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| ISBN                    | 3-03719-656-4  |
| Descrizione fisica      | 1 online resource (154 pages)  |
| Collana                 | EMS Series of Lectures in Mathematics (ELM) ; , 2523-5176  |
| Classificazione         | 57-xx18-xx19-xx  |
| Disciplina              | 516.07   |
| Soggetti                | Тороlogy   |
|                         | Manifolds and cell complexes   |
|                         | Category theory; homological algebra   |
|                         | \$K\$-theory   |
| Lingua di pubblicazione | Inglese  |
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| Livello bibliografico   | Monografia   |
| Nota di contenuto       | Generalized manifolds: introduction Surgery theory and applications to resolutions of generalized manifolds Controlled surgery theory and constructions of generalized manifolds Generalized manifolds and surgery theory.   |
| Sommario/riassunto      | Generalized manifolds are a most fascinating subject to study. They<br>were introduced in the 1930s, when topologists tried to detect<br>topological manifolds among more general spaces (this is nowadays<br>called the manifold recognition problem). As such, generalized<br>manifolds have served to understand the nature of genuine manifolds.<br>However, it soon became more important to study the category of<br>generalized manifolds itself. A breakthrough was made in the 1990s,<br>when several topologists discovered a systematic way of constructing<br>higher-dimensional generalized manifolds, based on advanced surgery<br>techniques. In fact, the development of controlled surgery theory and<br>the study of generalized manifolds developed in parallel. In this<br>process, earlier studies of geometric surgery turned out to be very<br>helpful. Generalized manifolds will continue to be an attractive subject<br>to study, for there remain several unsolved fundamental problems.<br>Moreover, they hold promise for new research, e.g. for finding<br>appropriate structures on these spaces which could bring to light |

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geometric (or even analytic) aspects of higher-dimensional generalized manifolds. This is the first book to systematically collect the most important material on higher-dimensional generalized manifolds and controlled surgery. It is self-contained and its extensive list of references reflects the historic development. The book is based on our graduate courses and seminars, as well as our talks given at various meetings, and is suitable for advanced graduate students and researchers in algebraic and geometric topology.