A general extension theorem for cohomology classes on non reduced analytic spaces: dedicated to the memory of Professor Qikeng Lu

Junyan Cao [1] Jean-Pierre Demailly [2] Shin-Ichi Matsumura [3] Détails

1 UPMC - Université Pierre et Marie Curie - Paris 6
2 IF - Institut Fourier
3 Tohoku University, Graduate School of Science, Department of Mathematics

hal-01480220-v1

Abstract : The main purpose of this paper is to generalize the celebrated L² extension theorem of Ohsawa-Takegoshi in several directions : the holomorphic sections to extend are taken in a possibly singular hermitian line bundle, the subvariety from which the extension is performed may be non reduced, the ambient manifold is Kähler and holomorphically convex, but not necessarily compact.

Keywords : Compact Kähler manifold | singular hermitian metric | coherent sheaf | sheaf cohomology | Dolbeault cohomology | plurisubharmonic function | L² estimates | Ohsawa-Takegoshi extension theorem | multiplier ideal sheaf

Type de document : Pré-publication, Document de travail
2017

Domaine : Mathématiques [math] / Géométrie algébrique [math.AG]

Format du dépôt	Fichier	
Type de document	Pré-publication, Document de travail	
Titre	en	A general extension theorem for cohomology classes on non reduced analytic spaces
Sous-Titre	en	dedicated to the memory of Professor Qikeng Lu
Auteur(s)	**Junyan Cao** [1] , **Jean-Pierre Demailly** [2] , **Shin-Ichi Matsumura** [3]	
	1 **UPMC - Université Pierre et Marie Curie - Paris 6** 93591 - 4 place Jussieu - 75005 Paris - France 2 **IF - Institut Fourier** 21 - France Université Joseph Fourier - Grenoble 1 51016 ; Centre National de la Recherche Scientifique : UMR5582 441569 3 **Tohoku University, Graduate School of Science, Department of Mathematics** 487190 - Tohoku University, Aobayama Campus, Sendai, Japan - Japon Tohoku University, Graduate School of Science,	

	Department of Mathematics 487189	
Résumé	en	The main purpose of this paper is to generalize the celebrated L^2 extension theorem of Ohsawa-Takegoshi in several directions : the holomorphic sections to extend are taken in a possibly singular hermitian line bundle, the subvariety from which the extension is performed may be non reduced, the ambient manifold is Kähler and holomorphically convex, but not necessarily compact.
Langue du document	anglais	
Date de production/ écriture	2017-02-20	
Classification	MSC 2010: primary 32L10, secondary 32E05	
Domaine	**Mathématiques [math]/Géométrie algébrique [math.AG]**	
Financement	ERC project ALKAGE, contract number 670846	
Mots-clés	en	Compact Kähler manifold, singular hermitian metric, coherent sheaf, sheaf cohomology, Dolbeault cohomology, plurisubharmonic function, L^2 estimates, Ohsawa-Takegoshi extension theorem, multiplier ideal sheaf

Masquer la liste complète des métadonnées