Record Nr. UNINA9910806284603321 **Titolo** Locally compact quantum groups and groupoids [[electronic resource]] : proceedings of the meeting of theoretical physicists and mathematicians, Strasbourg, February 21-23, 2002 / / editor, Leonid Vainerman Pubbl/distr/stampa Berlin; ; New York, : Walter de Gruyter, 2003 **ISBN** 1-282-19505-0 9786612195051 3-11-020005-8 Descrizione fisica 1 online resource (255 p.) Collana IRMA lectures in mathematics and theoretical physics; 2 Classificazione Altri autori (Persone) VainermanLeonid Disciplina 530.14/3 Soggetti Quantum groups Quantum groupoids Locally compact groups Mathematical physics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di contenuto Front matter -- Table of Contents -- Introduction of the editor --Quantum groupoids and pseudo-multiplicative unitaries -- Quantum SU(1, 1) and its Pontryagin dual -- Morita base change in quantum groupoids -- Galois actions by finite quantum groupoids -- On lowdimensional locally compact quantum groups -- Multiplicative partial isometries and finite quantum groupoids -- Multiplier Hopf -algebras with positive integrals: A laboratory for locally compact quantum groups -- Backmatter Sommario/riassunto The book contains seven refereed research papers on locally compact quantum groups and groupoids by leading experts in the respective fields. These contributions are based on talks presented on the occasion of the meeting between mathematicians and theoretical physicists held in Strasbourg from February 21 to February 23, 2002. Topics covered are: various constructions of locally compact quantum groups and their multiplicative unitaries; duality theory for locally

compact quantum groups; combinatorial quantization of flat

connections associated with SL(2,c); quantum groupoids, especially coming from Depth 2 Extensions of von Neumann algebras, C*-algebras and Rings. Many mathematical results are motivated by problems in theoretical physics. Historical remarks set the results presented in perspective. Directed at research mathematicians and theoretical physicists as well as graduate students, the volume will give an overview of a field of research in which great progress has been achieved in the last few years, with new ties to many other areas of mathematics and physics.