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Soggetti	Artificial intelligence Computer engineering Computer networks Application software Computers Image processing—Digital techniques Computer vision Artificial Intelligence Computer Engineering and Networks Computer and Information Systems Applications Computing Milieux Computer Imaging, Vision, Pattern Recognition and Graphics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Model Compression I -- Fine-grained Channel Pruning for Deep Residual Neural Networks -- A Lightweight Fully Convolutional Neural Network of High Accuracy Surface Defect Detection -- Detecting Uncertain BNN Outputs on FPGA Using Monte Carlo Dropout Sampling -- Neural network compression via learnable wavelet transforms -- Fast and Robust Compression of Deep Convolutional Neural Networks -- Model Compression II -- Pruning artificial neural networks: a way to

find well-generalizing, high-entropy sharp minima -- Log-Nets: Logarithmic Feature-Product Layers Yield More Compact Networks -- Tuning Deep Neural Network's hyperparameters constrained to deployability on tiny systems -- Obstacles to Depth Compression of Neural Networks -- Multi-task and Multi-label Learning -- Multi-Label Quadruplet Dictionary Learning -- Pareto Multi-Task Deep Learning -- Convex Graph Laplacian Multi-Task Learning SVM -- Neural Network Theory and Information Theoretic Learning -- Prediction Stability as a Criterion in Active Learning -- Neural Spectrum Alignment: Empirical Study -- Nonlinear, Nonequilibrium Landscape Approach to Neural Network Dynamics -- Hopfield Networks for Vector Quantization -- Prototype-Based Online Learning on Homogeneously Labeled Streaming Data -- Normalization and Regularization Methods -- Neural Network Training with Safe Regularization in the Null Space of Batch Activations -- The Effect of Batch Normalization in the Symmetric Phase -- Regularized Pooling -- Reinforcement Learning I -- Deep Recurrent Deterministic Policy Gradient for Physical Control -- Exploration via Progress-Driven Intrinsic Rewards -- An improved reinforcement learning based heuristic dynamic programming algorithm for model-free optimal control -- PBCS: Efficient Exploration and Exploitation Using a Synergy between Reinforcement Learning and Motion Planning -- Understanding failures of deterministic actor-critic with continuous action spaces and sparse rewards -- Reinforcement Learning II -- GAN-based Planning Model in Deep Reinforcement Learning -- Guided Reinforcement Learning via Sequence Learning -- Neural Machine Translation based on Improved Actor-Critic Method -- Neural Machine Translation based on Prioritized Experience Replay -- Improving Multi-Agent Reinforcement Learning with Imperfect Human Knowledge -- Reinforcement Learning III -- Adaptive Skill Acquisition in Hierarchical Reinforcement Learning -- Social Navigation with Human Empowerment driven Deep Reinforcement Learning -- Curious Hierarchical Actor-Critic Reinforcement Learning -- Policy Entropy for Out-of-Distribution Classification -- Reservoir Computing -- Analysis of reservoir structure contributing to robustness against structural failure of Liquid State Machine -- Quantifying robustness and capacity of reservoir computers with consistency profiles -- Two-Step FORCE Learning Algorithm for Fast Convergence in Reservoir Computing -- Morphological Computation of Skin Focusing on Fingerprint Structure -- Time Series Clustering with Deep Reservoir Computing -- ReservoirPy: an Efficient and User-Friendly Library to Design Echo State Networks -- Robotics and Neural Models of Perception and Action -- Adaptive, Neural Robot Control -- Path Planning on 3D Spiking Neural Networks -- CABIN: A Novel Cooperative Attention Based Location Prediction Network Using Internal-External Trajectory Dependencies -- Neuro-Genetic Visuomotor Architecture for Robotic Grasping -- From Geometries to Contact Graphs -- Sentiment Classification -- Structural Position Network for Aspect-based Sentiment Classification -- Cross-Domain Sentiment Classification using Topic Attention and Dual-Task Adversarial Training -- Data Augmentation for Sentiment Analysis in English -- the Online Approach -- Spiking Neural Networks I -- Dendritic computation in a point neuron model. -- Benchmarking Deep Spiking Neural Networks on Neuromorphic Hardware -- Unsupervised Learning of Spatio-Temporal Receptive Fields from an Event-Based Vision Sensor -- Spike-Train Level Unsupervised Learning Algorithm for Deep Spiking Belief Networks -- Spiking Neural Networks II -- Modelling Neuromodulated Information Flow and Energetic Consumption at Thalamic Relay Synapses -- Learning Precise Spike Timings with Eligibility Traces -- Meta-STDP rule stabilizes synaptic

weights under in vivo-like ongoing spontaneous activity in a computational model of CA1 pyramidal cell -- Adaptive Chemotaxis for improved Contour Tracking using Spiking Neural Networks -- Text Understanding I -- Mental Imagery-Driven Neural Network to Enhance Representation for Implicit Discourse Relation Recognition -- Adaptive Convolution Kernel for Text Classification via Multi-Channel Representations -- Text generation in discrete space -- Short text processing for analyzing user portraits: A dynamic combination -- Text Understanding II -- A Hierarchical Fine-Tuning Approach Based on Joint Embedding of Words and Parent Categories for Hierarchical Multi-label Text Classification -- Boosting Tricks for Word Mover's Distance -- Embedding Compression with Right Triangle Similarity Transformations -- Neural Networks for Detecting Irrelevant Questions during Visual Question Answering -- F-Measure Optimisation and Label Regularisation for Energy-based Neural Dialogue State Tracking Models -- Unsupervised Learning -- Unsupervised Change Detection using Joint Autoencoders for Age-Related Macular Degeneration Progression -- A fast algorithm to find Best Matching Units in Self-Organizing Maps -- Tumor Characterization using Unsupervised Learning of Mathematical Relations within Breast Cancer Data -- Balanced SAM-kNN: Online Learning with Heterogeneous Drift and Imbalanced Data -- A Rigorous Link Between Self-Organizing Maps and Gaussian Mixture Models -- Collaborative Clustering through Optimal Transport.

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#### Sommario/riassunto

The proceedings set LNCS 12396 and 12397 constitute the proceedings of the 29th International Conference on Artificial Neural Networks, ICANN 2020, held in Bratislava, Slovakia, in September 2020. \* The total of 139 full papers presented in these proceedings was carefully reviewed and selected from 249 submissions. They were organized in 2 volumes focusing on topics such as adversarial machine learning, bioinformatics and biosignal analysis, cognitive models, neural network theory and information theoretic learning, and robotics and neural models of perception and action. \*The conference was postponed to 2021 due to the COVID-19 pandemic.

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