

1. Record Nr.	UNIPARTHENOPE000005363
Titolo	Digital divide : la nuova frontiera dello sviluppo globale / Angelo Buongiovanni, Flavia Marzano, Elisabetta Tesi, Paolo Zocchi ; a cura di Pasquale Tarallo ; prefazione di Franco Bassanini
Pubbl/distr/stampa	Milano : FrancoAngeli, <<c>>2003
ISBN	88-464-4636-4
Descrizione fisica	206 p. ; 23 cm
Disciplina	303.4834
Collocazione	303 D 1
Lingua di pubblicazione	Italiano
Formato	Materiale a stampa
Livello bibliografico	Monografia
2. Record Nr.	UNISA996472036703316
Titolo	Information and communication technologies for agriculture . Theme III, : decision / / Dionysis D. Bochtis [and four others], editors
Pubbl/distr/stampa	Cham, Switzerland : , : Springer, , [2022] ©2022
ISBN	3-030-84152-9
Descrizione fisica	1 online resource (303 pages)
Collana	Springer Optimization and its Applications
Disciplina	338.10285
Soggetti	Agriculture - Decision making Agriculture - Decision making - Methodology Enginyeria agronòmica Agricoltura Presa de decisions Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

Intro -- Preface -- Contents -- Part I: Value Chain -- Agricultural Information Model -- 1 Introduction -- 2 Related Work -- 3 Technical Requirements -- 3.1 Core Data Modeling Requirements -- 3.2 Semantic Interoperability Requirements -- 4 AIM Design -- 4.1 Meta-model Layer -- 4.2 Cross-Domain Layer -- Cross-Domain Integration Process -- 4.3 Domain Layer -- Domain Layer Requirements -- AIM Domain-Specific Ontologies -- 5 Semantic Interoperability -- 6 Implementation -- 6.1 Meta-model Implementation -- 6.2 Cross-Domain Implementation -- 6.3 Domain-Specific Implementation -- 7 Methodology for Profiles -- 8 Exemplary Use Cases -- 9 Conclusions and Future Work -- References -- Development of a Framework for Implementing o- on the Beef Cattle Value Chain -- 1 Introduction -- 2 Related Work -- 2.1 Frameworks for IoT in Agri-food Value Chains -- 2.2 General Frameworks for IoT and the IoT-A -- 3 Methodology -- 4 Results -- 4.1 Overview of the Beef Cattle Value Chain -- 4.2 Requirements and Services Identification -- 4.3 IoT-A for the Beef Cattle Value Chain -- 5 Discussion -- 6 Conclusions -- References -- Food Business Information Systems in Western Greece -- 1 Introduction -- 2 Literature Review -- 2.1 Studies from 1990 to 2000 -- 2.2 Studies from 2001 to 2005 -- 2.3 Studies from 2006 to 2010 -- 2.4 Studies from 2011 to 2015 -- 2.5 Studies from 2016 Until Today -- 3 Methodology -- 4 Results -- 4.1 Adoption of Human Resources Information Systems -- 4.2 Adoption of Accounting and Financial Information System -- 4.3 Adoption of Sales and Marketing Information Systems -- 4.4 Adoption of Operational Information Systems -- 4.5 Adoption of Production Information Systems -- 4.6 Analysis of Software Packages Applications in Food Businesses of Western Greece -- 5 Conclusions -- References -- Part II: Primary Production. From Precision Agriculture to Agriculture 4.0: Integrating ICT in Farming -- 1 Introduction -- 2 Agriculture 4.0 Constituents -- 2.1 Internet of Things (IoT) -- 2.2 Artificial Intelligence (AI) -- 2.3 Machine Learning (ML) -- 2.4 Big Data Analytics -- 2.5 Wireless Sensor Networks (WSN) -- 2.6 Blockchain -- 2.7 Cloud Computing -- 2.8 Automated Guided Vehicles -- 2.9 5G Technology -- 3 Discussion -- References -- On the Routing of Unmanned Aerial Vehicles (UAVs) in Precision Farming Sampling Missions -- 1 Introduction -- 2 Types of UAVs and Their Use -- 3 UAVs Applications in Precision Agriculture -- 4 UAVs Route Planning -- 5 Algorithms for Solving TSP -- 5.1 Exact Algorithms -- Dynamic Programming -- Branch-and-Bound Algorithms -- Branch-and-Cut Algorithms -- 5.2 Algorithms for Sub-optimal Solutions -- Approximation Algorithms -- Christofides-Serdyukov Algorithm -- Heuristics -- Nearest Neighbor Algorithm -- Multiple Fragment Algorithm -- k-Opt or Lin-Kernighan Heuristics -- Metaheuristics -- Genetic Algorithms -- Ant Colony Optimization -- 6 Demonstration of UAVs Routing in Agriculture -- 6.1 Single TSP (sTSP) -- 6.2 Multiple TSP (mTSP) (Without a Fixed Depot) -- 6.3 Multiple TSP, Single (Fixed) Depot (mTSPsD) -- 6.4 Multiple TSP, Multiple (Fixed) Depots (mTSPmD) -- 6.5 Multiple TSP, Multiple (Fixed) Depots and Constrained Travelling Distance (mTSPmDcT) -- 7 Conclusions -- References -- 3D Scenery Construction of Agricultural Environments for Robotics Awareness -- 1 Introduction -- 1.1 Depth Cameras -- 2 Point Cloud Processing and Digitalization -- 2.1 3D Mapping -- 2.2 Digital Twin -- 2.3 Simulation Environments -- 2.4 Aim of This Chapter -- 3 Demonstrative Scenario: An In-field Application -- 3.1 Point Cloud Data Acquisition -- 3.2 Point Cloud Data Processing -- 3.3 Orchard's Simulation Environment -- 4 Conclusions -- References. A Weed Control Unmanned Ground Vehicle Prototype for Precision Farming Activities: The Case of Red Rice -- 1 Introduction -- 2

Literature Review -- 3 Materials and Methods -- 3.1 Research Design -- 3.2 Case Study -- 4 Robot Prototype Development -- 4.1 Rod Mechanism -- 4.2 Autonomous Vehicle -- 5 Results -- 5.1 Simulation Environment -- 5.2 Real-World Environment -- 6 Conclusions -- References -- Decision-Making and Decision Support System for a Successful Weed Management -- 1 Introduction -- 1.1 The Introduction of Decision Support Systems (DSS) in Agriculture -- 1.2 The Development of DSSs in Terms of Weed Management -- 2 Factors Affecting Decision-Making Process in DSSs for Weed Management -- 2.1 Weed Emergence and Weed Flora Composition in the Field -- 2.2 The Impact of Weed Competition on Crops' Productivity -- 3 Factors Affecting Decision-Making Either in the Short- or in the Long-Term Period and Future Challenges of DSSs Developed fo... -- 4 Conclusion -- References -- Zephyrus: Grain Aeration Strategy Based on the Prediction of Temperature and Moisture Fronts -- 1 Introduction -- 2 Methodology -- 2.1 Theory Basis of Zephyrus Control Strategy -- 2.2 Description of Zephyrus Control Strategy -- 2.3 Experimental Evaluation of Zephyrus Control Strategy -- 2.4 Comparison of Zephyrus with Other Aeration Controllers -- 3 Results and Discussion -- 3.1 Experimental Evaluation of Zephyrus Control Strategy -- 3.2 Comparison of Zephyrus with Other Aeration Controllers -- 4 Conclusions -- References -- Decision-Making Applications on Smart Livestock Farming -- 1 Smart Livestock Farming -- 1.1 Concepts and Fundamentals -- 1.2 Smart Livestock Farming Models Implemented On-farm Actions -- Pig Production -- Poultry Production -- Dairy and Beef Production -- 2 Tools for Implementing Decision-Making Applications in Smart Livestock Farming. 2.1 Paraconsistent Logic Applications -- Applications -- Poultry Production -- 2.2 Pig production -- 2.3 Use of Machine Learning on Livestock Production -- Applications -- Dairy Production -- Poultry Production -- Pig Production -- 2.4 Technical Challenges -- 3 Final Remarks -- References -- Part III: Environment -- Programmable Process Structures of Unified Elements for Model-Based Planning and Operation of Complex Agri-environmental Proce... -- 1 Introduction -- 1.1 Functionality Modeling of Complex Process Systems -- 1.2 Structural Modeling of Complex Systems -- 2 Methodology -- 3 Results and Discussion -- 3.1 Recirculation Aquaculture System -- Challenge -- Experimental Unit -- Conceptual Model -- PPS Implementation of the Model -- Validation of a Pilot Experiment -- Study of a Complete Fish Grading Process -- Simulation-Based Design -- Experiences About the Applied Methodology -- 3.2 Ecosystem-Involved Fishpond -- Challenge -- Investigated Production Site -- Conceptual Model -- PPS Implementation of the Model -- Validation of the Model -- Simulation of Various Managerial Strategies -- Effect of Climate Change on Production of Fishpond -- Experiences About the Applied Methodology -- 3.3 Agroforestry Site -- Challenge -- Experimental Site -- Conceptual Model -- PPS Implementation of the Model -- Illustration of Simulation-Based Analysis -- Experiences About the Applied Methodology -- 4 Concluding Discussion -- References -- Monitoring and Estimation of Sugarcane Burning in the Middle Paranapanema Basin, Brazil, Using Linear Mixed Models -- 1 Introduction -- 2 Material and Methods -- 2.1 Topographic Survey -- 2.2 Statistical Modeling -- 3 Results and Discussion -- 4 Conclusions -- References -- A Decision Support System for Green Crop Fertilization Planning -- 1 Introduction -- 2 System Description -- 3 Case Study Demonstration. 3.1 The Demonstrated Crops -- 3.2 Fertilization Scenario -- 3.3 Input Parameters -- 4 Results -- 5 Discussion -- 6 Conclusions -- References -- Knowledge Elicitation and Modeling of Agroecological

Management Strategies -- 1 Introduction -- 2 Agroecological Farm Management -- 3 Developing a Farm-Management Model -- 4 Decision-Relevant Concepts -- 4.1 Activities, Operations, and Resources -- 4.2 Goals and Plans -- 4.3 Preferences and Priorities -- 4.4 Events and Reactions -- 5 Example of an Agroecological Management Strategy -- 6 Discussion and Conclusion -- References.

---