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Sommario/riassunto	Third millennium engineering address new challenges in materials sciences and engineering. In particular, the advances in materials engineering combined with the advances in data acquisition, processing and mining as well as artificial intelligence allow for new ways of thinking in designing new materials and products. Additionally, this gives rise to new paradigms in bridging raw material data and processing to the induced properties and performance. This present topical issue is a compilation of contributions on novel ideas and concepts, addressing several key challenges using data and artificial intelligence, such as:- proposing new techniques for data generation and data mining;- proposing new techniques for visualizing, classifying, modeling, extracting knowledge, explaining and certifying data and data-driven models;- processing data to create data-driven models from scratch when other models are absent, too complex or too poor for making valuable predictions;- processing data to enhance existing physic-based models to improve the quality of the prediction capabilities and, at the same time, to enable data to be smarter; and- processing data to create data-driven enrichment of existing models when physics-based models exhibit limits within a hybrid paradigm.