

1. Record Nr.	UNISA996466294803316
Titolo	Computational Science and Its Applications – ICCSA 2017 [[electronic resource]] : 17th International Conference, Trieste, Italy, July 3-6, 2017, Proceedings, Part II / / edited by Osvaldo Gervasi, Beniamino Murgante, Sanjay Misra, Giuseppe Borruso, Carmelo M. Torre, Ana Maria A.C. Rocha, David Taniar, Bernady O. Apduhan, Elena Stankova, Alfredo Cuzzocrea
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2017
ISBN	3-319-62395-8
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XXXVI, 726 p. 291 illus.)
Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 10405
Disciplina	004
Soggetti	Computer networks Artificial intelligence Algorithms Computer science—Mathematics Discrete mathematics Artificial intelligence—Data processing Computer Communication Networks Artificial Intelligence Discrete Mathematics in Computer Science Data Science Mathematical Applications in Computer Science
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Intro -- Preface -- Welcome to Trieste -- Organization -- Contents - Part II -- Workshop on Agricultural and Environmental Big Data Analytics (AEDBA 2017) -- Lack of Data: Is It Enough Estimating the Coffee Rust with Meteorological Time Series? -- 1 Introduction -- 2 Background -- 2.1 Coffee Rust -- 2.2 Time Series -- 2.3 Regression Models -- 3 Data Pre-processing -- 4 Experimental Results -- 5 Conclusions and Future Works -- References -- Urban Sprawl, Labor

Incomes and Real Estate Values -- Abstract -- 1 Introduction and Aim of the Paper -- 2 Methodology of Analysis and Data Processing -- 3 Urban Growth on a Metropolitan Area -- 4 Spatial Distribution of Real Estate Values -- 5 Labor or Capital Income, Unemployment Rate and More -- 6 Conclusions -- References -- OLAP Analysis of Integrated Pest Management's Defense Rules: Application to Olive Crop in Apulia Region -- Abstract -- 1 Introduction -- 2 Related Work -- 2.1 Sustainable Agriculture Indicators -- 2.2 OLAP for Agriculture -- 3 OLAP Model for IPM -- 3.1 Integrated Pest Management for Olive Tree -- 3.2 OLAP Model -- 4 Implementation -- 5 Conclusions -- References -- Adaptive Prediction of Water Quality Using Computational Intelligence Techniques -- Abstract -- 1 Introduction -- 2 Related Studies -- 3 Data and Study Area -- 3.1 United States Geological Survey (USGS) -- 3.2 Cauca River Modeling Project Phase II (PMC II) -- 4 Water Quality Adaptive Prediction -- 4.1 Parameters Setting Component -- 4.2 Predictive Component -- 4.3 Adaptive Component -- 5 Experimental Results -- 5.1 Regressor Selection for Predictive Component -- 5.2 Algorithm Selection for Adaptive Component -- 6 Conclusions and Future Work -- Acknowledgements -- References -- A Tool for Classification of Cacao Production in Colombia Based on Multiple Classifier Systems -- Abstract -- 1 Introduction -- 2 Data and Study Area. 3 Data Preprocessing -- 4 Model Selection -- 5 Model Deployment -- 6 Conclusions and Future Work -- Acknowledgements -- References -- Decision Support System for Coffee Rust Control Based on Expert Knowledge and Value-Added Services -- Abstract -- 1 Introduction -- 2 Decision Support System for Coffee Rust Control: DSS-CRC -- 2.1 Fungicide Type -- 2.2 Moment of Fungicide Application -- 2.3 Fungicide Application Technology -- 2.4 Knowledge Base Definition -- 3 DSS-EWS Integration -- 4 Evaluation -- 4.1 Decision Quality -- 4.2 Decision Process Efficiency -- 4.3 Decision Maker's Satisfaction -- 5 Conclusions -- Acknowledgements -- References -- Impact of Temporal Features of Cattle Exchanges on the Size and Speed of Epidemic Outbreaks -- 1 Introduction -- 2 Dataset -- 3 Data Modeling -- 4 Infection Modeling -- 5 Size of Cascades -- 6 Speed of Cascades -- 7 Conclusion -- References -- Creating Territorial Intelligence Through a Digital Knowledge Ecosystem: A Way to Actualize Farmer Empowerment -- Abstract -- 1 Introduction -- 2 A Mobile-Based Information System for Farmers Empowerment -- 3 A TI-Based Shift from Farmers Empowerment to Citizen Empowerment -- 4 The Digital Knowledge Ecosystem for Spatially-Enabled Farmer Communities -- 4.1 Architectural Principles of the Digital Knowledge Ecosystem -- 4.2 Engaging Mobile Users -- 5 Conclusion -- References -- Workshop on Advanced Methods in Data Mining for Applications (AMDMA 2017) -- The Classification of Turkish Economic Growth by Artificial Neural Network Algorithms -- 1 Introduction -- 2 Materials and Methods -- 2.1 Materials -- 2.2 Methods -- 3 Results and Discussion -- 4 Conclusion -- References -- Standardized Precipitation Index Analyses with Wavelet Techniques at Watershed Basin -- Abstract -- 1 Introduction -- 2 Materials and Methods -- 2.1 Study Area and Data. 2.2 Standardized Precipitation Index -- 2.3 Wavelet Analyses -- 3 Analyses -- 3.1 Time Series Analyses of SPI -- 3.2 Wavelet Analyses -- 4 Results and Conclusion -- Acknowledgements -- References -- Comparison of Deep Learning and Support Vector Machine Learning for Subgroups of Multiple Sclerosis -- 1 Introduction -- 2 Material and Method -- 2.1 Materials -- 3 Method -- 4 Results and Discussion -- 5 Conclusion -- References -- Workshop on Advanced Smart Mobility and Transportation (ASMAT 2017) -- Preliminary Investigation on a

Numerical Approach for the Evaluation of Road Macrotecture --
 Abstract -- 1 Introduction -- 2 Objective -- 3 Laboratory Test:
 Gyratory Compactor Technique and Experimental Campaign -- 4
 Numerical Modeling -- 4.1 The DEM Simulation of the Gyratory
 Compactor -- 5 Analysis of Results -- 5.1 Repeatability Analysis -- 5.2
 Wall Effect Analysis -- 5.3 Time History Analysis -- 5.4 Real Specimens
 and DEM Comparison -- 6 Conclusions and Recommendations --
 Acknowledgements -- References -- Novelty Detection for Location
 Prediction Problems Using Boosting Trees -- Abstract -- 1 Introduction
 -- 2 Related Work -- 3 Proposed System -- 3.1 Preprocessing -- 3.2
 Features Extraction -- 3.3 Classification Models -- 4 Experimental
 Results -- 4.1 Datasets -- 4.2 Experiments -- 4.3 Results -- 5
 Conclusion -- References -- Estimation of an Urban OD Matrix Using
 Different Information Sources -- Abstract -- 1 Introduction -- 2 The
 Empirical Data -- 3 State of the Art of OD Estimations -- 3.1
 Categories of Sensors -- 3.2 Multiple Data Source -- 4 The
 Methodological Framework -- 5 Some Preliminary Results -- 6
 Discussion and Conclusions -- References -- Workshop on Advances in
 Information Systems and Technologies for Emergency Preparedness,
 Risk Assessment and Mitigation (ASTER 2017).
 Flood Hazard Assessment of the Fortore River Downstream the Occhito
 Dam, in Southern Italy -- Abstract -- 1 Introduction -- 2 The Case
 Study Description -- 3 Evaluation of the Hydrological Discharges -- 4
 Results -- 5 Conclusions -- Acknowledgments -- References --
 Hierarchical Spatial Distribution of Seismic Risk of Italian RC Buildings
 Stock -- Abstract -- 1 Introduction -- 2 Elements for Italian Existing
 RC Buildings Seismic Risk Map -- 2.1 Italian Seismic Hazard -- 2.2
 Building Types -- 2.3 Seismic Risk Index -- 3 A Novel Italian RC
 Buildings Seismic Risk GIS Map -- 4 Discussion and Conclusion --
 References -- Resilience Modification and Dynamic Risk Assessment in
 Hybrid Systems: Study Cases in Underground Settlements of Murgia
 Edge (Apulia, Southern Italy) -- Abstract -- 1 Introduction -- 2 Hybrid
 Systems -- 3 Apulian Underground Settlements -- 3.1 Instability and
 Hazard Factors -- 3.2 Risk Factors -- 3.3 Resilience and Emerging
 Signals -- 4 Methodologies and Study Cases -- 5 Conclusions --
 References -- Preventive Approach to Reduce Risk Caused by Failure of
 a Rainwater Drainage System: The Case Study of Corato (Southern Italy)
 -- Abstract -- 1 Introduction -- 2 The Case Study -- 3 Data and
 Method -- 3.1 Key Variables and Data Collected -- 3.2 Layer
 Integration and Risk Mapping -- 4 Results -- 5 Conclusions --
 References -- Earthquake's Rubble Heaps Volume Evaluation:
 Expeditious Approach Through Earth Observation and Geomatics
 Techniques -- Abstract -- 1 Introduction -- 1.1 Earthquake Events --
 2 Study Area -- 2.1 Geology -- 3 Data and Methods -- 3.1 Dataset --
 3.2 Methodology -- 4 Results -- 5 Discussion and Conclusions --
 Acknowledgments -- References -- A Geospatial Decision Support Tool
 for Seismic Risk Management: Florence (Italy) Case Study -- Abstract --
 1 Introduction -- 2 A Short Overview on the Steps -- 3 Case Study
 Description.
 3.1 Historical Seismicity and Selection of the Earthquake Event for the
 Scenarios -- 3.2 Available Data -- 4 Method -- 4.1 Deterministic
 Seismic Hazard and Site Effects Analysis -- 4.2 Building Vulnerability
 and Damage Assessment -- 4.3 Expected Consequences on Population
 and Buildings -- 5 Results and Discussion: Scenarios for Selected
 Earthquakes -- 6 Conclusion -- Acknowledgement and Disclaimer --
 References -- Enhancing Creativity in Risk Assessment of Complex
 Sociotechnical Systems -- 1 Introduction -- 2 Related Work -- 3 The
 Water Systems Case Study -- 3.1 Vulnerability Assessment Support

System Experiment -- 3.2 VUM Ontology -- 4 CREAM-Based Risk Models Generation -- 4.1 Risk Models Generation Process -- 4.2 Risk Mini-Models Examples -- 5 Conclusions -- References -- Spatial Analysis and Ranking for Retrofitting of the School Network in Lima, Peru -- Abstract -- 1 Introduction -- 2 The Case Study -- 2.1 Description of the Lima Metropolitan Area -- 2.2 Seismic Risk of Public Schools in the City -- 3 Retrofitting Prioritization Ranking -- 3.1 Methodology -- 3.2 Results -- 4 Conclusion -- Acknowledgments -- References -- Workshop on Bio-inspired Computing and Applications (BIONCA 2017) -- Crowd Anomaly Detection Based on Optical Flow, Artificial Bacteria Colony and Kohonen's Neural Network -- 1 Introduction -- 2 Related Works -- 3 Architecture of the System -- 4 Proposed Algorithm -- 4.1 Optical Flow -- 4.2 Artificial Bacteria Colony -- 4.3 Kohonen's Neural Network -- 5 Experiments and Results -- 6 Conclusion -- References -- Workshop on Computational and Applied Mathematics (CAM 2017) -- An Uncoupling Strategy in the Newmark Method for Dynamic Problems -- 1 Introduction -- 2 Model Equations -- 3 Uncoupled Newmark Method -- 4 Convergence Issue -- 5 Numerical Simulations -- 6 Conclusions -- References. Continuous Extensions for Structural Runge--Kutta Methods.

Sommario/riassunto

The six-volume set LNCS 10404-10409 constitutes the refereed proceedings of the 17th International Conference on Computational Science and Its Applications, ICCSA 2017, held in Trieste, Italy, in July 2017. The 313 full papers and 12 short papers included in the 6-volume proceedings set were carefully reviewed and selected from 1052 submissions. Apart from the general tracks, ICCSA 2017 included 43 international workshops in various areas of computational sciences, ranging from computational science technologies to specific areas of computational sciences, such as computer graphics and virtual reality. Furthermore, this year ICCSA 2017 hosted the XIV International Workshop On Quantum Reactive Scattering. The program also featured 3 keynote speeches and 4 tutorials.
