

1. Record Nr.	UNINA9910973246903321
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Titolo	Cancellation for Surfaces Revisited
Pubbl/distr/stampa	Providence : , : American Mathematical Society , , 2022 ©2022
ISBN	9781470471712 147047171X
Edizione	[1st ed.]
Descrizione fisica	1 online resource (124 pages)
Collana	Memoirs of the American Mathematical Society ; ; v.278
Classificazione	14R1014D22
Altri autori (Persone)	KalimanS ZaidenbergM
Disciplina	516.3/52 516.352
Soggetti	Surfaces, Algebraic Cancellation theory (Group theory) Moduli theory Algebraic geometry -- Affine geometry -- Affine spaces (automorphisms, embeddings, exotic structures, cancellation problem) Algebraic geometry -- Families, fibrations -- Fine and coarse moduli spaces
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
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cylinders upon deformation of surfaces -- 5.1. Equivariant Asanuma modification -- 5.2. Rigidity of cylinders under deformations of GDF surfaces -- 5.3. Rigidity of cylinders under deformations of \mathbb{A}^1 -fibered surfaces -- 5.4. Rigidity of line bundles over affine surfaces -- Chapter 6. Basic examples of Zariski factors -- 6.1. Line bundles over affine curves -- 6.2. Parabolic \mathbb{A}^1 -surfaces: an overview -- 6.3. Parabolic \mathbb{A}^1 -surfaces as Zariski factors -- Chapter 7. Zariski \mathbb{A}^1 -factors -- 7.1. Stretching and rigidity of cylinders -- 7.2. Non-cancellation for GDF surfaces -- 7.3. Extended graphs of Gizatullin surfaces -- 7.4. Zariski \mathbb{A}^1 -factors and affine \mathbb{A}^1 -fibered surfaces -- Chapter 8. Classical examples -- Chapter 9. GDF surfaces with isomorphic cylinders -- 9.1. Preliminaries -- 9.2. Classification of GDF cylinders up to \mathbb{A}^1 -isomorphism -- 9.3. GDF surfaces whose fiber trees are bushes. 9.4. Spring bushes versus bushes -- 9.5. Cylinders over Danielewski-Fieseler surfaces -- 9.6. Proof of the main theorem -- Chapter 10. On moduli spaces of GDF surfaces -- 10.1. Coarse moduli spaces of GDF surfaces -- 10.2. The automorphism group of a GDF surface -- 10.3. Configuration spaces and configuration invariants -- 10.4. Versal deformation families of trivializing sequences -- 10.5. Proof of Theorem 10.1.3 -- Acknowledgments -- Bibliography -- Back Cover.

Sommario/riassunto

"The celebrated Zariski Cancellation Problem asks as to when the existence of an isomorphism $X \times \mathbb{A}^1 \cong X \times \mathbb{A}^n$ for (affine) algebraic varieties X and X implies that $X \cong \mathbb{A}^n$. In this paper we provide a criterion for cancellation by the affine line (that is, $n = 1$) in the case where X is a normal affine surface admitting an \mathbb{A}^1 -fibration $X \rightarrow B$ with no multiple fiber over a smooth affine curve B . For two such surfaces $X \rightarrow B$ and $X' \rightarrow B$ we give a criterion as to when the cylinders $X \times \mathbb{A}^1$ and $X' \times \mathbb{A}^1$ are isomorphic over B . The latter criterion is expressed in terms of linear equivalence of certain divisors on the Danielewski-Fieseler quotient of X over B . It occurs that for a smooth \mathbb{A}^1 -fibered surface $X \rightarrow B$ the cancellation by the affine line holds if and only if $X \rightarrow B$ is a line bundle, and, for a normal such X , if and only if $X \rightarrow B$ is a cyclic quotient of a line bundle (an orbifold line bundle). If X does not admit any \mathbb{A}^1 -fibration over an affine base then the cancellation by the affine line is known to hold for X by a result of Bandman and Makar-Limanov. If the cancellation does not hold then X deforms in a non-isotrivial family of \mathbb{A}^1 -fibered surfaces B with cylinders \mathbb{A}^1 isomorphic over B . We construct such versal deformation families and their coarse moduli spaces provided B does not admit nonconstant invertible functions. Each of these coarse moduli spaces has infinite number of irreducible components of growing dimensions; each component is an affine variety with quotient singularities. Finally, we analyze from our viewpoint the examples of non-cancellation constructed by Danielewski, tom Dieck, Wilkens, Masuda and Miyanishi, e.a."

2. Record Nr.	UNINA9911019774303321
Titolo	Arid zone geomorphology : process, form and change in drylands // edited by David S.G. Thomas
Pubbl/distr/stampa	Chichester [England] ; ; Hoboken, N.J., : Wiley-Blackwell, 2011
ISBN	9786613619952 9780470975695 0470975695 9781280590122 1280590122 9780470710760 0470710764 9780470710777 0470710772
Edizione	[3rd ed.]
Descrizione fisica	xxiv, 624 p. : ill., maps
Altri autori (Persone)	ThomasDavid S. G
Disciplina	551.41/5
Soggetti	Geomorphology Arid regions
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Sommario/riassunto	The new edition of Arid Zone Geomorphology aims to encapsulate the advances that have been made in recent years in the investigation and explanation of landforms and geomorphological processes in drylands. Building on the success of the previous two editions, the Third Edition has been completely revised and updated to reflect the latest developments in the field. Whilst this latest edition will remain a comprehensive reference to the subject, the book has been restructured to include regional case studies throughout to enhance student understanding and is clearly defined into five distinct sections; Firstly, the book introduces the reader to Large Scale Controls and Variability in Drylands and then moves on to consider Surface Processes and Characteristics; The Work of Water, The Work of the Wind. The

book concludes with a section on Living with Dryland Geomorphology that includes a chapter on geomorphological hazards and the human impact on these environments. Once again, recognised world experts in the field have been invited to contribute chapters in order to present a comprehensive and up-to-date overview of current knowledge about the processes shaping the landscape of deserts and arid regions. In order to broaden the appeal of the Third Edition, the book has been reduced in extent by 100 pages and the Regional chapters have been omitted in favour of the inclusion of key regional case studies throughout the book. The Editor is also considering the inclusion of a supplementary website that could include further images, problems and case studies.
