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Nota di contenuto	Foreword; Preface; Contents; 1. Why Higher Dimensions are Interesting; 2. The Randall-Sundrum Set-Up; 3. General Structure of Anti-de Sitter Spacetimes; 4. General Properties of Embeddings; 5. The Israel Junction Conditions; 6. The Newtonian Limit of an Embedded Brane; 7. Embedding of Static Robertson-Walker Branes and Negative Pressure; 8. Embedding of de Sitter and Anti-de Sitter Branes in Ads5; 9. Embedding of Non-Static Robertson-Walker Branes in Ads5; 10. Embedding Robertson-Walker Brane Worlds in $M(4, 2)$; 11. Null Geodesics of Ads5 Bulks Containing Robertson-Walker Branes 12. Generalized Einstein Equations on the Brane 13. General Structure of Brane-World Gravitational Fluctuations; 14. Transverse-Traceless M4 Fluctuation Modes; 16. Normalization of Fluctuation Modes and Curved Space Gauss's Law; 17. Fluctuations around an Embedded Positive-Tension Minkowski Brane; 18. Fluctuations around an Embedded Negative-Tension Minkowski Brane; 19. Fluctuations around an Embedded Positive-Tension Ads Brane; 20. Equivalent Schrodinger Equation Treatment of the Fluctuation Equation; 21. Fluctuations around an Embedded Positive-Tension dS Brane 22. Dynamically Generated Domain Walls and the Brane World Appendix A Gauge Invariance of the Fluctuation Equation; Appendix B

Perturbative Weyl Tensor; Appendix C Transverse and Transverse-Traceless Projection; Appendix D Fluctuation Energy-Momentum Tensor; Appendix E Retarded Propagators for Pure AdS and Pure dS Spacetimes; Appendix F Embedding M(2, 1) Branes in AdS₄; Bibliography; Author Index; Subject Index

Sommario/riassunto

This timely and valuable book provides a detailed pedagogical introduction and treatment of the brane-localized gravity program of Randall and Sundrum, in which gravitational signals are able to localize around our four-dimensional world in the event that it is a brane embedded in an infinitely-sized, higher dimensional anti-de Sitter bulk space. A completely self-contained development of the material needed for brane-world studies is provided for both students and workers in the field, with a significant amount of the material being previously unpublished. Particular attention is given to iss
