Record Nr. UNINA9910254067003321 Foliation Theory in Algebraic Geometry / / edited by Paolo Cascini, **Titolo** James McKernan, Jorge Vitório Pereira Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2016 **ISBN** 3-319-24460-4 Edizione [1st ed. 2016.] 1 online resource (221 p.) Descrizione fisica Collana Simons Symposia, , 2365-9564 Disciplina 510 Soggetti Algebraic geometry Algebraic Geometry Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali "Simons Symposia"--Cover. Includes bibliographical references at the end of each chapters. Nota di bibliografia Nota di contenuto On Fano Foliations 2 -- Rational Curves on Foliated Varieties -- Local Structure of Closed Symmetric 2-Differentials -- Aspects of the Geometry of Varieties with Canonical Singularities -- Geometric Structures and Substructures on Uniruled Projective Manifolds --Foliations, Shimura Varieties and the Green-Griffiths-Lang Conjecture -- On the Structure of Codimension I Foliations with Pseudoeffective Conormal Bundle. Sommario/riassunto Featuring a blend of original research papers and comprehensive surveys from an international team of leading researchers in the thriving fields of foliation theory, holomorphic foliations, and birational geometry, this book presents the proceedings of the conference "Foliation Theory in Algebraic Geometry," hosted by the Simons Foundation in New York City in September 2013. Topics covered include: Fano and del Pezzo foliations; the cone theorem and rank one foliations; the structure of symmetric differentials on a smooth complex surface and a local structure theorem for closed symmetric differentials of rank two; an overview of lifting symmetric differentials from varieties with canonical singularities and the applications to the classification of AT bundles on singular varieties; an overview of the powerful theory of the variety of minimal rational tangents introduced by Hwang and Mok; recent examples of varieties which are hyperbolic

and yet the Green-Griffiths locus is the whole of X; and a classification

of psuedoeffective codimension one distributions. Foliations play a fundamental role in algebraic geometry, for example in the proof of abundance for threefolds and to a solution of the Green-Griffiths conjecture for surfaces of general type with positive Segre class. The purpose of this volume is to foster communication and enable interactions between experts who work on holomorphic foliations and birational geometry, and to bring together leading researchers to demonstrate the powerful connection of ideas, methods, and goals shared by these two areas of study.