| Record Nr.              | UNINA9910279757403321   |
|-------------------------|---|
| Titolo                  | A primer for undergraduate research : from groups and tiles to frames<br>and vaccines / / edited by Aaron Wootton, Valerie Peterson, Christopher<br>Lee   |
| Pubbl/distr/stampa      | Cham : , : Springer International Publishing : , : Imprint : Birkhäuser, , 2017   |
| ISBN                    | 3-319-66065-9   |
| Edizione                | [1st ed. 2017.]   |
| Descrizione fisica      | 1 online resource (313 pages) : illustrations   |
| Collana                 | Foundations for Undergraduate Research in Mathematics, , 2520-1212  |
| Disciplina              | 516.35  |
| Soggetti                | Discrete mathematics  |
|                         | Group theory  |
|                         | Number theory   |
|                         | Convex geometry   |
|                         | Discrete geometry   |
|                         | Biomathematics  |
|                         | Matrix theory   |
|                         | Algebra<br>Discrete Mathematics   |
|                         | Group Theory and Generalizations  |
|                         | Number Theory   |
|                         | Convex and Discrete Geometry  |
|                         | Physiological, Cellular and Medical Topics  |
|                         | Linear and Multilinear Algebras, Matrix Theory  |
| Lingua di pubblicazione | Inglese   |
| Formato                 | Materiale a stampa  |
| Livello bibliografico   | Monografia  |
| Nota di bibliografia    | Includes bibliographical references at the end of each chapters and index.  |
| Nota di contenuto       | Coxeter Groups and the Davis Complex (T.A. Schroeder) A Tale of<br>Two Symmetries: Embeddable and Non-Embeddable Group Actions on<br>Surfaces (V. Peterson, A. Wootton) Tile Invariants for Tackling Tiling<br>Questions (M.P. Hitchman) Forbidden Minors: Finding the Finite Few<br>(T.W. Mattman) Introduction to competitive graph coloring (C. Dunn,<br>V. Larsen, J.F. Nordstrom) Matrioids (E. McNicholas, N.A. Neudauer, |

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|                    | C. Starr) Finite Frame Theory (S. Datta, J. Oldroyd) Mathematical decision-making with linear and convex programming (J. Kotas) Computing weight multiplicities (P. E. Harris) Vaccination strategies for small worlds. (W. Just, H. C. Highlander) Steady and Stable: Numerical Investigations of Nonlinear Partial Differential Equations (R. C. Harwood).   |
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| Sommario/riassunto | This highly readable book aims to ease the many challenges of starting<br>undergraduate research. It accomplishes this by presenting a diverse<br>series of self-contained, accessible articles which include specific open<br>problems and prepare the reader to tackle them with ample<br>background material and references. Each article also contains a<br>carefully selected bibliography for further reading. The content spans<br>the breadth of mathematics, including many topics that are not<br>normally addressed by the undergraduate curriculum (such as matroid<br>theory, mathematical biology, and operations research), yet have few<br>enough prerequisites that the interested student can start exploring<br>them under the guidance of a faculty member. Whether trying to start<br>an undergraduate thesis, embarking on a summer REU, or preparing for<br>graduate school, this book is appropriate for a variety of students and<br>the faculty who guide them |