

cases	doc_1		doc_2		decision	id
	authors	<ul style="list-style-type: none"><li>William M. Goldman</li></ul>			DUPLICATES	106
	title	Locally Homogeneous Geometric Manifolds	authors	<ul style="list-style-type: none"><li>William M. Goldman</li></ul>		
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	id	id3621458669703606779	urls	<ul style="list-style-type: none"><li>https://web.archive.org/web/20171004062511/https://core.ac.uk/download/pdf/2111879.pdf</li></ul>		
	abstract	Motivated by Felix Klein's notion that geometry is governed by its group of symmetry transformations, Charles Ehresmann initiated the study of geometric structures on topological spaces locally modeled on a homogeneous space of a Lie group. These locally homogeneous spaces later formed the context of Thurston's 3-dimensional geometrization program. The basic problem is for a given topology $\hat{\mathbb{R}}$ and a geometry $X = G/H$ , to classify all the possible ways of introducing the local geometry of $X$ into $\hat{\mathbb{R}}$ . For example, a sphere admits no local Euclidean geometry: there is no metrically accurate Euclidean atlas of the earth. One develops a space whose points are equivalence classes of geometric structures on $\hat{\mathbb{R}}$ , which itself exhibits a rich geometry and symmetries arising from the topological symmetries of $\hat{\mathbb{R}}$ . We survey several examples of the classification of locally homogeneous geometric structures on manifolds in low dimension, and how it leads to a general study of surface group representations. In particular geometric structures are a useful tool in understanding local and global properties of deformation spaces of representations of fundamental groups. (2000) . Primary 57M50; Secondary 57N16. Mathematics Subject Classification	id	id5778645022539893868		
	versions		abstract	Motivated by Felix Klein's notion that geometry is governed by its group of symmetry transformations, Charles Ehresmann initiated the study of geometric structures on topological spaces locally modeled on a homogeneous space of a Lie group. These locally homogeneous spaces later formed the context of Thurston's 3-dimensional geometrization program. The basic problem is for a given topology $S$ and a geometry $X = G/H$ , to classify all the possible ways of introducing the local geometry of $G/H$ into $S$ . For example, a sphere admits no local Euclidean geometry: there is no metrically accurate Euclidean atlas of the earth. One develops a space whose points are equivalence classes of geometric structures on $S$ , which itself exhibits a rich geometry and symmetries arising from the topological symmetries of $S$ . In this talk I will survey several examples of the classification of locally homogeneous geometric structures on manifolds in low dimension, and how it leads to a general study of surface group representations. In particular geometric structures are a useful tool in understanding local and global properties of deformation spaces of representations of fundamental groups.		
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