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cases			DUPLICATES	163

doc_1	
authors	• Tommaso Pacini
title	Desingularizing isolated conical singularities: Uniform estimates via weighted Sobolev spaces
publication_date	2013-01-01 00:00:00
source	SupportedSources.INTERNET_ARCHIVE
journal	International Press of Boston
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doi	10.4310/cag.2013.v21.n1.a3
urls	• https://web.archive.org/web/20190428163938/https://www.intlpress.com/site/pub/files/_fulltext/journals/cag/2013/0021/0001/CAG-2013-0021-0001-a003.pdf
id	id2909072353530375580
abstract	We define a very general "parametric connect sum" construction that can be used to eliminate isolated conical singularities of Riemannian manifolds. We then show that various important analytic and elliptic estimates, formulated in terms of weighted Sobolev spaces, can be obtained independently of the parameters used in the construction. Specifically, we prove uniform estimates related to (i) Sobolev Embedding Theorems, (ii) the invertibility of the Laplace operator and (iii) PoincarÃ© and Gagliardo-Nirenberg-Sobolev-type inequalities. Our main tools are the well-known theories of weighted Sobolev spaces and elliptic operators on "conifolds". We provide an overview of both, together with an extension of the former to general Riemannian manifolds. For a geometric application of our results we refer the reader to our paper [15] concerning desingularizations of special Lagrangian conifolds in C m .
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doc_2	
authors	• Tommaso Pacini
title	Desingularizing isolated conical singularities: Uniform estimates via weighted Sobolev spaces
publication_date	2012-11-12 00:00:00
source	SupportedSources.INTERNET_ARCHIVE
journal	
volume	
doi	
urls	• https://archive.org/download/arxiv-1005.3511/1005.3511.pdf
id	id-8227055806813848420
abstract	We define a very general "parametric connect sum" construction which can be used to eliminate isolated conical singularities of Riemannian manifolds. We then show that various important analytic and elliptic estimates, formulated in terms of weighted Sobolev spaces, can be obtained independently of the parameters used in the construction. Specifically, we prove uniform estimates related to (i) Sobolev Embedding Theorems, (ii) the invertibility of the Laplace operator and (iii) Poincare' and Gagliardo-Nirenberg-Sobolev type inequalities. Our main tools are the well-known theories of weighted Sobolev spaces and elliptic operators on "conifolds". We provide an overview of both, together with an extension of the former to general Riemannian manifolds. For a geometric application of our results we refer the reader to our paper "Special Lagrangian conifolds, II: Gluing constructions in C^m".
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