

Patrick Doherty
Witold Lukaszewicz
Andrzej Skowron
Andrzej Szatas

Knowledge Representation Techniques

A Rough Set Approach



Springer

Contents

Part I Introduction and Preliminaries

1	Introduction	3
2	Basic Notions	17
3	Rough Sets	39
4	Relational and Deductive Databases	57
5	Non-Monotonic Reasoning	77

Part II From Relations to Knowledge Representation

6	Rough Knowledge Databases	103
7	Combining Rough and Crisp Knowledge	129
8	Weakest Sufficient and Strongest Necessary Conditions	143
9	CAKE: Computer Aided Knowledge Engineering	159
10	Formalization of Default Logic Using CAKE	181
11	A UAV Scenario: A Case Study	213

Part III From Sensors to Relations

12	Information Granules	229
13	Tolerance Spaces	245
14	A Rough Set Approach to Machine Learning	277
15	UAV Learning Process: A Case Study	311
	References	321
	Index	335