

1. Record Nr.	UNINA9910778325403321
Titolo	Philosophy of technology and engineering sciences [[electronic resource] /] / edited by Anthonie Meijers
Pubbl/distr/stampa	Amsterdam ; ; Boston, : Elsevier/North Holland, 2009
ISBN	1-282-28584-X 9786612285844 0-08-093074-3
Edizione	[1st ed.]
Descrizione fisica	1 online resource (1473 p.)
Collana	Handbook of the philosophy of science ; ; v. 9
Altri autori (Persone)	MeijersAnthonie
Disciplina	501 601
Soggetti	Technology - Philosophy Engineering - Philosophy
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 and index.
Nota di contenuto	Front Cover; Philosophy of Technology and Engineering Sciences; Copyright Page; CONTENTS; General Preface; List of Contributors; Chapter 1 General Introduction; Part I Technology, Engineering and the Sciences; Chapter 2 Introduction to Part I; Chapter 3 Defining Technology and the Engineering Sciences; Chapter 4 Science, Technology and the Science-Technology Relationship; Chapter 5 The Role of Social Science in Engineering; Chapter 6 The Emergence of the Engineering Sciences: An Historical Analysis; Chapter 7 Coherence and Diversity in the Engineering Sciences Part II Ontology and Epistemology of ArtifactsChapter 8 Introduction to Part II; Chapter 9 Artefacts in Metaphysics; Chapter 10 Philosophical Theories of Artifact Function; Chapter 11 Functional Decomposition and Mereology in Engineering; Chapter 12 Artefacts in Formal Ontology; Chapter 13 The Nature of Technological Knowledge; Chapter 14 Tacit Knowledge and Engineering Design; Chapter 15 Practical Reasoning and Engineering; Part III Philosophy of Engineering Design; Chapter 16 Introduction to Part III; Chapter 17 Thinking about Design: An Historical Perspective Chapter 18 Typologies of Design PracticeChapter 19 Translating

Customer Requirements into Technical Specifications; Chapter 20 Foundational Issues of Engineering Design; Chapter 21 Computational Representations of Function in Engineering Design; Chapter 22 Rationality in Design; Chapter 23 Designing Socio-Technical Systems; Chapter 24 Introduction to Part IV; Chapter 25 The Notion of a Model: A Historical Overview; Chapter 26 Functional Modelling and Mathematical Models: A Semantic Analysis; Chapter 27 Models as Epistemic Tools in Engineering Sciences
Chapter 28 Model-Based Reasoning in Interdisciplinary Engineering
Chapter 29 Scale Modelling in Engineering: Froude's Case; Chapter 30 Similarity and Dimensional Analysis; Chapter 31 Measurement Theory and Engineering; Chapter 32 Technological Explanation; Part V Norms and Values in Technology and Engineering; Chapter 33 Introduction to Part V; Chapter 34 Why Technologies Are Inherently Normative; Chapter 35 Artefacts and Normativity; Chapter 36 Professional Standards in Engineering Practice; Chapter 37 Values in Engineering Design; Chapter 38 The Concept of Efficiency: An Historical Analysis
Chapter 39 Aesthetic Values in Technology and Engineering Design
Chapter 40 Risk and Safety in Technology; Chapter 41 Technology Assessment: Concepts and Methods; Chapter 42 The Interaction of Ethics and Technology in Historical Perspective; Part VI Philosophical Issues in Engineering Disciplines; Chapter 43 Introduction to Part VI; Chapter 44 Philosophy of Architecture; Chapter 45 Philosophy of Agricultural Technology; Chapter 46 Philosophy of Medical Technology; Chapter 47 Philosophy of Biotechnology; Chapter 48 Philosophy of Computing and Information Technology; Index

Sommario/riassunto

The Handbook Philosophy of Technology and Engineering Sciences addresses numerous issues in the emerging field of the philosophy of those sciences that are involved in the technological process of designing, developing and making of new technical artifacts and systems. These issues include the nature of design, of technological knowledge, and of technical artifacts, as well as the toolbox of engineers. Most of these have thus far not been analyzed in general philosophy of science, which has traditionally but inadequately regarded technology as mere applied science and focused on physics, biolo
