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Nota di contenuto	1. Preliminaries -- 2. Topological 1-Segal and 2-Segal Spaces -- 3. Discrete 2-Segal Spaces -- 4. Model Categories and Bousfield localization -- 5. The 1-Segal and 2-Segal model structures -- 6. The path space criterion for 2-Segal Spaces -- 7. 2-Segal Spaces from higher categories -- 8. Hall Algebras associated to 2-Segal Spaces -- 9. Hall (,2)-Categories -- 10. An (,2)-categorical theory of Spans -- 11. 2-segal Spaces as monads in bispans App -- A: Bicategories.
Sommario/riassunto	This monograph initiates a theory of new categorical structures that generalize the simplicial Segal property to higher dimensions. The authors introduce the notion of a d-Segal space, which is a simplicial space satisfying locality conditions related to triangulations of d-dimensional cyclic polytopes. Focus here is on the 2-dimensional case. Many important constructions are shown to exhibit the 2-Segal property, including Waldhausen’s S-construction, Hecke-Waldhausen constructions, and configuration spaces of flags. The relevance of 2-Segal spaces in the study of Hall and Hecke algebras is discussed.

Higher Segal Spaces marks the beginning of a program to systematically study d-Segal spaces in all dimensions d. The elementary formulation of 2-Segal spaces in the opening chapters is accessible to readers with a basic background in homotopy theory. A chapter on Bousfield localizations provides a transition to the general theory, formulated in terms of combinatorial model categories, that features in the main part of the book. Numerous examples throughout assist readers entering this exciting field to move toward active research; established researchers in the area will appreciate this work as a reference.