Record Nr. UNINA9910254598703321 Autore Oblak Blagoje Titolo BMS Particles in Three Dimensions / / by Blagoje Oblak Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2017 3-319-61878-4 **ISBN** Edizione [1st ed. 2017.] Descrizione fisica 1 online resource (461 pages) Collana Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190-5053 539.725 Disciplina Soggetti Gravitation Cosmology Mathematical physics Classical and Quantum Gravitation, Relativity Theory Mathematical Applications in the Physical Sciences Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali "Doctoral Thesis accepted by Free University of Brussels, Belgium." Nota di bibliografia Includes bibliographical references at the end of each chapters and index. Nota di contenuto Introduction -- Part I: Quantum Symmetries -- Quantum Mechanics and Central Extensions -- Induced Representations -- Semi-direct Products -- Coadjoint Orbits and Geometric Quantization -- Part II: Virasoro Symmetry and AdS3 Gravity -- The Virasoro Group -- Virasoro Coadjoint Orbits -- Symmetries of Gravity in AdS3 -- Part III: BMS3 Symmetry and Gravity in Flat Space -- Classical BMS3 Symmetry --Quantum BMS3 Symmetry -- Partition Functions and Characters --Conclusions. Sommario/riassunto This thesis presents the state of the art in the study of Bondi-Metzner-Sachs (BMS) symmetry and its applications in the simplified setting of three dimensions. It focuses on presenting all the background material in a pedagogical and self-contained manner to enable readers to fully appreciate the original results that have been obtained while learning a number of fundamental concepts in the field along the way. This makes it a highly rewarding read and a perfect starting point for anybody with a serious interest in the four-dimensional problem.