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Titolo	Creative Ways of Knowing in Engineering // edited by Diana Bairaktarova, Michele Eodice
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2017
ISBN	3-319-49352-3
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XVIII, 234 p. 19 illus., 9 illus. in color.)
Disciplina	502.3
Soggetti	Engineering—Vocational guidance Technical education Education—Data processing Job Careers in Science and Engineering Engineering/Technology Education Computers and Education
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	The New Renaissance Artificers: Harnessing the Power of Creativity in the Engineering Classroom -- The Engineers' Orchestra: A Conductorless Orchestra for Our Time -- Science Fiction as Platform for Problem-Based Learning and Teaching Writing as Design -- "Writing as Knowing: Creative Knowing through Multiple Messaging Modes in an Engineering Technical Communications Course" -- The Engineering of a Writing Assignment: Optimizing the Research Paper in an Introductory Chemical Engineering Course in the United Arab Emirates -- Creativity and Identity in the Construction of Professional Portfolios -- Uneasy Stories: Critical Reflection Narratives in Engineering Education -- Ethical Dilemmas in the Engineering Writing Classroom -- Creative Ways of Knowing and the Future of Engineering Education -- Afterword.
Sommario/riassunto	This book offers a platform for engineering educators who are interested in implementing a "creative ways of knowing" approach to presenting engineering concepts. The case studies in this book reveal how students learn through creative engagement that includes not only

design and build activities, but also creative presentations of learning, such as composing songs, writing poems and short stories, painting and drawing, as well as designing animations and comics. Any engineering educator will find common ground with the authors, who are all experienced engineering and liberal arts professors, who have taken the step to include creative activities and outlets for students learning engineering. • Demonstrates various methods for returning to the basics of engineering education, which include design and creativity, teamwork and interdisciplinary thinking; • Discusses a timely topic, as higher education puts more attention on the student experience of learning in all disciplines; • Includes actual student products demonstrating “creative ways of knowing in engineering”; • Highlights multiple ways to teach engineering concepts.

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