Record Nr. UNINA9910462074003321 **Titolo** Discipline-based education research [[electronic resource]]: understanding and improving learning in undergraduate science and engineering / / Susan R. Singer, Natalie R. Nielsen, and Heidi A. Schweingruber, editors.; Committee on the Status, Contributions, and Future Directions of Discipline-Based Education Research, Board on Science Education, Division of Behavioral and Social Sciences and Education, National Research Council of the Naitonal Academies Washington, D.C., : National Academies Press, 2012 Pubbl/distr/stampa **ISBN** 1-283-63631-X 0-309-25412-4 Descrizione fisica 1 online resource (282 p.) Altri autori (Persone) SingerSusan R NielsenNatalie R SchweingruberHeidi A Disciplina 507.11 Soggetti Science - Study and teaching (Higher) - United States Engineering - Study and teaching (Higher) - United States Electronic books. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references. ""Front Matter""; ""Acknowledgments""; ""Contents""; ""In Memoriam, Nota di contenuto Michael Edward Martinez""; ""Executive Summary""; ""Section I: Status of Discipline-Based Education Research""; ""1 Introduction""; ""2 The Emergence and Current State of Discipline-Based Education Research""; ""Section II: Contributions of Discipline-Based Education Research""; ""3 Overview of Discipline-Based Education Research""; ""4 Identifying and Improving Students Conceptual Understanding in Science and Engineering""; ""5 Problem Solving, Spatial Thinking, and the Use of Representations in Science and Engineering"" ""6 Instructional Strategies"""7 Some Emerging Areas of Discipline-Based Education Research""; ""Section III: Future Directions for Discipline-Based Education Research""; ""8 Translating Research into

Teaching Practice: The Influence of Discipline-Based Education

Research on Undergraduate Science and Engineering Instruction""; ""9 Future Directions for Discipline-Based Education Research: Conclusions and Recommendations""; ""References""; ""Appendix: Biographical Sketches of Committee Members and Staff""