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| Autore | Grebenstein Markus |
| Titolo | Approaching Human Performance : The Functionality-Driven Awiwi Robot Hand / / by Markus Grebenstein |
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| ISBN | 9783319035932<br>3319035932 |
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| Descrizione fisica | 1 online resource (XXXIV, 209 p. 164 illus., 133 illus. in color.) |
| Collana | Springer Tracts in Advanced Robotics, , 1610-7438 ; ; 98 |
| Disciplina | 629.8933 |
| Soggetti | Robotics<br>Automation<br>Artificial intelligence<br>Robotics and Automation<br>Artificial Intelligence |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Bibliographic Level Mode of Issuance: Monograph |
| Nota di contenuto | Analysis of the Current State of Robot Hands -- Analysis of the Human Hand -- The Awiwi Hand: An Arti cial Hand for the DLR Hand Arm System.- Results. |
| Sommario/riassunto | Humanoid robotics have made remarkable progress since the dawn of robotics. So why don't we have humanoid robot assistants in day-to-day life yet? This book analyzes the keys to building a successful humanoid robot for field robotics, where collisions become an unavoidable part of the game. The author argues that the design goal should be real anthropomorphism, as opposed to mere human-like appearance. He deduces three major characteristics to aim for when designing a humanoid robot, particularly robot hands: - Robustness against impacts - Fast dynamics - Human-like grasping and manipulation performance Instead of blindly copying human anatomy, this book opts for a holistic design methodology. It analyzes human hands and existing robot hands to elucidate the important functionalities that are the building blocks toward these necessary characteristics. They are the keys to designing an anthropomorphic |

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| | robot hand, as illustrated in the high performance anthropomorphic Awiwi Hand presented in this book. This is not only a handbook for robot hand designers. It gives a comprehensive survey and analysis of the state of the art in robot hands as well as the human anatomy. It is also aimed at researchers and roboticists interested in the underlying functionalities of hands, grasping and manipulation. The methodology of functional abstraction is not limited to robot hands, it can also help realize a new generation of humanoid robots to accommodate a broader spectrum of the needs of human society. |

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| Autore | Kutasov I. M |
| Titolo | Applied geothermics for petroleum engineers / / I.M. Kutasov |
| Pubbl/distr/stampa | Amsterdam ; ; New York, : Elsevier, 1999 |
| ISBN | 1-281-01920-8<br>9786611019204<br>0-08-052732-9 |
| Edizione | [1st ed.] |
| Descrizione fisica | 1 online resource (361 p.) |
| Collana | Developments in petroleum science ; ; 48 |
| Disciplina | 622/.338 |
| Soggetti | Petroleum engineering<br>Petroleum - Geology<br>Earth temperature |
| 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 (p. 324-339) and index. |
| Nota di contenuto | Front Cover; Applied Geothermics for Petroleum Engineers; Copyright Page; Contents; DEDICATION; ACKNOWLEDGMENT; CHAPTER 1. INTRODUCTION; 1.1 Scope of the Monograph; 1.2 Objectives of Monograph; 1.3 Potential Applications; 1.4 Symbols and Units; CHAPTER 2. TEMPERATURE FIELD OF RESERVOIRS; 2.1 Thermal Properties of Formations; 2.2 Heat Flow and Temperature; 2.3 Basic Heat Transfer Equations; 2.4 Thermal Regime of Permafrost; 2.5 Temperature Anomalies due to Topographic and Geological Factors; CHAPTER 3. WELLBORE AND FORMATIONS TEMPERATURE DURING |

DRILLING

3.1 Heat Exchange in the Wellbore-Formation System3.2 Downhole Circulating Mud Temperatures; 3.3 Drilling Fluid Densities at High Temperatures and Pressures; 3.4 Hydrostatic Mud Pressure; 3.5 Drilling Through Hydrates; 3.6 Formation Temperatures Around the Wellbore; 3.7 Thermal Stresses in Formations and Casings; 3.8 Drilling Through Permafrost Interval; 3.9 Hole Enlargement Control in Permafrost Areas; CHAPTER 4. WELLBORE AND FORMATIONS TEMPERATURE DURING SHUT-IN; 4.1 Determination of the Downhole Shut-in Temperatures; 4.2 Prediction of the Formations Temperatures

4.3 Temperature Distribution in Formations4.4 Restoration of the Thermal Equilibrium in Permafrost Areas; CHAPTER 5. CEMENTING OF CASING; 5.1 Strength and Thickening Time of Cement; 5.2 Cement Heat Generation; 5.3 Temperature Increase Due to Cement Hydration; 5.4 Bottomhole Fluid Circulating Temperatures; 5.5 Designing Cementing Programs for Deep Wells; 5.6 Cementing of Casing in Permafrost Regions; CHAPTER 6. PRODUCTION AND INJECTION WELLS; 6.1 Heat Transfer; 6.2 Temperature Profiles in Wells; 6.3 Water Formation Volume Factor; 6.4 Temperature Around the Wellbore

6.5 Permafrost Thawing and Estimation of Well Thermal Insulation Efficiency6.6 Thermal Stresses; CHAPTER 7. INTERPRETATION AND UTILIZATION OF TEMPERATURE DATA; 7.1 Effect of Free Thermal Convection and Casing; 7.2 Determination of Formation Temperature; 7.3 Estimation of the Geothermal Gradient; 7.4 Mud Density Program; 7.5 Location of the Cement Column Top; 7.6 The Injectivity Profile; 7.7 The Use of Thermistors in Temperature Probes; 7.8 Interpretation of Temperature Surveys in Shallow Wells; CHAPTER 8. APPENDICES; 8.1 APPENDIX A. CONVERSION FACTORS

8.2 APPENDIX B. THERMAL PROPERTIES OF FORMATIONS8.3 APPENDIX C. COMPUTER PROGRAMS (FORTRAN); REFERENCES; INDEX

Sommario/riassunto

The purpose of Applied Geothermics for Petroleum Engineers is to present in a clear and concise form methods of utilizing the data of temperature surveys in deep boreholes as well as the results of field, laboratory and analytical investigations in geothermics to a wide audience. Although some aspects of the subject of this book have been discussed in several previous books and numerous papers, Applied Geothermics for Petroleum Engineers is the first book on this topic available to the petroleum engineering community. The objective of the book is to present the state of knowl