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Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Title Page; Copyright Page; Contents; Contributors; Preface; Introduction: Paul Witherspoon and the Birth of Contemporary Fractured Rock Hydrogeology; Early Influences; Underground Gas Storage; Aquitards; Geothermal Energy; Nuclear Waste Isolation; Fractured Rock Hydrogeology; Paul Witherspoon's Legacy; References; Chapter 1 A Complex Systems Approach to Describing Flow and Transport in Fractured-Porous Media; 1.1. Introduction; 1.2. The Field of Complex Systems; 1.3. Fractured Rock as a Complex System; 1.4. Models and Approaches: Model Simplifications 1.5. Conclusion: Can Complexity Sciences Benefit the Field of Flow and Transport in Fractured-Porous Media?Acknowledgment; References; PART I Methods of Field Measurements and Experiments; Chapter 2 Fracture Flow and Underground Research Laboratories for Nuclear Waste Disposal and Physics Experiments; 2.1. Introduction; 2.2. Cubic Law for Fracture Flow and Literature on Fractured Rock Mass Characterization; 2.3. Underground Research Laboratory, Facility, Borehole Studies, and the ISRM Networking Commission; 2.4. Concluding Remarks; Acknowledgments; References

Chapter 3 Permeability Structure of a Strike-Slip Fault 3.1. Introduction; 3.2. Hydraulic Tests; 3.3. Drawdown Analysis; 3.3. Conclusions; Acknowledgments; Appendix; References; Chapter 4 Feasibility of Long-Term Passive Monitoring of Deep Hydrogeology with Flowing Fluid Electric Conductivity Logging Method; 4.1. Introduction; 4.2. Motivation and Problem Definition; 4.3. Results and Discussion; 4.4. Concluding Remarks; Acknowledgments; References; PART II Collective Behavior and Emergent Properties of Complex Fractured Rock Systems; Chapter 5 Particle Swarms in Fractures; 5.1. Introduction 5.2. Experimental Methods 5.3. Analysis Techniques; 5.4. Results and Discussion; 5.5. Conclusions; Acknowledgments; References; Chapter 6 The Effect of Chemical Osmosis on Oil and Gas Production from Fractured Shale Formations; 6.1. Introduction; 6.2. Clay as Semipermeable Membrane; 6.3. Oil Recovery Experiments in Bakken; 6.4. Mathematical Model; 6.5. The Effect of Osmosis Pressure on Oil and Gas Production; 6.6. Conclusions; Acknowledgments; Nomenclature (A Dash Denotes No Unit of Measure); References Chapter 7 An Experimental Investigation of Stress-Dependent Permeability and Permeability Hysteresis Behavior in Rock Fractures 7.1. Introduction; 7.2. Materials and Equipment; 7.3. Experimental Results; 7.4. Discussion; 7.5. Conclusion; Acknowledgments; References; Chapter 8 Permeability of Partially Cemented Fractures; 8.1. Introduction; 8.2. Methods; 8.3. Results; 8.4. Discussion; 8.5. Conclusion; Acknowledgments; References; Chapter 9 An Emergent Conductivity Relationship for Water Flow Based on Minimized Energy Dissipation: From Landscapes to Unsaturated Soils; 9.1. Introduction 9.2. Steady-State Optimal Landscape

Sommario/riassunto

Despite of many years of studies, predicting fluid flow, heat, and chemical transport in fractured-porous media remains a challenge for scientists and engineers worldwide. This monograph is the third in a series on the dynamics of fluids and transport in fractured rock published by the American Geophysical Union (Geophysical Monograph Series, Vol. 162, 2005; and Geophysical Monograph, No. 122, 2000). This monograph is dedicated to the late Dr. Paul Witherspoon for his seminal influence on the development of ideas and methodologies and the birth of contemporary fractured rock hydrogeology, in

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Autore	Bylieva Daria
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Altri autori (Persone)	NordmannAlfred
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Nota di contenuto	Chapter 1. Artistic Creativity in View of the Philosophy of Technology -- Chapter 2. Traditional and Cognitiviste Views of Conceivability -- Chapter 3. Traditional and Cognitiviste Views of Conceivability -- Chapter 4. The Phygital World: The Role of Imagination in the Development of Artificial Intelligence -- Chapter 5. Scientific and Literary Speech - How Fiction can Shape the Worldview of Scientists -- Chapter 6. Scientific Fictions and Historical Reality -- Chapter 7. Thought Experiments: The Subjunctive Mood in History -- Chapter 8. Constructive and Predictive Capabilities of the Alternative History Genre -- Chapter 9. Multiplayer Online Games Become Reality: A New Literary Genre -- Chapter 10. Artificial Intelligence as a Creator of Over-Normative Reality -- Chapter 11. Nomadism and Reality - Two scenarios for their interrelation and development -- Chapter 12. Emotive Lexis and a Scholar’s Hypothetical Portrait.
Sommario/riassunto	This book presents the proceedings of the 24th International Conference Professional Culture of the Specialist of the Future. Professionals and experts in all fields need to be prepared to handle

unfamiliar situations. Some of these are unexpected events that may occur quite suddenly out of the blue, and others may emerge in the course of technological development or predicted trends. In order to successfully confront the future, professionals therefore need to engage in hypothetical thinking as they entertain concrete scenarios or fictitious possibilities. Scientists and engineers lead the way when they employ thought experiments and systematically consider alternative realities. Educators come up with creative approaches to foster the “art of the as-if.” This highly interdisciplinary collection of 50 papers discusses the theoretical challenge of hypothetical thinking and presents practical strategies for its promotion.