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Title: Real Lie groups and groups definable in o-minimal expansions of the real field

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Abstract: We will characterize torsion free groups definable in o-minimal structures, using the concept of "supersolvability". Using this, we will analyze the relation between real Lie groups and groups definable in o-minimal expansions of the real field. We prove for example that every connected simply connected supersolvable real Lie group is Lie isomorphic to a group definable in the real exponential field.