1.	Record Nr.	UNINA9910463211803321
	Autore	Brown John David
	Titolo	Lower dimensional gravity [[electronic resource] /] / John David Brown
	Pubbl/distr/stampa	Singapore ; ; Teaneck, N.J., : World Scientific, c1988
	ISBN	1-283-97143-7
		981-4434-17-5
	Descrizione fisica	1 online resource (164 p.)
	Disciplina	530.11
	Soggetti	Quantum gravity
		Supergravity
		Gauge fields (Physics)
		General relativity (Physics)
		Symmetry (Physics)
		Space and time
		Particles (Nuclear physics)
		Mathematical physics
		Electronic books.
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	A revised version of the author' thesis. Cf. p. v.
	Nota di bibliografia	Includes bibliographical references.
	Nota di contenuto	CONTENTS; I INTRODUCTION; I.1 Three Dimensional Gravity; I.2 Two Dimensional Gravity; References for Chapter I; II THE ASYMPTOTIC STRUCTURE OF THREE DIMENSIONAL GRAVITY; II.1 Introduction; II.2 Solutions To Three Dimensional Gravity With < 0; II.3 Global Charges and the RxSO(2) Asymptotic Symmetries; II.4 The Conformal Group Of Asymptotic Symmetries; IV.5 The Canonical Realization Of Asymptotic Symmetries; II. Appendix 1: The Initial Value Problem; II. Appendix 2: The Lie and Surface Deformation Algebras; References for Chapter II; III BL.ACK HOLES IN TWO SPACETIME DIMENSIONS III.1 Point Sources in Two Dimensional GravityIII.2 Black Hole Solutions; References for Chapter III; IV NEUTRALIZATION OF THE COSMOLOGICAL CONSTANT IN TWO SPACETIME DIMENSIONS; IV.I Introduction; IV.1a. Particle creation.; IV.1b. Neutralization of the cosmological constant.; IV.1c. Additional features of particle creation.; IV.1d. Overview.; IV.2

Pair Creation Without Gravity; IV.2a. Lorentzian solutions.; IV.2b. Instantons.; IV.2c. Action and probability.; IV.3 Adding Gravity; IV.3a. The gravitational equation.; IV.3b. Geometry of the instantons.; IV.4 Instantons For Pair Creation
IV..4a. Solving the equations.IV.4b. Interpretation.; IV.5 The Gravitational Action; IV.5a. Coordinate invariance.; IV.5b. Surface terms.; IV.6 Probability For Particle Creation; IV.6a. Type 1 instantons.; IV.6b. Topology change.; IV.6c. Dependence on m and e.; IV.7 The Cosmological Constant; IV.7a. Evolution from de Sitter spacetime.; IV.7b. Evolution to (nearly) flat spacetime.; IV.8 Membrane Creation In Four Dimensions; IV.8a. Four dimensional generalization.; IV.8b. Instantons.; IV.8c. Probability.; IV.8d. Neutralizing the cosmological constant.; References for Chapter IV

Sommario/riassunto	This book addresses the subject of gravity theories in two and three spacetime dimensions. The prevailing philosophy is that lower dimensional models of gravity provide a useful arena for developing new ideas and insights, which are applicable to four dimensional gravity. The first chapter consists of a comprehensive introduction to both two and three dimensional gravity, including a discussion of their basic structures. In the second chapter, the asymptotic structure of three dimensional Einstein gravity with a negative cosmological constant is analyzed. The third chapter contains a treatment