformations around a fixed point. This theorem is preceded by a related result by Cartan (1955). We also mention the article of Voronin (1982) where the classification of pairs of  $2D$ -involutions is also considered.

## References

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