Record Nr.	UNISA996465485003316
Titolo	Future Data and Security Engineering [[electronic resource]]: 4th International Conference, FDSE 2017, Ho Chi Minh City, Vietnam, November 29 – December 1, 2017, Proceedings / / edited by Tran Khanh Dang, Roland Wagner, Josef Küng, Nam Thoai, Makoto Takizawa, Erich J. Neuhold
Pubbl/distr/stampa	Cham:,: Springer International Publishing:,: Imprint: Springer,, 2017
ISBN	3-319-70004-9
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XVI, 492 p. 154 illus.)
Collana	Information Systems and Applications, incl. Internet/Web, and HCI;; 10646
Disciplina	005.8
Soggetti	Application software
	Data encryption (Computer science)
	Computer security
	Software engineering
	Programming languages (Electronic computers)
	Artificial intelligence Information Systems Applications (incl. Internet)
	Cryptology
	Systems and Data Security
	Software Engineering
	Programming Languages, Compilers, Interpreters Artificial Intelligence
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Intro Preface Organization Contents Invited Keynotes Eco Models of Distributed Systems 1 Introduction 2 System Model 3 Power Consumption and Computation Models 3.1 Power Consumption Models 3.2 Computation Models 3.3 Estimation Model 4 Server Selection Algorithm 5 Static Migration of Virtual Machines 6 Dynamic Migration of Virtual Machines 7 Evaluation 7.1 SGEA Algorithm 7.2 ISEAM Algorithm 7.3 DVMM Algorithm

1.

-- 8 Concluding Remarks -- References -- Estimating the Assessment Difficulty of CVSS Environmental Metrics: An Experiment -- 1 Introduction -- 2 Background on CVSS -- 3 Research Design -- 4 Study Realization -- 5 Our Results -- 6 Threats to Validity -- 7 Discussion and Conclusions -- References -- Advances in Query Processing and Optimization -- Fast Top-Q and Top-K Query Answering -- 1 Introduction -- 2 Related Work -- 3 Top-Q Query Answering -- 3.1 Query Formulation -- 3.2 Processing TQQA Queries -- 4 Prototype and Experiments -- 4.1 Similarity Function(s) -- 4.2 Objective Function --4.3 Prototype -- 4.4 Experimental Setup -- 4.5 Discussion of Results -- 5 Conclusion -- References -- Low-Latency Radix-4 Multiplication Algorithm over Finite Fields -- 1 Introduction -- 2 Multiplication Based on Shifted Polynomial Basis over Finite Fields -- 3 Proposed Radix-4 Multiplication Algorithm Based on SPB -- 4 Conclusion -- References -- An Iterative Algorithm for Computing Shortest Paths Through Line Segments in 3D -- 1 Introduction -- 2 Preliminaries -- 3 Our Method -- 4 Experiments -- 5 Concluding Remarks -- References -- On Transformation-Based Spatial Access Methods with Monotone Norms -- 1 Preliminaries -- 1.1 Transformation of Multidimensional Spatial Data Space via Space-Filling Curves -- 1.2 Dedicated Spatial Data and Index Structures: Point and Spatial Access Methods. 2 Transformation Techniques in Spatial Access Methods -- 2.1 Efficient Support of Complex Spatial Operations -- 2.2 Distance Metrics on Multidimensional Spatially Extended Objects -- 3 Hausdorff Distance Metric for Multidimensional Spatially Extended Objects -- 3.1 Distance Metric on Closed and Bounded Subsets of Rk -- 3.2 Computation of the Distance Metric on C(k, d) -- 3.3 Effective Computation of the Distance Metric on P(k, d) -- 4 Relating the Distance Metrics on Original and Transform Spaces via Monotone Norms -- 5 Conclusion -- References -- Query Answering System as a Tool in Incomplete Distributed Information System Optimization Process -- Abstract -- 1 Introduction -- 2 Incomplete Information System -- 3 Query Processing Based on Collaboration Between Information Systems -- 4 Searching the Closest Information System -- 5 Conclusions -- References -- Using a Genetic Algorithm in a Process of Optimizing the Deployment of Radio Stations -- Abstract -- 1 Introduction - Multilateration Surveillance System (MSS) -- 2 Multilateration (MLAT) -- 2.1 The Calculation of Target Location in 2D -- 2.2 Accuracy -- 3 Research -- 3.1 Formalizing the Optimization Task -- 4 Deployment of Radio Stations in a Specific Area -- 4.1 The Optimization Process -- 4.2 Evaluation of Results and Discussion -- 5 Conclusion -- Acknowledgements -- References -- Big Data Analytics and Applications -- IFIN+: A Parallel Incremental Frequent Itemsets Mining in Shared-Memory Environment -- Abstract -- 1 Introduction -- 2 Related Works -- 3 IPPC Tree Construction -- 4 Preliminaries -- 5 Algorithm IFIN+ -- 6 Experiments -- 7 Conclusions -- References -- Parallel Algorithm of Local Support Vector Regression for Large Datasets -- 1 Introduction -- 2 Support Vector Regression --3 Parallel Algorithm of Local Support Vector Regression -- 4 Evaluation -- 5 Discussion on Related Works. 6 Conclusion and Future Works -- References -- On Semi-supervised Learning with Sparse Data Handling for Educational Data Classification -- Abstract -- 1 Introduction -- 2 An Educational Data Classification Task at the Program Level -- 3 The Proposed Educational Data Classification Method with Semi-supervised Learning and Sparse Data Handling -- 3.1 The Proposed Robust Semi-supervised Learning Framework -- 3.2 Realization of the Proposed Framework for a Robust Random Forest-Based Self-training Algorithm -- 4 Evaluation -- 5

Conclusions -- Acknowledgments -- References -- Logistic Regression

Methods in Selected Medical Information Systems -- Abstract -- 1 Introduction -- 2 Main Assumptions -- 3 Logistic Regression -- 4 Experiments -- 5 Conclusion and Future Work -- References --Blockchains and Emerging Authentication Techniques -- Mapping Requirements Specifications into a Formalized Blockchain-Enabled Authentication Protocol for Secured Personal Identity Assurance -- 1 Introduction -- 2 Authorin -- 3 Modeling the Authorin Protocol -- 3.1 Modeling Strategy -- 3.2 Mapping the Agent-Oriented Model to CPN Models -- 4 Protocol Semantics -- 5 Refined CPN Models of Authoria -- 5.1 KeyGenerationEstablishBinding Module -- 5.2 V& -- A-Processing Module -- 5.3 Mining Module -- 5.4 Revocation Module --6 Evaluation -- 6.1 State-Space Analysis -- 6.2 Related Work -- 7 Conclusion and Future Work -- A Appendix -- A.1 CPN Model -- A.2 Goal Model -- A.3 Behavior Interfaces of Activities -- A.4 Protocol Semantics -- A.5 State-Space Analysis -- References -- Gait Recognition with Multi-region Size Convolutional Neural Network for Authentication with Wearable Sensors -- 1 Introduction -- 2 Background and Related Work -- 2.1 Vision-Based Gait Recognition --2.2 Achievement of Sensor-Based Gait Recognition -- 2.3 Deep Learning Approaches -- 3 Proposed Method. 3.1 Overview -- 3.2 Data Acquisition -- 3.3 Preprocessing -- 3.4 Main Processing -- 3.5 Post Processing -- 3.6 Support Vector Machine Classifier -- 4 Experiments and Results -- 4.1 Experiment Set 1: Optimum Parameters for CNN Models -- 4.2 Experiment Set 2: Pretrained CNN Model Evaluation -- 5 Conclusion -- References -- Data Engineering Tools in Software Development -- Agile Software Engineering Methodology for Information Systems' Integration Projects -- Abstract -- 1 Introduction -- 2 The Viewpoint Framework -- 3 The Methodology -- 3.1 The Iteration Cycle and Agility -- 3.2 Describing Motivational Scenarios -- 3.3 Modelling Goals -- 3.4 Modelling Roles -- 3.5 Mapping Roles to Information Systems and Registries -- 3.6 Modelling Business Processes -- 3.7 Defining User Requirements -- 3.8 Elaborating User Stories into Tasks for Implementing Building Blocks and Integration and Managing Tasks -- 4 Conclusions --Acknowledgements -- References -- Effectiveness of Object Oriented Inheritance Metrics in Software Reusability -- Abstract -- 1 Introduction -- 2 Related Work -- 3 Proposed Inheritance Metrics -- 4 Examples for Illustration -- 5 Results of Existing and Proposed Metrics -- 6 Analysis of Results -- 7 Conclusion and Future Works --References -- Data Protection, Data Hiding, and Access Control --Security Analysis of Administrative Role-Based Access Control Policies with Contextual Information -- Abstract -- 1 Introduction -- 2 Background -- 3 Administrative Spatial Temporal RBAC -- 4 Implementation and Evaluation -- 5 Conclusion -- Acknowledgements -- References -- Metamorphic Malware Detection by PE Analysis with the Longest Common Sequence -- Abstract -- 1 Introduction -- 2 Related Work -- 3 The Proposed Malware Detection Method -- 3.1 The Portable Executable Format Structure -- 3.2 Feature Extraction -- 3.3 Feature Selection. 3.4 Classification -- 4 Experiment -- 4.1 Dataset -- 4.2 Evaluation Criteria -- 4.3 Experimental Results -- 5 Conclusion -- References --A Steganography Technique for Images Based on Wavelet Transform --1 Introduction -- 2 Proposed Approach -- 2.1 Embedding Stage -- 2.2 Extraction Stage -- 3 Experiment and Results -- 4 Related Work -- 5 Conclusion -- References -- Internet of Things and Applications --

Activity Recognition from Inertial Sensors with Convolutional Neural Networks -- 1 Introduction -- 2 Background and Related Work -- 3 Proposed Method -- 3.1 Human Activity Recognition with 2D

Convolutional Neural Networks -- 3.2 Human Activity Recognition with 3D Convolutional Neural Networks -- 3.3 Human Activity Recognition with 3D Convolutional Neural Network and Extra 561-Element Feature -- 4 Experiments -- 4.1 Dataset -- 4.2 Experiments with 2D Convolutional Neural Network Models -- 4.3 Experiments with 3D Convolutional Neural Network Models -- 5 Conclusion and Future Work -- References -- Accuracy Improvement for Glucose Measurement in Handheld Devices by Using Neural Networks -- Abstract -- 1 Introduction -- 2 Materials and Proposed Methods -- 2.1 The Effect of HCT on Glucose Measurement -- 2.2 The Proposed Method for Glucose Value Correction -- 3 Experimental Results -- 4 Conclusions --Acknowledgements -- References -- Towards a Domain Specific Framework for Wearable Applications in Internet of Things -- 1 Introduction -- 2 Background -- 2.1 Domain Specific Languages -- 2.2 Internet of Things -- 2.3 Wearable Applications -- 3 Motivation and Research Problems -- 3.1 Example Descriptions -- 3.2 Hardware Design -- 3.3 Research Problems -- 4 Framework -- 4.1 Software Abstraction -- 4.2 Generating Source Code for Wearable Applications -- 4.3 Domain Modeling -- 5 Experiments -- 6 Related Work -- 6.1 FXU Framework -- 6.2 IoTSuite Framework. 6.3 M3 Framework.

Sommario/riassunto

This book constitutes the refereed proceedings of the Third International Conference on Future Data and Security Engineering, FDSE 2016, held in Can Tho City, Vietnam, in November 2016. The 28 revised full papers and 7 short papers presented were carefully reviewed and selected from 128 submissions. The accepted papers were grouped into the following sessions: Advances in query processing and optimization Big data analytics and applications Blockchains and emerging authentication techniques Data engineering tools in software development Data protection, data hiding, and access control Internet of Things and applications Security and privacy engineering Social network data analytics and recommendation systems.