1. Record Nr. UNINA9910337609303321

Titolo	Applied Physics, System Science and Computers II : Proceedings of the 2nd International Conference on Applied Physics, System Science and Computers (APSAC2017), September 27-29, 2017, Dubrovnik, Croatia / / edited by Klimis Ntalianis, Anca Croitoru
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
ISBN	3-319-75605-2
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (viii, 288 pages) : illustrations
Collana	Lecture Notes in Electrical Engineering, , 1876-1100 ; ; 489
Disciplina	530
Soggetti	Electrical engineering Biophysics Biological physics Mathematical models Manufactures Electrical Engineering Biological and Medical Physics, Biophysics Mathematical Modeling and Industrial Mathematics Manufacturing, Machines, Tools, Processes
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Mechanism of Film Boiling Elimination during Quenching in Mineral Oils Caused by Oligomeric Additives -- Comparison of E-mode GaN HEMT Using Different Gate Oxide Stack Approach -- Physical Parameterization in MRI -- A Choosing of the Disperse Sample for Investigation of Magnetic Properties of the Disperse Phase Particles. Noticing of Volume Fraction Limiting -- Simulation of the Inflow to a Well Equipped with a Vertical Slot Filter -- Errors of Approximation with Polynomial Splines of the Fifth Order -- Classical Potential Barrier of Liquid Phase Radical Reactions and Its Simulation Based on the Experimental Kinetic and Thermochemical Data Using Fuzzy Neural Networks -- Type of Substance as a New Physical Quantity -- Spectroscopy of Colorants for Fine Art in Visual and Near Infrared

Spectrum -- From Quantum Sensing to SWEME Interaction Modeling -- An Ultrasound Technique for the Characterization of the Acoustic Emission of Reinforced Concrete Beam -- Prediction of Airport Acoustical Noise by Deterministic Decomposition and Seasonal ARIMA Techniques -- Express Registration of Partial Discharges in Gas-insulated Switchgear -- Risk Factors for the Occurrence of Traumatic Vacuum Phenomenon After Chest Compression for Patients with Cardiac Arrest -- A System for Big Attributed Hierarchical Graph Visualization -- A System of Functional Programming for Supporting Cloud Supercomputing -- Security and Performance of a Textual Substitution Compression Method Applied to Images -- A Solution of the Mastermind Board Game in Scratch Suitable for Algorithmic Thinking Development -- The Development of KarelNXT Robot as a Simulation of xKarel Programming Language -- Development of Polytechnic Creativity of Primary School Pupils -- Distribution and Validation of Meteorological Data for the Air Traffic Management Systems -- HLA Simulation of Customer Flow in a Polyclinic -- Steganographic Principle for Transfer Hidden Pictures within Pictures -- Assets as Part of Tertiary Technical Education -- Using of the Tablets for Amplyopia Treatment -- Neural Interface: The potential of Using Cheap EEG Devices for Scientific Purposes -- Optimal Information Paths in Social Media: Personalized Consumption of Tweets -- Solving Sparse Matrices: a Comparative Analysis between FPGA and GPU -- Making a Shift from Believing to Knowing by the Help of RDF CFL Formal Representation -- Deformation Analysis in Image Sequences by Physics-Inspired Virtual Current Interaction -- Utilization of NFV in Cloud Data Center -- Autonomic Machine Learning for Intelligent Databases -- Recommender System for Post-editing of Machine Translation -- Neural Network methods for Image Segmentation -- An HPC-Data Center Case Study on the Power Consumption of Workload -- Identifying Problematic e-Courses Content Based on Students Behaviour -- Dyscalculia: A Behavioural Vision -- Enhancing the Development of Interaction between Authorities in Maritime Surveillance -- Electricity Peak Demand Classification with Machine Learning Techniques -- The -Complexity of Finite-Dimensional Continuous Maps -- Characterisation of the Vibration of an Ultrasonic Transducer for Guided Waves Applications -- Asymptotic Stability of Partial Difference Equations Systems with Singular Matrix -- Chaos and Stability of the Financial System -- A Simple Econophysics Model of the Stock Market as a Nonequilibrium Open System -- Mathematical Modeling and Simulation of Selected Multipulse Rectifiers, Used in "Conventional" Airplanes and Aircrafts Consistent with the Trend of "MEA/AEA" -- A Sufficient Asymptotic Stability Condition in Generalised Model Predictive Control to Avoid Input Saturation -- Minimization of Dynamic Loads in the Reciprocating Motion of the Executive Links of a Large Mass -- Harmonic Analysis in a Node Where Exist a Deformed Regime -- Human Upper Limb Motions Video Analysis Used for Rehabilitation Robotics -- Interactive Control System Proposal for High Switching Frequency Resonant Converters -- PWM Controlled Single-Phase Induction Motor Supplied from Single-Leg MxC -- Forward and Inverse Kinematics Using Transposition Method for Robotic Arm DOBOT -- Integral Assessment of Power Network Equipment Operational Risks: Special Aspects.

Sommario/riassunto

This book reports on advanced theories and methods in three related fields of research: applied physics, system science and computers. It is organized in three parts, the first of which covers applied physics topics, including lasers and accelerators; condensed matter, soft matter and materials science; nanoscience and quantum engineering; atomic,

molecular, optical and plasma physics; as well as nuclear and high-energy particle physics. It also addresses astrophysics, gravitation, earth and environmental science, as well as medical and biological physics. The second and third parts focus on advances in computers and system science, respectively, and report on automatic circuit control, power systems, computer communication, fluid mechanics, simulation and modeling, software engineering, data structures and applications of artificial intelligence among other areas. Offering a collection of contributions presented at the 2nd International Conference on Applied Physics, System Science and Computers (APSAC), held in Dubrovnik, Croatia on September 27–29, 2017, the book bridges the gap between applied physics and electrical engineering. It not only to presents new methods, but also promotes collaborations between different communities working on related topics at the interface between physics and engineering, with a special focus on communication, data modeling and visualization, quantum information, applied mechanics as well as bio and geophysics.