

1. Record Nr.	UNINA9910299741603321
Titolo	An Anthology of Theories and Models of Design : Philosophy, Approaches and Empirical Explorations // edited by Amaresh Chakrabarti, Lucienne T. M. Blessing
Pubbl/distr/stampa	London : , : Springer London : , : Imprint : Springer, , 2014
ISBN	1-4471-6338-9
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (454 p.)
Disciplina	601 620 620.0042 745.401
Soggetti	Engineering design Philosophy Engineering Design Philosophy of Technology
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 at the end of each chapters and index.
Nota di contenuto	Theories and Models of Design: A Summary of Findings -- Design Theories, Models and Their Testing On the Scientific Status of Design Research -- A Structure for Design Theory -- Motive of Design: Roles of Pre- and Post-Design in Highly Advanced Products -- What the Design Theory of Social Cyberphysical Systems must Describe, Explain and Predict -- Models of Design -- Perceiving design as modelling: A cybernetic systems perspective -- The Contact and Channel Approach (C&C ² -A): Relating a System's Physical Structure to its Functionality -- Domain Theory, its Models and Concepts -- Engineering Design: Role of Theory, Models, and Methods -- 10 Years of C-K Theory: A Survey on the Academic and Industrial Impacts of a Design Theory -- Designing the Inventive Way in the Innovation Era -- The Function-Behaviour-Structure Ontology of Design -- The Aristotelian Proto-theory of Design -- Perspectives on Design Models and Theories and Development of an Extended – Integrated Model of Designing --

Modelling Products and Product Development Based on Characteristics and Properties -- A Theoretical Approach to Intuition in Design -- Re-Visiting Design as an Information Processing Activity -- Constraints and conditions: Drivers for Design Processes -- Theories, Models, Programs and Tools of Design: Views from Artificial Intelligence, Cognitive Science and Human-Centered Computing -- Modeling the Role of Sketching in Design Idea Generation.

Sommario/riassunto

While investigations into both theories and models has remained a major strand of engineering design research, current literature sorely lacks a reference book that provides a comprehensive and up-to-date anthology of theories and models, and their philosophical and empirical underpinnings; An Anthology of Theories and Models of Design fills this gap. The text collects the expert views of an international authorship, covering:

- significant theories in engineering design, including CK theory, domain theory, and the theory of technical systems;
- current models of design, from a function behavior structure model to an integrated model;
- important empirical research findings from studies into design; and
- philosophical underpinnings of design itself.

For educators and researchers in engineering design, An Anthology of Theories and Models of Design gives access to in-depth coverage of theoretical and empirical developments in this area; for practitioners, the book will provide exposure to theoretical and empirical foundations to methods and tools that are currently practiced as well as those in the process of development.
