

1. Record Nr.	UNINA9910452547703321
Autore	Inkpen Robert <1964-, >
Titolo	Science, philosophy and physical geography / / Rob Inkpen and Graham Wilson
Pubbl/distr/stampa	New York : , : Routledge, , 2013
ISBN	0-415-67966-4 0-203-80634-4 1-136-65464-X
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (558 p.)
Disciplina	910/.0201
Soggetti	Physical geography - Philosophy Electronic books.
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	Cover; Half Title; Title Page; Copyright Page; Table of Contents; List of figures and tables; Preface to the first edition; Preface to the second edition; Acknowledgements; Introduction; Structure of the book; Chapter 1. Ideas, change and stability in physical geography; What are ideas and how do they change?; Johannes Umbgrove and plate tectonics; Is there a history of ideas in physical geography?; What are the important concepts in physical geography?; Chaos, complexity and Earth Systems Science (ESS); Summary; Chapter 2. The nature of reality; What is reality? Views of different philosophiesCase Study: Critical rationalism: an example from environmental reconstruction; Reality as a dialogue; Theory, reality and practice; Case Study: Myths and theories; Physical geography as historical science; Summary; Chapter 3. Entities and classification; Introduction; What are entities?; Entities and kinds; Case Study: Species as natural kinds; Case Study: Magnitude and frequency - entities out of context; Classification; Case Study: The EU Water Framework Directive and the classification of surface water status; Case Study: Classification of soils Events - mega entities?Summary; Chapter 4. Forms of explanation; Explanation in physical geography; What is explanation?; Causality; Case Study: Necessary and sufficient conditions; Explanatory

frameworks; Case Study: Abduction as a form of explanation in environmental reconstruction; Case Study: Linking theory and practice; The problems of causation; Summary; Chapter 5. Probing reality; Probing and the dialogue with reality; Measurement systems; Case Study: Triangulation of techniques - measurement of surface form on rocks; Practice in physical geography
Case Study: Linking process and form - intensive study of bedforms
Case Study: Probing reality - fluvial flow structure; Case Study: Multiple working hypotheses; Summary; Chapter 6. The field; What is 'field science'?; The philosophies of fieldwork; Case Study: Local underdeterminism and the Younger Dryas event; 'Simplifying the field' - laboratory and experimental research; Monitoring the field; Fieldwork as a reflective and imaginative practice; Summary; Chapter 7. Systems - the framework for physical geography?; Systems analysis in physical geography; Application of systems thinking
Systems and change
Case Study: Systems and landscape sensitivity; Summary; Chapter 8. Change and complexity; Equilibrium - an ex-concept?; Chaos and complexity - more of the same?; Case study: Chaos theory and ecological systems; Emergence and hierarchies - scale revisited?; Case Study: Scale and (dis)connectivity; Case Complexity and change - landscape evolution and organization; Summary; Chapter 9. Modelling; Conceptual approaches to modelling; Types of models; Conceptual models; Analogue models; Deterministic models; Empirical- statistical models
Case Study: Numerical modelling of Late Quaternary relative sea-level change and glacial isostatic adjustment

Sommario/riassunto

<P>This accessible and engaging text explores the relationship between philosophy, science and physical geography. It addresses an imbalance that exists in opinion, teaching and to a lesser extent research, between a philosophically enriched human geography and a perceived philosophically empty physical geography.</P><P>The text challenges the myth that there is a single self-evident scientific method that can, and is, applied in a straightforward manner by physical geographers. It demonstrates the variety of alternative philosophical perspectives and emphasizes the difference that the real wo
