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Nota di contenuto	Introduction to the international handbook of engineering education research / Aditya Johri -- The historically global forming of engineering education / Aparajith Ramnath, Amy Sue Bix, Christine Wineberg, Aive Pevkur Eddie -- Gaps, resources, and potentials for growth in comparative engineering education research / Xiaofeng Tang, Jennifer Case, Andres Valderrama Pineda -- Decolonization in engineering education / Jillian Seniuk Cicek, Stephanie Masta, Tom Goldfinch, Bruce Kloot -- Developing a global and culturally inclusive vision of engineering ethics education and research / Diana Martin, Alison Gwynne-Evans, Alexandra Kazakova, Qin Zhu -- Disrupting engineering education / Euan Lindsay, Roger Hadgraft, Ron Ulseth, Fiona Boyle -- The role and use of theory in engineering education research / Andrea Goncher, Ashish Hingle, Aditya Johri, Jennifer Case -- Emotions in engineering education / Johanna Lonngren, Ines Direito, Roland Tormey, James Huff -- Advancing an integrative perspective of identity in engineering education / James Huff, Monique Ross -- Critical and cultural analysis of engineering learning / Stephen Secules, Greses Perez, Roy Pea, Aditya Johri -- Critical perspectives on diversity, equity, and inclusion research in engineering education / Joel Mejia, Julie Martin -- Professional learning for pre-college engineering

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## Sommario/riassunto

"This comprehensive handbook offers a broad overview of contemporary research on engineering education and its practical application. Over the past two decades, the field of engineering education research (EER) has become a vibrant and impactful community with new journals, conferences, and doctoral and research programs established across the globe. The increased interest in this area has helped to improve the education and training of the next generation of engineers, as well as supporting growth in the use of technology for teaching and learning, increased attention to broadening participation, diversity and inclusion in the field, and a wide international expansion of the field. Drawing on the work of 100 expert contributors from over 20 countries, this volume covers both emergent and established areas of research within engineering education, giving voice to newcomers to the field as well as perspectives from established experts. Contents include: Sociocognitive and affective perspectives on engineering education; Technology and online learning

in engineering education; Cultural and ethical issues including diversity, equity, and inclusion in engineering education; Curriculum design, teaching practices, and teacher education at all levels; Research methods and assessment in engineering education. This book offers an innovative and in-depth overview of engineering education scholarship and practice, which will be of use to researchers in engineering education, engineering educators and faculty, teacher educators in engineering education or STEM education, and other engineering and STEM-related professional organizations"--

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