

2019 International Joint Conference on Neural Networks (IJCNN 2019)

**Budapest, Hungary
14-19 July 2019**

Pages 1-774



**IEEE Catalog Number: CFP19IJS-POD
ISBN: 978-1-7281-1986-1**

**Copyright © 2019 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP19IJS-POD
ISBN (Print-On-Demand):	978-1-7281-1986-1
ISBN (Online):	978-1-7281-1985-4
ISSN:	2161-4393

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

COMPARISON OF PROBABILISTIC MODELS AND NEURAL NETWORKS ON PREDICTION OF HOME SENSOR EVENTS	1
<i>Flávia Dias Casagrande ; Jim Tørresen ; Evi Zouganeli</i>	
CYSTOID FLUID COLOR MAP GENERATION IN OPTICAL COHERENCE TOMOGRAPHY IMAGES USING A DENSELY CONNECTED CONVOLUTIONAL NEURAL NETWORK	9
<i>Plácido L. Vidal ; Joaquim De Moura ; Jorge Novo ; Marcos Ortega</i>	
LEARNING ADAPTIVE WEIGHT MASKING FOR ADVERSARIAL EXAMPLES	17
<i>Yoshimasa Kubo ; Michael Traynor ; Thomas Trappenberg ; Sageev Oore</i>	
AN ENSEMBLE STRATEGY FOR HAPLOTYPE INFERENCE BASED ON THE INTERNAL VARIABILITY OF ALGORITHMS	25
<i>Rogério S. Rosa ; Lucas F. S. Cambuim ; Edna N. S. Barros</i>	
VERTICAL AND HORIZONTAL PARTITIONING IN DATA STREAM REGRESSION ENSEMBLES	33
<i>Jean Paul Barddal</i>	
WHO SHOULD BID HIGHER, NS OR WE, IN A GIVEN BRIDGE DEAL?	41
<i>Jacek Mandziuk ; Jakub Suchan</i>	
DEEP MULTI-VIEW LEARNING FROM SEQUENTIAL DATA WITHOUT CORRESPONDENCE	49
<i>Tung Doan ; Takasu Atsuhiko</i>	
EXPLORATION DRIVEN BY AN OPTIMISTIC BELLMAN EQUATION	57
<i>Samuele Tosatto ; Carlo D'Eramo ; Joni Pajarinen ; Marcello Restelli ; Jan Peters</i>	
CROSS-PROJECT DEFECT PREDICTION VIA ASTTOKEN2VEC AND BLSTM-BASED NEURAL NETWORK	65
<i>Hao Li ; Xiaohong Li ; Xiang Chen ; Xiaofei Xie ; Yanzhou Mu ; Zhiyong Feng</i>	
SMOOTH DEEP NETWORK EMBEDDING	73
<i>Mengyu Zheng ; Chuan Zhou ; Jia Wu ; Li Guo</i>	
IDENTIFYING MISLABELED INSTANCES IN CLASSIFICATION DATASETS	81
<i>Nicolas M. Müller ; Karla Markert</i>	
EFFECT OF PRUNING ON CATASTROPHIC FORGETTING IN GROWING DUAL MEMORY NETWORKS	89
<i>Wei Shiung Liew ; Chu Kiong Loo ; Vadym Gryshchuk ; Cornelius Weber ; Stefan Wermter</i>	
ANALYZING MULTI-CHANNEL NETWORKS FOR GESTURE RECOGNITION	97
<i>Pradyumna Narayana ; J. Ross Beveridge ; Bruce A. Draper</i>	
SKIN LESION SEGMENTATION USING DEEP LEARNING FOR IMAGES ACQUIRED FROM SMARTPHONES	105
<i>Gabriel G. De Angelo ; Andre G. C. Pacheco ; Renato A. Krohling</i>	
FEATURE SELECTION BASED ON FEATURE CURVE OF SUBCLASS PROBLEM	113
<i>Lei Liu ; Bing Zhang ; Shidong Wang ; Shuangjie Li ; Kaixiang Zhang ; Shuqin Wang</i>	
ECG-BASED HEARTBEAT CLASSIFICATION IN NEUROMORPHIC HARDWARE	121
<i>Federico Corradi ; Sandeep Pande ; Jan Stuijt ; Ning Qiao ; Siebren Schaafsma ; Giacomo Indiveri ; Francky Catthoor</i>	
ON CLASS IMBALANCE AND BACKGROUND FILTERING IN VISUAL RELATIONSHIP DETECTION	129
<i>Alessio Sarullo ; Tingting Mu</i>	
DNN-BASED ACOUSTIC-TO-ARTICULATORY INVERSION USING ULTRASOUND TONGUE IMAGING	137
<i>Dagoberto Porras ; Alexander Sepúlveda-Sepúlveda ; Tamás Gábor Csapó</i>	
A MEMORY-BASED STDP RULE FOR STABLE ATTRACTOR DYNAMICS IN BOOLEAN RECURRENT NEURAL NETWORKS	145
<i>Jérémie Cabessa ; Alessandro Villa</i>	
FAST AND EFFICIENT TEXT CLASSIFICATION WITH CLASS-BASED EMBEDDINGS	153
<i>Jônatas Wehrmann ; Camila Kolling ; Rodrigo C. Barros</i>	
A DISCRETIZATION-BASED ENSEMBLE LEARNING METHOD FOR CLASSIFICATION IN HIGH-SPEED DATA STREAMS	161
<i>João Roberto Bertini Junior</i>	
HOW TO PRODUCE COMPLEMENTARY EXPLANATIONS USING AN ENSEMBLE MODEL	169
<i>Wilson Silva ; Kelwin Fernandes ; Jaime S. Cardoso</i>	

ENSEMBLE ATTENTION FOR TEXT RECOGNITION IN NATURAL IMAGES	177
<i>Hongchao Gao ; Yujia Li ; Xi Wang ; Jizhong Han ; Ruixuan Li</i>	
ADAPTIVE RANDOM FORESTS WITH RESAMPLING FOR IMBALANCED DATA STREAMS	185
<i>Luis Eduardo Boiko Ferreira ; Heitor Murilo Gomes ; Albert Bifet ; Luiz S. Oliveira</i>	
INTRUSION DETECTION METHOD BASED ON INFORMATION GAIN AND RELIEFF FEATURE SELECTION	191
<i>Yong Zhang ; Xuezheng Ren ; Jie Zhang</i>	
CONVOLUTIONAL NEURAL NETWORK ARCHITECTURE DESIGN BY THE TREE GROWTH ALGORITHM FRAMEWORK	196
<i>Ivana Strumberger ; Eva Tuba ; Nebojsa Bacanin ; Raka Jovanovic ; Milan Tuba</i>	
A COMPREHENSIVE ANALYSIS ON ADVERSARIAL ROBUSTNESS OF SPIKING NEURAL NETWORKS	204
<i>Saima Sharmin ; Priyadarshini Panda ; Syed Shakib Sarwar ; Chankyu Lee ; Wachirawit Ponghiran ; Kaushik Roy</i>	
A SPIKING NETWORK FOR INFERENCE OF RELATIONS TRAINED WITH NEUROMORPHIC BACKPROPAGATION	212
<i>Johannes C. Thiele ; Olivier Bichler ; Antoine Dupret ; Sergio Solinas ; Giacomo Indiveri</i>	
OPTIMIZATION OF CHEMICAL PROCESSES APPLYING SURROGATE MODELS FOR PHASE EQUILIBRIUM CALCULATIONS	220
<i>Corina Nentwich ; Christopher Varela ; Sebastian Engell</i>	
DETECTION OF TYPICAL PRONUNCIATION ERRORS IN NON-NATIVE ENGLISH SPEECH USING CONVOLUTIONAL RECURRENT NEURAL NETWORKS	228
<i>Aleksandr Diment ; Eemi Fagerlund ; Adrian Benfield ; Tuomas Virtanen</i>	
INTRANET USER-LEVEL SECURITY TRAFFIC MANAGEMENT WITH DEEP REINFORCEMENT LEARNING	236
<i>Qiuqing Jin ; Liming Wang</i>	
HEARTBEAT ANOMALY DETECTION USING ADVERSARIAL OVERSAMPLING	244
<i>Jefferson L. P. Lima ; David Macêdo ; Cleber Zanchettin</i>	
LEARNING "WHAT" AND "WHERE": AN INTERPRETABLE NEURAL ENCODING MODEL	251
<i>Haibao Wang ; Lijie Huang ; Changde Du ; Huiguang He</i>	
MIXTURE OF PRE-PROCESSING EXPERTS MODEL FOR NOISE ROBUST DEEP LEARNING ON RESOURCE CONSTRAINED PLATFORMS	259
<i>Taesik Na ; Minah Lee ; Burhan A. Mudassar ; Priyabrata Saha ; Jong Hwan Ko ; Saibal Mukhopadhyay</i>	
TRUSTSIGN: TRUSTED MALWARE SIGNATURE GENERATION IN PRIVATE CLOUDS USING DEEP FEATURE TRANSFER LEARNING	266
<i>Daniel Nahmias ; Aviad Cohen ; Nir Nissim ; Yuval Elovici</i>	
AN ATTENTION-BASED MODEL FOR LEARNING DYNAMIC INTERACTION NETWORKS	274
<i>Sandro Cavallari ; Soujanya Poria ; Erik Cambria ; Vincent W. Zheng ; Hongyun Cai</i>	
A NOVEL RECOMMENDER SYSTEM USING HIDDEN BAYESIAN PROBABILISTIC MODEL BASED COLLABORATIVE FILTERING	282
<i>Xin Dai ; Fanzhang Li ; Xiaopei Li ; Helan Liang</i>	
ADPR: AN ATTENTION-BASED DEEP LEARNING POINT-OF-INTEREST RECOMMENDATION FRAMEWORK	290
<i>Junjie Yin ; Yun Li ; Zheng Liu ; Jian Xu ; Bin Xia ; Qianmu Li</i>	
A GAN MODEL WITH SELF-ATTENTION MECHANISM TO GENERATE MULTI- INSTRUMENTS SYMBOLIC MUSIC	298
<i>Faqian Guan ; Chunyan Yu ; Suqiong Yang</i>	
WEAKLY-SUPERVISED DEEP RECURRENT NEURAL NETWORKS FOR BASIC DANCE STEP GENERATION	304
<i>Nelson Yalta ; Shinji Watanabe ; Kazuhiro Nakadai ; Tetsuya Ogata</i>	
A COMPUTATIONAL MODEL OF MULTI-SENSORY PERCEPTION AND ITS APPLICATION TO INVESTIGATING THE CONTROVERSY AROUND LEARNING STYLES	312
<i>A. Ravishankar Rao</i>	
DYNAMIC BUS ARRIVAL TIME PREDICTION EXPLOITING NON-LINEAR CORRELATIONS	320
<i>Avinash Achar ; Rohith Regikumar ; B Anil Kumar</i>	
CONTEXT-AWARE NETWORK FOR 3D HUMAN POSE ESTIMATION FROM MONOCULAR RGB IMAGE	328
<i>Binyi Yin ; Dongbo Zhang ; Shuai Li ; Aimin Hao ; Hong Qin</i>	
STEPENCOG: A CONVOLUTIONAL LSTM AUTOENCODER FOR NEAR-PERFECT FMRI ENCODING	336
<i>Subba Reddy Oota ; Vijay Rowtula ; Manish Gupta ; Raju S. Bapi</i>	

PYRAMID ATTENTION DENSE NETWORK FOR IMAGE SUPER-RESOLUTION	344
<i>Si-Bao Chen ; Chao Hu ; Bin Luo ; Chris H. Q. Ding ; Shi-Lei Huang</i>	
STEALING KNOWLEDGE FROM PROTECTED DEEP NEURAL NETWORKS USING COMPOSITE UNLABELED DATA	352
<i>Itay Mosafi ; Eli Omid David ; Nathan S. Netanyahu</i>	
NONLINEAR TRANSFORMATION FOR MULTIPLE AUXILIARY INFORMATION IN MUSIC RECOMMENDATION	360
<i>Junwei Zhang ; Min Gao ; Junliang Yu ; Xinyi Wang ; Yuqi Song ; Qingyu Xiong</i>	
TRANSFER LEARNING FOR PIANO SUSTAIN-PEDAL DETECTION	368
<i>Beici Liang ; György Fazekas ; Mark Sandler</i>	
OCSVM-BASED EVALUATION METHOD FOR GENERATIVE NEURAL NETWORKS	376
<i>Artúr István Károly ; Márta Takács ; Péter Galambos</i>	
BIDIRECTIONAL ASSOCIATIVE MEMORY FOR MULTIMODAL FUSION : A DEPRESSION EVALUATION CASE STUDY	382
<i>Stephane Cholet ; Helene Paugam-Moisy ; Sebastien Regis</i>	
IMPROMPTU ACCOMPANIMENT OF POP MUSIC USING COUPLED LATENT VARIABLE MODEL WITH BINARY REGULARIZER	388
<i>Bijue Jia ; Jiancheng Lv ; Yifan Pu ; Xue Yang</i>	
ON DISSIMILARITY REPRESENTATION AND TRANSFER LEARNING FOR OFFLINE HANDWRITTEN SIGNATURE VERIFICATION	394
<i>Victor L. F. Souza ; Adriano L. I. Oliveira ; Rafael M. O. Cruz ; Robert Sabourin</i>	
MODEL-FREE REINFORCEMENT LEARNING BASED LATERAL CONTROL FOR LANE KEEPING	403
<i>Qichao Zhang ; Rui Luo ; Dongbin Zhao ; Chaomin Luo ; Dianwei Qian</i>	
RANK SELECTION IN NON-NEGATIVE MATRIX FACTORIZATION: SYSTEMATIC COMPARISON AND A NEW MAD METRIC	410
<i>Laura Muzzarelli ; Susanne Weis ; Simon B. Eickhoff ; Kaustubh R. Patil</i>	
SKELETONIZATION COMBINED WITH DEEP NEURAL NETWORKS FOR SUPERPIXEL TEMPORAL PROPAGATION	418
<i>Ádám Fodor ; Áron Fóthi ; László Kopácsi ; Ellák Somfai ; András Lorincz</i>	
MULTI-LAYERED SPIKING NEURAL NETWORK WITH TARGET TIMESTAMP THRESHOLD ADAPTATION AND STDP	425
<i>Pierre Falez ; Pierre Tirilly ; Ioan Marius Bilasco ; Philippe Devienne ; Pierre Boulet</i>	
SRAGAN: GENERATING COLOUR LANDSCAPE PHOTOGRAPH FROM SKETCH	433
<i>Si-Bao Chen ; Peng-Cheng Wang ; Bin Luo ; Chris H. Q. Ding ; Jian Zhang</i>	
LEARNING SIMILARITY: FEATURE-ALIGNING NETWORK FOR FEW-SHOT ACTION RECOGNITION	441
<i>Shaoqing Tan ; Ruoyu Yang</i>	
LEARNING MINORITY CLASS PRIOR TO MINORITY OVERSAMPLING	448
<i>Payel Sadhukhan</i>	
LONG-TERM PREDICTION OF SMALL TIME-SERIES DATA USING GENERALIZED DISTILLATION	456
<i>Shogo Hayashi ; Akira Tanimoto ; Hisashi Kashima</i>	
TRANSPARENT MACHINE EDUCATION OF NEURAL NETWORKS FOR SWARM SHEPHERDING USING CURRICULUM DESIGN	464
<i>Alexander Gee ; Hussein Abbass</i>	
CONDENSED CONVOLUTION NEURAL NETWORK BY ATTENTION OVER SELF-ATTENTION FOR STANCE DETECTION IN TWITTER	472
<i>Shengping Zhou ; Junjie Lin ; Lianzhi Tan ; Xin Liu</i>	
FEATURE-DEPENDENT GRAPH CONVOLUTIONAL AUTOENCODERS WITH ADVERSARIAL TRAINING METHODS	480
<i>Di Wu ; Ruiqi Hu ; Yu Zheng ; Jing Jiang ; Nabin Sharma ; Michael Blumenstein</i>	
TOWARDS A DEEP LEARNING QUESTION-ANSWERING SPECIALIZED CHATBOT FOR OBJECTIVE STRUCTURED CLINICAL EXAMINATIONS	488
<i>Julia El Zini ; Yara Rizk ; Mariette Awad ; Jumana Antoun</i>	
MIDS: END-TO-END PERSONALIZED RESPONSE GENERATION IN UNTRIMMED MULTI-ROLE DIALOGUE	497
<i>Qichuan Yang ; Zhiqiang He ; Zhiqiang Zhan ; Jianyu Zhao ; Yang Zhang ; Changjian Hu</i>	
BATCH MODE ACTIVE LEARNING WITH NONLOCAL SELF-SIMILARITY PRIOR FOR SEMANTIC SEGMENTATION	505
<i>Yao Tan ; Qinghua Hu ; Zhibin Du</i>	

HYBRID MODEL FOR CAVITATION NOISE SPECTRA PREDICTION	512
<i>Francesca Cipollini ; Fabiana Miglianti ; Luca Oneto ; Giorgio Tani ; Michele Viviani</i>	
CURSE OF DIMENSIONALITY IN ADVERSARIAL EXAMPLES	520
<i>Nandish Chattopadhyay ; Anupam Chattopadhyay ; Sourav Sen Gupta ; Michael Kasper</i>	
PERSONALIZING SESSION-BASED RECOMMENDATION WITH DUAL ATTENTIVE NEURAL NETWORK	528
<i>Tianan Liang ; Yuhua Li ; Ruixuan Li ; Xiwu Gu ; Olivier Habimana ; Yi Hu</i>	
EVENT-TRIGGERED ADAPTIVE CONTROL FOR DISCRETE-TIME ZERO-SUM GAMES	536
<i>Ziyang Wang ; Qinglai Wei ; Derong Liu ; Yanhong Luo</i>	
LEARNING NAVIGATION VIA R-VIN ON ROAD GRAPHS	543
<i>Xiaojuan Wei ; Jinglin Li ; Quan Yuan ; Xu Han ; Fangchun Yang</i>	
INFORMATIVE INSTANCE DETECTION FOR ACTIVE LEARNING ON IMBALANCED DATA	551
<i>Jian Xu ; Xinyue Wang ; Zixin Cai ; Liu Yang ; Liping Jing</i>	
TRANSFER LEARNING USING ENSEMBLE NEURAL NETWORKS FOR ORGANIC SOLAR CELL SCREENING	558
<i>Arindam Paul ; Dipendra Jha ; Reda Al-Bahrani ; Wei-Keng Liao ; Alok Choudhary ; Ankit Agrawal</i>	
A HIERARCHICAL CONVOLUTIONAL NEURAL NETWORK FOR MALWARE CLASSIFICATION	566
<i>Daniel Gibert ; Carles Mateu ; Jordi Planes</i>	
NOISE-AWARE NETWORK EMBEDDING FOR MULTIPLEX NETWORK	574
<i>Xiaokai Chu ; Xinxin Fan ; Di Yao ; Chen-Lin Zhang ; Jianhui Huang ; Jingping Bi</i>	
HIERARCHICAL DUAL QUATERNION-BASED RECURRENT NEURAL NETWORK AS A FLEXIBLE INTERNAL BODY MODEL	582
<i>Malte Schilling</i>	
EVALUATION OF A DUAL CONVOLUTIONAL NEURAL NETWORK ARCHITECTURE FOR OBJECT-WISE ANOMALY DETECTION IN CLUTTERED X-RAY SECURITY IMAGERY	590
<i>Yona Falinie A. Gaus ; Neelanjan Bhowmik ; Samet Akçay ; Paolo M. Guillén-Garcia ; Jack W. Barker ; Toby P. Breckon</i>	
EFFORTLESS DEEP TRAINING FOR TRAFFIC SIGN DETECTION USING TEMPLATES AND ARBITRARY NATURAL IMAGES	598
<i>Lucas Tabelini Torres ; Thiago M. Paixão ; Rodrigo F. Berriel ; Alberto F. De Souza ; Claudine Badue ; Nicu Sebe ; Thiago Oliveira-Santos</i>	
GENERALIZED PATTERNATTRIBUTION FOR NEURAL NETWORKS WITH SIGMOID ACTIVATIONS	605
<i>Jiamei Sun ; Alexander Binder</i>	
CONVOLUTIONAL NEURAL NETWORK BASED EYE RECOGNITION FROM DISTANTLY ACQUIRED FACE IMAGES FOR HUMAN IDENTIFICATION	614
<i>Kazi Shah Nawaz Ripon ; Lasker Ershad Ali ; Nazmul Siddique ; Jinwen Ma</i>	
AN IMPROVED RECURRENT NEURAL NETWORK LANGUAGE MODEL FOR PROGRAMMING LANGUAGE	622
<i>Liwei Wu ; Youhua Wu ; Fei Li ; Tao Zheng</i>	
HIERARCHICAL MULTI-TASK LEARNING FOR HEALTHY DRINK CLASSIFICATION	629
<i>Homin Park ; Homanga Bharadhwaj ; Brian Y. Lim</i>	
AUTOMATIC CONFIGURATION OF DEEP NEURAL NETWORKS WITH PARALLEL EFFICIENT GLOBAL OPTIMIZATION	637
<i>Bas Van Stein ; Hao Wang ; Thomas Bäck</i>	
CONTINUOUS GESTURE RECOGNITION THROUGH SELECTIVE TEMPORAL FUSION	644
<i>Pradyumna Narayana ; J. Ross Beveridge ; Bruce A. Draper</i>	
A QOS-ORIENTED SCHEDULING AND AUTOSCALING FRAMEWORK FOR DEEP LEARNING	652
<i>Sikai Xing ; Shiyong Qian ; Bin Cheng ; Jian Cao ; Guangtao Xue ; Jiadi Yu ; Yanmin Zhu ; Minglu Li</i>	
DECODING OF FINGER ACTIVATION FROM ECOG DATA: A COMPARATIVE STUDY	660
<i>Guillaume Jubien ; Marie-Caroline Schaeffer ; Stéphane Bonnet ; Tetiana Aksenova</i>	
MULTILEVEL CLASSIFICATION USING A TAXONOMY APPLIED TO RECOGNIZING DIPTERA IMAGES	668
<i>Javier Navarrete ; Francisco Gomez-Donoso ; Diego Viejo ; Miguel Cazorla</i>	
MULTI-SATELLITE RESOURCE SCHEDULING BASED ON DEEP NEURAL NETWORK	676
<i>Huan Meng ; Changde Li ; Weizhi Lu ; Yuhan Dong ; Zhipeng Zhao ; Bin Wu</i>	
DISTRIBUTED ADAPTIVE DYNAMIC PROGRAMMING ALGORITHM FOR OFFICE ENERGY CONTROL WITH MULTIPLE BATTERIES	683
<i>Guang Shi ; Chao Li ; Bo Zhao ; Qinglai Wei ; Derong Liu</i>	

TEMPORAL LEARNING OF DYNAMICS IN COMPLEX NEURON MODELS USING BACKPROPAGATION	689
<i>Christian Jarvers ; Daniel Schmid ; Heiko Neumann</i>	
INTEGRATING DUAL USER NETWORK EMBEDDING WITH MATRIX FACTORIZATION FOR SOCIAL RECOMMENDER SYSTEMS	697
<i>Liyang Chen ; Honglei Zhang ; Jun Wu</i>	
A MULTI-MODEL ENSEMBLE METHOD USING CNN AND MAXIMUM CORRENTROPY CRITERION FOR BASAL CELL CARCINOMA AND SEBORRHEIC KERATOSES CLASSIFICATION	705
<i>Leida Guo ; Shaoyi Du ; Yuting Chi ; Wenting Cui ; Panpan Song ; Jihua Zhu ; Songmei Geng ; Meifeng Xu</i>	
ESTIMATING THE EFFECTIVE DIMENSION OF LARGE BIOLOGICAL DATASETS USING FISHER SEPARABILITY ANALYSIS	711
<i>Luca Albergante ; Jonathan Bac ; Andrei Zinovyev</i>	
GENERATE DESIRED IMAGES FROM TRAINED GENERATIVE ADVERSARIAL NETWORKS	719
<i>Ming Li ; Rui Xi ; Beier Chen ; Mengshu Hou ; Daibo Liu ; Lei Guo</i>	
MULTILAYER PERCEPTRON FOR SPARSE FUNCTIONAL DATA	727
<i>Qiyao Wang ; Shuai Zheng ; Ahmed Farahat ; Susumu Serita ; Takashi Saeki ; Chetan Gupta</i>	
MULTIPLE BACK PROPAGATION NETWORK AND METRIC FUSION FOR PERSON RE-IDENTIFICATION	737
<i>Si-Bao Chen ; Feng Luo ; Bin Luo ; Chris H. Q. Ding ; Yi Liu</i>	
CLEVERREG: A CNN-LSTM BASED LINEAR REGRESSION TECHNIQUE FOR TEMPORAL FIRE EVENT MODELLING	745
<i>Syed Adnan Yusuf ; Abdul Samad ; David James Garrity</i>	
SAI A SENSIBLE ARTIFICIAL INTELLIGENCE THAT PLAYS GO	752
<i>Francesco Morandin ; Gianluca Amato ; Rosa Gini ; Carlo Metta ; Maurizio Parton ; Gian-Carlo Pascutto</i>	
COMMON FATE BASED EPISODIC SEGMENTATION BY COMBINING SUPERVOXELS WITH DEEP NEURAL NETWORKS	760
<i>László Kopácsi ; Áron Fóthi ; Ádám Fodor ; Ellák Somfai ; András Lorincz</i>	
EXPLOITING MACHINE LEARNING MODELS TO AVOID TEXTING WHILE DRIVING	767
<i>Renato H. Torres ; Orlando Ohashi ; Gabriel Garcia ; Filipe Rocha ; Héctor Azpúrua ; Gustavo Pessin</i>	
QUERY RECOMMENDATION BASED ON IMPROVED QUERY FLOW GRAPH	775
<i>Jialu Xu ; Feiyue Ye ; Hang Yu ; Bo Wang</i>	
DEEP DOMAIN ADAPTATION FOR VULNERABLE CODE FUNCTION IDENTIFICATION	783
<i>Van Nguyen ; Trung Le ; Tue Le ; Khanh Nguyen ; Olivier Devel ; Paul Montague ; Lizhen Qu ; Dinh Phung</i>	
VISUAL RELATIONSHIP ATTENTION FOR IMAGE CAPTIONING	791
<i>Zongjian Zhang ; Yang Wang ; Qiang Wu ; Fang Chen</i>	
DEEP LEARNING LONG-RANGE INFORMATION IN UNDIRECTED GRAPHS WITH WAVE NETWORKS	799
<i>Matthew K. Matlock ; Arghya Datta ; Na Le Dang ; Kevin Jiang ; S. Joshua Swamidass</i>	
INCORPORATING HUMAN KNOWLEDGE IN NEURAL RELATION EXTRACTION WITH REINFORCEMENT LEARNING	807
<i>Bing Liu ; Guilin Qi ; Lu Pan ; Shangfu Duan ; Tianxing Wu</i>	
SKIDNET: SKIP IMAGE DENOISING NETWORK FOR X-RAYS	815
<i>Sandipan Dutta ; Shaurya Chaturvedi ; Swaraj Kumar ; Mps Bhatia</i>	
INTERPRETATION OF MESOSCOPIC NEURODYNAMICS BY SIMULATING CONVERSION BETWEEN PULSES AND WAVES	823
<i>J. J. Joshua Davis ; Robert Kozma</i>	
PROMISE: A TAXI RECOMMENDER SYSTEM BASED ON INTER-REGIONAL PASSENGER MOBILITY	831
<i>Xiaojun Li ; Yu-E Sun ; Qian Liu ; Zhiwei Shen ; Benjian Song ; Yang Du ; He Huang</i>	
CONVOLUTIONAL LSTM NETWORK WITH HIERARCHICAL ATTENTION FOR RELATION CLASSIFICATION IN CLINICAL TEXTS	839
<i>Li Tang ; Fei Teng ; Zheng Ma ; Lufei Huang ; Ming Xiao ; Xuan Li</i>	
YOUR EYES SAY YOU'RE LYING: AN EYE MOVEMENT PATTERN ANALYSIS FOR FACE FAMILIARITY AND DECEPTIVE COGNITION	847
<i>Jiaxu Zuo ; Tom Gedeon ; Zhenyue Qin</i>	
STUDY OF SHORT-TERM PERSONALIZED GLUCOSE PREDICTIVE MODELS ON TYPE-1 DIABETIC CHILDREN	855
<i>Maxime De Bois ; Mounîm A. El Yacoubi ; Mehdi Ammi</i>	
MENDING IS BETTER THAN ENDING: ADAPTING IMMUTABLE CLASSIFIERS TO NONSTATIONARY ENVIRONMENTS USING ENSEMBLES OF PATCHES	863
<i>Sebastian Kauschke ; Lukas Fleckenstein ; Johannes Fürnkranz</i>	

OPTIMIZING WEIGHT VALUE QUANTIZATION FOR CNN INFERENCE	871
<i>Wakana Nogami ; Tsutomu Ikegami ; Shin-Ichi O'Uchi ; Ryousei Takano ; Tomohiro Kudoh</i>	
DYREG-FRESNET: UNSUPERVISED FEATURE SPACE AMPLIFIED DYNAMIC REGULARIZED RESIDUAL NETWORK FOR TIME SERIES CLASSIFICATION	879
<i>Arijiti Ukil ; Soma Bandyopadhyay ; Arpan Pal</i>	
CHARACTER-AWARE CONVOLUTIONAL RECURRENT NETWORKS WITH SELF- ATTENTION FOR EMOTION DETECTION ON TWITTER	887
<i>Jiangping Huang ; Chunli Xiang ; Shuwei Yuan ; Desen Yuan ; Xiaorui Huang</i>	
SSA: A MORE HUMANIZED AUTOMATIC EVALUATION METHOD FOR OPEN DIALOGUE GENERATION	895
<i>Zhiqiang Zhan ; Zifeng Hou ; Qichuan Yang ; Jianyu Zhao ; Yang Zhang ; Changjian Hu</i>	
EFFICIENT ON-LINE LEARNING WITH DIAGONAL APPROXIMATION OF LOSS FUNCTION HESSIAN	903
<i>Pawel Wawrzynski</i>	
EVALUATION OF HEART DISEASE DIAGNOSIS APPROACH USING ECG IMAGES	911
<i>Marcos Aurelio A. Ferreira ; Mateus Valentim Gurgel ; Leandro B. Marinho ; Navar Medeiros M. Nascimento ; Suane Pires P. Da Silva ; Shara Shami A. Alves ; Geraldo Luís Bezerra Ramalho ; Pedro Pedrosa Rebouças Filho</i>	
A NEW KNOWLEDGE DISTILLATION FOR INCREMENTAL OBJECT DETECTION	918
<i>Li Chen ; Chunyan Yu ; Lvcai Chen</i>	
ENSO FORECASTING OVER MULTIPLE TIME HORIZONS USING CONVLSTM NETWORK AND ROLLING MECHANISM	925
<i>Bin Mu ; Cheng Peng ; Shijin Yuan ; Lei Chen</i>	
ANALYSING AND INFERRING OF INTIMACY BASED ON FNIRS SIGNALS AND PERIPHERAL PHYSIOLOGICAL SIGNALS	933
<i>Chao Li ; Qian Zhang ; Ziping Zhao ; Li Gu ; Nicholas Cummins ; Björn Schuller</i>	
KDSL: A KNOWLEDGE-DRIVEN SUPERVISED LEARNING FRAMEWORK FOR WORD SENSE DISAMBIGUATION	941
<i>Shi Yin ; Yi Zhou ; Chenguang Li ; Shangfei Wang ; Jianmin Ji ; Xiaoping Chen ; Ruili Wang</i>	
ENSEMBLE APPLICATION OF TRANSFER LEARNING AND SAMPLE WEIGHTING FOR STOCK MARKET PREDICTION	949
<i>Simone Merello ; Andrea Picasso Ratto ; Luca Oneto ; Erik Cambria</i>	
IMPROVING SENTENCE REPRESENTATIONS WITH LOCAL AND GLOBAL ATTENTION FOR CLASSIFICATION	957
<i>Zesheng Liu ; Xu Bai ; Tian Cai ; Chanjuan Chen ; Wang Zhang ; Lei Jiang</i>	
A NOVEL LSTM APPROACH FOR ASYNCHRONOUS MULTIVARIATE TIME SERIES PREDICTION	964
<i>King Ma ; Henry Leung</i>	
EXPLAINABLE CLASSIFIER SUPPORTING DECISION-MAKING FOR BREAST CANCER DIAGNOSIS FROM HISTOPATHOLOGICAL IMAGES	971
<i>Patrik Sabol ; Peter Sincák ; Kana Ogawa ; Pitoyo Hartono</i>	
ON THE PERFORMANCE OF DIFFERENTIAL EVOLUTION FOR HYPERPARAMETER TUNING	979
<i>Mischa Schmidt ; Shahd Safarani ; Julia Gastingner ; Tobias Jacobs ; Sébastien Nicolas ; Anett Schülke</i>	
CONTEXT GATING WITH SHORT TEMPORAL INFORMATION FOR VIDEO CAPTIONING	987
<i>Jinlei Xu ; Ting Xu ; Xin Tian ; Chunping Liu ; Yi Ji</i>	
MODULATION BASED TRANSFER LEARNING OF MOTIVATIONAL CUES IN DEVELOPMENTAL ROBOTICS	994
<i>Alejandro Romero ; Jose A. Becerra ; Francisco Bellas ; Richard J. Duro</i>	
QUALITATIVE DATA CLUSTERING: A NEW INTEGER LINEAR PROGRAMMING MODEL	1002
<i>Luiz Henrique Nogueira Lorena ; Marcos Gonçalves Quiles ; Luiz Antonio Nogueira Lorena ; André C. P. L. F. De Carvalho ; Juliana Garcia Cespedes</i>	
GENERATIVE MODELS FROM THE PERSPECTIVE OF CONTINUAL LEARNING	1010
<i>Timothée Lesort ; Hugo Caselles-Dupré ; Michael Garcia-Ortiz ; Andrei Stoian ; David Filliat</i>	
LEARNING CONVOLUTIONAL NEURAL NETWORKS IN PRESENCE OF CONCEPT DRIFT	1018
<i>Simone Disabato ; Manuel Roveri</i>	
IMPROVE L2-NORMALIZED SOFTMAX WITH EXPONENTIAL MOVING AVERAGE	1026
<i>Xuefei Zhe ; Le Ou-Yang ; Hong Yan</i>	
QUESTION ANSWERING WITH HIERARCHICAL ATTENTION NETWORKS	1033
<i>Tayfun Alpay ; Stefan Heinrich ; Michael Nelskamp ; Stefan Wermter</i>	
REMOVING MOVABLE OBJECTS FROM GRID MAPS OF SELF-DRIVING CARS USING DEEP NEURAL NETWORKS	1041
<i>Rânik Guidolini ; Raphael V. Carneiro ; Claudine Badue ; Thiago Oliveira-Santos ; Alberto F. De Souza</i>	

MULTI-PERSPECTIVE FEATURE GENERATION BASED ON ATTENTION MECHANISM	1049
<i>Longxuan Ma ; Lei Zhang</i>	
A METHOD FOR VOLTAGE SAG SOURCE LOCATION USING CLUSTERING ALGORITHM AND DECISION RULE LABELING	1057
<i>José Carlos C. L. Da Silva Filho ; Fabbio Anderson Silva Borges ; Ricardo De Andrade L. Rabelo ; Ivan Saraiva Silva</i>	
NESTED HARDWARE ARCHITECTURE FOR SELF-ORGANIZING MAP	1065
<i>Hiroomi Hikawa</i>	
MODEL BASED ON DEEP FEATURE EXTRACTION FOR DIAGNOSIS OF ALZHEIMER'S DISEASE	1072
<i>Iago R. R. Silva ; Gabriela S. L. Silva ; Rodrigo G. De Souza ; Wellington P. Dos Santos ; Roberta A. De A. Fagundes</i>	
CONTINUOUS MODELING OF POWER PLANT PERFORMANCE WITH REGULARIZED EXTREME LEARNING MACHINE	1079
<i>Rui Xu ; Weizhong Yan</i>	
ENHANCE KNOWLEDGE GRAPH EMBEDDING VIA FAKE TRIPLES	1087
<i>Zhihuan Yan ; Rong Peng ; Yaqian Wang ; Weidong Li</i>	
IMPROVED TECHNIQUES FOR BUILDING EEG FEATURE FILTERS	1094
<i>Yue Yao ; Josephine Plested ; Tom Gedeon ; Yuchi Liu ; Zhengjie Wang</i>	
DUAL-STREAM SELF-ATTENTIVE RANDOM FOREST FOR FALSE INFORMATION DETECTION	1100
<i>Manqing Dong ; Lina Yao ; Xianzhi Wang ; Boualem Benatallah ; Xiang Zhang ; Quan Z. Sheng</i>	
A CROWDSOURCING BASED HUMAN-IN-THE-LOOP FRAMEWORK FOR DENOISING UUS IN RELATION EXTRACTION TASKS	1108
<i>Mengting Li ; Jian Jin ; Wen Wu ; Yan Yang ; Liang He ; Jing Yang</i>	
EEG-BASED MOTOR IMAGERY CLASSIFICATION WITH DEEP MULTI-TASK LEARNING	1116
<i>Yaguang Song ; Danli Wang ; Kang Yue ; Nan Zheng ; Zuo-Jun Max Shen</i>	
ENSEMBLE VALIDATION: SELECTIVITY HAS A PRICE, BUT VARIETY IS FREE	1124
<i>Eric Bax ; Farshad Kooti</i>	
ANALYSIS ON CHARACTERISTICS OF MULTI-STEP LEARNING ECHO STATE NETWORKS FOR NONLINEAR TIME SERIES PREDICTION	1132
<i>Takanori Akiyama ; Gouhei Tanaka</i>	
HYPERSPECTRAL IMAGE CLASSIFICATION FOR REMOTE SENSING USING LOW-POWER NEUROMORPHIC HARDWARE	1140
<i>Vivek Parmar ; Jung-Ho Ahn ; Manan Suri</i>	
RELEARNING PROCEDURE TO ADAPT POLLUTANT PREDICTION NEURAL MODEL: CHOICE OF RELEARNING ALGORITHM	1147
<i>Philippe Thomas ; Marie-Christine Suhner ; William Derigent</i>	
ACCELERATING THE DEEP REINFORCEMENT LEARNING WITH NEURAL NETWORK COMPRESSION	1155
<i>Hongjie Zhang ; Zhuocheng He ; Jing Li</i>	
EVENT-TRIGGERED H_∞ TRACKING CONTROL OF NONLINEAR SYSTEMS VIA REINFORCEMENT LEARNING METHOD	1163
<i>Lili Cui ; Wei Qu ; Li Wang ; Yanhong Luo ; Zhanshan Wang</i>	
A MODEL BASED ON SIAMESE NEURAL NETWORK FOR ONLINE TRANSACTION FRAUD DETECTION	1171
<i>Xinxin Zhou ; Zhaohui Zhang ; Lizhi Wang ; Pengwei Wang</i>	
PREDICTION INTERVALS WITH LSTM NETWORKS TRAINED BY JOINT SUPERVISION	1178
<i>Nicolás Cruz ; Luis G. Marín ; Doris Sáez</i>	
TENSOR RING RESTRICTED BOLTZMANN MACHINES	1186
<i>Maolin Wang ; Chenbin Zhang ; Yu Pan ; Jing Xu ; Zenglin Xu</i>	
ENCODING OF A CHAOTIC ATTRACTOR IN A RESERVOIR COMPUTER: A DIRECTIONAL FIBER INVESTIGATION	1194
<i>Sanjukta Krishnagopal ; Garrett Katz ; Michelle Girvan ; James Reggia</i>	
AN INFERABLE REPRESENTATION LEARNING FOR FRAUD REVIEW DETECTION WITH COLD-START PROBLEM	1202
<i>Qian Li ; Qiang Wu ; Chengzhang Zhu ; Jian Zhang ; Wentao Zhao</i>	
DENSE-CAM: VISUALIZE THE GENDER OF BRAINS WITH MRI IMAGES	1210
<i>Kai Gao ; Hui Shen ; Yadong Liu ; Lingli Zeng ; Dewen Hu</i>	
MODEL-FREE TEMPORAL DIFFERENCE LEARNING FOR NON-ZERO-SUM GAMES	1217
<i>Liming Wang ; Yongliang Yang ; Dawei Ding ; Yixin Yin ; Zhishan Guo ; Donald C. Wunsch</i>	

ANXIETYDECODER: AN EEG-BASED ANXIETY PREDICTOR USING A 3-D CONVOLUTIONAL NEURAL NETWORK	1223
<i>Yi Wang ; Brendan McCane ; Neil McNaughton ; Zhiyi Huang ; Habab Shadli ; Phoebe Neo</i>	
SPARSE BINARY COMPRESSION: TOWARDS DISTRIBUTED DEEP LEARNING WITH MINIMAL COMMUNICATION	1231
<i>Felix Sattler ; Simon Wiedemann ; Klaus-Robert Müller ; Wojciech Samek</i>	
FPCAS: IN-MEMORY FLOATING POINT COMPUTATIONS FOR AUTONOMOUS SYSTEMS	1239
<i>Sina Sayyah Ensan ; Swaroop Ghosh</i>	
MULTI-LABEL CLASSIFICATION MODELS FOR DETECTION OF PHONETIC FEATURES IN BUILDING ACOUSTIC MODELS	1247
<i>Rupam Ojha ; C Chandra Sekhar</i>	
EVALUATING THE STABILITY OF RECURRENT NEURAL MODELS DURING TRAINING WITH EIGENVALUE SPECTRA ANALYSIS	1255
<i>Priyadarshini Panda ; Efstathia Soufleri ; Kaushik Roy</i>	
INTERPRETABLE VARIATIONAL AUTOENCODERS FOR COGNITIVE MODELS	1263
<i>Mariana Curi ; Geoffrey A. Converse ; Jeff Hajewski ; Suely Oliveira</i>	
A NOVEL CLUSTERING ALGORITHM BASED ON DIRECTIONAL PROPAGATION OF CLUSTER LABELS	1271
<i>Na Xiao ; Kenli Li ; Xu Zhou ; Keqin Li</i>	
A FAST FEATURE EXTRACTION ALGORITHM FOR IMAGE AND VIDEO PROCESSING	1279
<i>Sadiq H. Abdulhussain ; Abd Rahman Ramli ; Basheera M. Mahmmod ; M. Iqbal Saripan ; S. A. R. Al-Haddad ; Thar Baker ; Wameedh N. Flayyih ; Wissam A. Jassim</i>	
ECG SEGMENTATION BY NEURAL NETWORKS: ERRORS AND CORRECTION	1287
<i>Iana Sereda ; Sergey Alekseev ; Aleksandra Koneva ; Roman Kataev ; Grigory Osipov</i>	
ADDITIVE MARGIN SINCNET FOR SPEAKER RECOGNITION	1294
<i>João Antônio Chagas Nunes ; David Macêdo ; Cleber Zanchettin</i>	
LOCALITY PRESERVING PROJECTION VIA DEEP NEURAL NETWORK	1299
<i>Tianhang Long ; Junbin Gao ; Mingyan Yang ; Yongli Hu ; Baocai Yin</i>	
REVCUT TREE SEARCH METHOD IN COMPLEX SINGLE-PLAYER GAME WITH CONTINUOUS SEARCH SPACE	1307
<i>Hongming Zhang ; Fangjuan Cheng ; Bo Xu ; Feng Chen ; Jiachen Liu ; Wei Wu</i>	
NEURAL NETWORK BASED INVERSE SYSTEM IDENTIFICATION FROM SMALL DATA SETS	1315
<i>Chathura Wanigasekara ; Akshya Swain ; Sing Kiong Nguang ; B. Gangadhara Prusty</i>	
A HYBRID CHARACTER REPRESENTATION FOR CHINESE EVENT DETECTION	1321
<i>Xi Xiangyu ; Zhang Tong ; Ye Wei ; Zhang Jinglei ; Xie Rui ; Zhang Shikun</i>	
JOINT GRAPH BASED EMBEDDING AND FEATURE WEIGHTING FOR IMAGE CLASSIFICATION	1329
<i>Ruifeng Zhu ; Fadi Dornaika ; Yassine Ruichek</i>	
EVOLUTIONARY COMMUNITY DETECTION IN DYNAMIC SOCIAL NETWORKS	1337
<i>Fanzhen Liu ; Jia Wu ; Chuan Zhou ; Jian Yang</i>	
PRACTICAL STOCHASTIC SEPARATION THEOREMS FOR PRODUCT DISTRIBUTIONS	1344
<i>Bogdan Grechuk</i>	
GCGAN: GENERATIVE ADVERSARIAL NETS WITH GRAPH CNN FOR NETWORK-SCALE TRAFFIC PREDICTION	1352
<i>Yuxuan Zhang ; Senzhang Wang ; Bing Chen ; Jiannong Cao</i>	
PARALLEL TRANSFER LEARNING IN MULTI-AGENT SYSTEMS: WHAT, WHEN AND HOW TO TRANSFER?	1360
<i>Adam Taylor ; Ivana Dusparic ; Maxime Guériau ; Siobhán Clarke</i>	
IMPROVING THE QUALITY OF ENZYME PREDICTION BY USING FEATURE SELECTION AND DIMENSIONALITY REDUCTION	1368
<i>Luis H. Brito ; Ana L. C. V. Lara ; Luis E. Zárate ; Cristiane N. Nobre</i>	
CONTRASTIVE RELEVANCE PROPAGATION FOR INTERPRETING PREDICTIONS BY A SINGLE-SHOT OBJECT DETECTOR	1376
<i>Hideomi Tsunakawa ; Yoshitaka Kameya ; Hanju Lee ; Yosuke Shinya ; Naoki Mitsumoto</i>	
CLASSIFICATION OF POWER QUALITY DISTURBANCES USING CONVOLUTIONAL NETWORK AND LONG SHORT-TERM MEMORY NETWORK	1385
<i>Wilson Leal Rodrigues Junior ; Fabbio Anderson Silva Borges ; Ricardo De A. Lira Rabelo ; Bruno Vicente Alves De Lima ; Jose Eduardo Almeida De Alencar</i>	
CELEBRITIES-REID: A BENCHMARK FOR CLOTHES VARIATION IN LONG-TERM PERSON RE-IDENTIFICATION	1391
<i>Yan Huang ; Qiang Wu ; Jingsong Xu ; Yi Zhong</i>	

USING LOCAL CONVOLUTIONAL UNITS TO DEFEND AGAINST ADVERSARIAL EXAMPLES	1399
<i>Matej Kocián ; Martin Pilát</i>	
CROSS-DOMAIN RECOMMENDATION WITH SEMANTIC CORRELATION IN TAGGING SYSTEMS	1407
<i>Qian Zhang ; Peng Hao ; Jie Lu ; Guangquan Zhang</i>	
METHODOLOGY BASED ON ADABOOST ALGORITHM COMBINED WITH NEURAL NETWORK FOR THE LOCATION OF VOLTAGE SAG DISTURBANCE	1415
<i>F. A. S. Borges ; R. A. L. Rabêlo ; R. A. S. Fernandes ; M. A. Araújo</i>	
AN OBJECT DETECTION BY USING ADAPTIVE STRUCTURAL LEARNING OF DEEP BELIEF NETWORK	1422
<i>Shin Kamada ; Takumi Ichimura</i>	
INCREMENTAL LEARNING BASED SUBSPACE MODELING FOR DISTRIBUTED PARAMETER SYSTEMS	1430
<i>Zhi Wang ; Han-Xiong Li</i>	
FASHION OUTFIT COMPOSITION COMBINING SEQUENTIAL LEARNING AND DEEP AESTHETIC NETWORK	1436
<i>Zhen Wang ; Hongyan Quan</i>	
MACHINE LEARNING APPROACHES FOR PREDICTING THE 10.7 CM RADIO FLUX FROM SOLAR MAGNETOGRAM DATA	1443
<i>Julio J. Valdés ; Ljubomir Nikolic ; Kenneth Tapping</i>	
NON-NEGATIVE AUTOENCODER WITH SIMPLIFIED RANDOM NEURAL NETWORK	1451
<i>Yonghua Yin ; Erol Gelenbe</i>	
FROM FACE RECOGNITION TO FACIAL PAREIDOLIA: ANALYSING HIDDEN NEURON ACTIVATIONS IN CNNs FOR CROSS-DEPICTION RECOGNITION	1457
<i>Asad Abbas ; Stephan Chalup</i>	
CONFIDENCE IDENTIFICATION BASED ON THE COMBINATION OF VERBAL AND NON-VERBAL FACTORS IN HUMAN ROBOT INTERACTION	1465
<i>Wei-Fen Hsieh ; Youdi Li ; Erina Kasano ; Eri-Sato Simokawara ; Toru Yamaguchi</i>	
A UNIFIED APPROACH ON ACTIVE LEARNING DUAL SUPERVISION	1472
<i>Adrian Chriswanto ; Hsing-Kuo Pao ; Yuh-Jye Lee</i>	
MIXED VARIATIONAL INFERENCE	1480
<i>Nikolaos Gianniotis</i>	
END-TO-END LEARNING METHOD FOR SELF-DRIVING CARS WITH TRAJECTORY RECOVERY USING A PATH-FOLLOWING FUNCTION	1488
<i>Tadashi Onishi ; Toshiyuki Motoyoshi ; Yuki Suga ; Hiroki Mori ; Tsuya Ogata</i>	
ANOMALY DETECTION FOR VISUAL QUALITY CONTROL OF 3D-PRINTED PRODUCTS	1496
<i>Loek Tomnaer ; Jiapeng Li ; Vladimir Osin ; Mike Holenderski ; Vlado Menkovski</i>	
THE IMPACT OF IMAGE RESOLUTION ON FACIAL EXPRESSION ANALYSIS WITH CNNs	1504
<i>Asad Abbas ; Stephan Chalup</i>	
A NEW SPECTRAL-SPATIAL PSEUDO-3D DENSE NETWORK FOR HYPERSPECTRAL IMAGE CLASSIFICATION	1512
<i>Ailin Li ; Zhaowei Shang</i>	
UNIVERSAL READOUT FOR GRAPH CONVOLUTIONAL NEURAL NETWORKS	1519
<i>Nicolò Navarin ; Dinh Van Tran ; Alessandro Sperduti</i>	
QUANTITATIVE ANALYSIS OF DYNAMICAL COMPLEXITY IN CULTURED NEURONAL NETWORK MODELS FOR RESERVOIR COMPUTING APPLICATIONS	1526
<i>Satoshi Moriya ; Hideaki Yamamoto ; Ayumi Hirano-Iwata ; Shigeru Kubota ; Shigeo Sato</i>	
EFFICIENT DEEP GAUSSIAN PROCESS MODELS FOR VARIABLE-SIZED INPUTS	1532
<i>Issam H. Laradji ; Mark Schmidt ; Vladimir Pavlovic ; Minyoung Kim</i>	
GMM-VRD: A GAUSSIAN MIXTURE MODEL FOR DEALING WITH VIRTUAL AND REAL CONCEPT DRIFTS	1539
<i>Gustavo H. F. M. Oliveira ; Leandro L. Minku ; Adriano L. I. Oliveira</i>	
HIERARCHICAL RECURRENT ATTENTION NETWORKS FOR CONTEXT-AWARE EDUCATION CHATBOTS	1547
<i>Jean-Baptiste Aujogue ; Alex Aussem</i>	
DOAD: AN ONLINE DREDGING OPERATION ANOMALY DETECTION METHOD BASED ON AIS DATA	1555
<i>Bin Cheng ; Shiyong Qian ; Jian Cao ; Guangtao Xue ; Jiadi Yu ; Yanmin Zhu ; Minglu Li</i>	
IMAGE CAPTIONING WITH PARTIALLY REWARDED IMITATION LEARNING	1562
<i>Xintong Yu ; Tszhang Guo ; Kun Fu ; Lei Li ; Changshui Zhang ; Jianwei Zhang</i>	

A PREPROCESSING LAYER IN SPIKING NEURAL NETWORKS – STRUCTURE, PARAMETERS, PERFORMANCE CRITERIA	1570
<i>Mikhail Kiselev ; Andrey Lavrentyev</i>	
CROPOUT: A GENERAL MECHANISM FOR REDUCING OVERFITTING ON CONVOLUTIONAL NEURAL NETWORKS	1579
<i>Wenbo Hou ; Wenhai Wang ; Ruo-Ze Liu ; Tong Lu</i>	
A METHODOLOGY FOR NEURAL NETWORK ARCHITECTURAL TUNING USING ACTIVATION OCCURRENCE MAPS.....	1587
<i>Rafael Garcia ; Alexandre Xavier Falcão ; Alexandru C. Telea ; Bruno Castro Da Silva ; Jim Tjørresen ; João Luiz Dihl Comba</i>	
DEEP CAPSULE NETWORK BASED AUTOMATIC BATCH CODE IDENTIFICATION PIPELINE FOR A REAL-LIFE INDUSTRIAL APPLICATION	1597
<i>Chandan Kumar Singh ; Vivek Kumar Gangwar ; Harsh Vardhan Singh ; Karan Narain ; Anima Majumder ; Swagat Kumar</i>	
DEEPIQ: A HUMAN-INSPIRED AI SYSTEM FOR SOLVING IQ TEST PROBLEMS	1606
<i>Jacek Mandziuk ; Adam Zychowski</i>	
ATTENTION-DRIVEN MULTI-SENSOR SELECTION.....	1614
<i>Stefan Braun ; Daniel Neil ; Jithendar Anumula ; Enea Ceolini ; Shih-Chii Liu</i>	
LOCAL CRITIC TRAINING OF DEEP NEURAL NETWORKS.....	1622
<i>Hojung Lee ; Jong-Seok Lee</i>	
THE CRAMMING, SOFTENING AND INTEGRATING LEARNING ALGORITHM WITH PARAMETRIC RELU ACTIVATION FUNCTION FOR BINARY INPUT/OUTPUT PROBLEMS	1630
<i>Yu-Han Tsai ; Yu-Jie Jheng ; Rua-Huan Tsaih</i>	
TRAINING DEEP NEURAL NETWORKS WITH ADVERSARIALLY AUGMENTED FEATURES FOR SMALL-SCALE TRAINING DATASETS	1637
<i>Masato Ishii ; Atsushi Sato</i>	
TEXT ATTENTION AND FOCAL NEGATIVE LOSS FOR SCENE TEXT DETECTION	1645
<i>Randong Huang ; Bo Xu</i>	
EMOTION HELPS SENTIMENT: A MULTI-TASK MODEL FOR SENTIMENT AND EMOTION ANALYSIS	1653
<i>Abhishek Kumar ; Asif Ekbal ; Daisuke Kawahra ; Sadao Kurohashi</i>	
LANGUAGE MODELING THROUGH LONG-TERM MEMORY NETWORK	1661
<i>Anupiya Nugaliyadde ; Ferdous Sohel ; Kok Wai Wong ; Hong Xie</i>	
HIERARCHICAL CLASSIFICATION FEATURE EXTRACTION FOR MOVING TARGET DETECTION USING RADAR ECHO.....	1667
<i>Chunhua Zhou ; Huiting Xia ; Jiejun Yin ; Liang Gao ; Yaqi Liu</i>	
ASPECT-LEVEL SENTIMENT CLASSIFICATION WITH REINFORCEMENT LEARNING	1674
<i>Tingting Wang ; Jie Zhou ; Qinmin Vivian Hu ; And Liang He</i>	
ZERO-SHOT IMAGE RECOGNITION USING RELATIONAL MATCHING, ADAPTATION AND CALIBRATION.....	1682
<i>Debasmit Das ; C. S. George Lee</i>	
SELECTIVE HYPOTHESIS TRANSFER FOR LIFELONG LEARNING	1690
<i>Diana Benavides-Prado ; Yun Sing Koh ; Patricia Riddle</i>	
STATIC CROWD SCENE ANALYSIS VIA DEEP NETWORK WITH MULTI-BRANCH DILATED CONVOLUTION BLOCKS	1700
<i>Haoran Liu ; Aiwon Jiang ; Qiaosi Yi ; Xiaolin Deng ; Jianyi Wan ; Mingwen Wang</i>	
PEAK AREA DETECTION NETWORK FOR DIRECTLY LEARNING PHASE REGIONS FROM RAW X-RAY DIFFRACTION PATTERNS.....	1707
<i>Dipendra Jha ; Aaron Gilad Kusne ; Reda Al-Bahrani ; Nam Nguyen ; Wei-Keng Liao ; Alok Choudhary ; Ankit Agrawal</i>	
SELF-ORGANIZING NEURONS: TOWARD BRAIN-INSPIRED UNSUPERVISED LEARNING.....	1715
<i>Lyes Khacef ; Benoît Miramond ; Diego Barrientos ; Andres Upegui</i>	
IN A SPIN-WAVE RESERVOIR FOR MACHINE LEARNING	1724
<i>Ryosho Nakane ; Gouhei Tanaka ; Akira Hirose</i>	
A NOVEL END-TO-END MULTIPLE TAGGING MODEL FOR KNOWLEDGE EXTRACTION.....	1733
<i>Yunhua Song ; Hongyun Bao ; Zhineng Chen ; Jianquan Ouyang</i>	
ANALYZING MINIMAL COMPLEXITY MACHINES.....	1741
<i>Shigeo Abe</i>	
MACHINE LEARNING TO IDENTIFY GENDER VIA HAIR ELEMENTS.....	1749
<i>Paquale Avino ; Francesco Mercaldo ; Vittoria Nardone ; Ivan Notardonato ; Antonella Santone</i>	

MOTION INTEGRATION AND DISAMBIGUATION BY SPIKING V1-MT-MSTL FEEDFORWARD-FEEDBACK INTERACTION	1756
<i>Maximilian P. R. Löhner ; Daniel Schmid ; Heiko Neumann</i>	
AUDIO-BASED RECOGNITION OF BIPOLAR DISORDER UTILISING CAPSULE NETWORKS.....	1765
<i>Shahin Amiriparian ; Arsany Awad ; Maurice Gerczuk ; Lukas Stappen ; Alice Baird ; Sandra Ottl ; Björn Schuller</i>	
SPARSITY AS THE IMPLICIT GATING MECHANISM FOR RESIDUAL BLOCKS.....	1772
<i>Shaek Salman ; Xiuwen Liu</i>	
RESERVOIR COMPUTING BASED ON DYNAMICS OF PSEUDO-BILLIARD SYSTEM IN HYPERCUBE	1778
<i>Yuichi Katori ; Hakaru Tamukoh ; Takashi Morie</i>	
TWO-STREAM CONVOLUTION NEURAL NETWORK WITH VIDEO-STREAM FOR ACTION RECOGNITION.....	1786
<i>Wei Dai ; Yimin Chen ; Chen Huang ; Ming-Ke Gao ; Xinyu Zhang</i>	
AX-DBN: AN APPROXIMATE COMPUTING FRAMEWORK FOR THE DESIGN OF LOW- POWER DISCRIMINATIVE DEEP BELIEF NETWORKS	1794
<i>Ian Colbert ; Ken Kreuz-Delgado ; Srinjoy Das</i>	
COMC: A FRAMEWORK FOR ONLINE CROSS-DOMAIN MULTISTREAM CLASSIFICATION	1803
<i>Hemeng Tao ; Zhuoyi Wang ; Yifan Li ; Mahmoud Zamani ; Latifur Khan</i>	
AN ANALYSIS ON THE LEARNING RULES OF THE SKIP-GRAM MODEL.....	1811
<i>Canlin Zhang ; Xiuwen Liu ; Daniel Bis</i>	
A CHARACTER-ENHANCED CHINESE WORD EMBEDDING MODEL.....	1819
<i>Gang Yang ; Hongzhe Xu ; Tianhao He ; Zaishang Cai</i>	
A THREE-MODULES SCENARIO IN AN INTERPRETATION OF VISUAL HALLUCINATION IN DEMENTIA WITH LEWY BODIES AND PRELIMINARY RESULTS OF COMPUTER EXPERIMENTS.....	1824
<i>Shigetoshi Nara ; Hiroshi Fujii ; Hiromichi Tsukada ; Ichiro Tsuda</i>	
MULTI-SOURCE TRANSFER LEARNING FOR NON-STATIONARY ENVIRONMENTS.....	1832
<i>Honghui Du ; Leandro L. Minku ; Huiyu Zhou</i>	
LEARNING TOPOLOGICAL REPRESENTATION FOR NETWORKS VIA HIERARCHICAL SAMPLING.....	1840
<i>Guoji Fu ; Chengbin Hou ; Xin Yao</i>	
A PERFORMANCE EVALUATION OF CONVOLUTIONAL NEURAL NETWORKS FOR FACE ANTI SPOOFING	1848
<i>Chaitanya Nagpal ; Shiv Ram Dubey</i>	
MPSSD: MULTI-PATH FUSION SINGLE SHOT DETECTOR.....	1856
<i>Shuyi Qu ; Kaizhu Huang ; Amir Hussain ; Yannis Goulermas</i>	
A DATA STRATIFICATION PROCESS FOR INSTANCES SELECTION IN SEMI-SUPERVISED LEARNING.....	1862
<i>Karliane M. O. Vale ; Anne Magály De P. Canuto ; Flavius L. Gorgônio ; Amarildo J. F. Lucena ; Cainan T. Alves ; Arthur C. Gorgônio ; Araken M. Santos</i>	
COMPETITIVE ONLINE GENERALISED LINEAR REGRESSION WITH MULTIDIMENSIONAL OUTPUTS	1870
<i>Raisa Dzhamtyrova ; Yuri Kalnishkan</i>	
BAGGING ADVERSARIAL NEURAL NETWORKS FOR DOMAIN ADAPTATION IN NON- STATIONARY EEG	1878
<i>Haider Raza ; Spyridon Samothrakis</i>	
REFERENCE-ORIENTED LOSS FOR PERSON RE-IDENTIFICATION	1885
<i>Mingyang Yu ; Zhigang Chang ; Qin Zhou ; Shibao Zheng ; Tai Pang Wu</i>	
RESTRICTED BOLTZMANN MACHINES: AN EIGENCENTRALITY-BASED APPROACH.....	1893
<i>Andrew Skabar</i>	
METRIC LEARNING BASED FRAMEWORK FOR STREAMING CLASSIFICATION WITH CONCEPT EVOLUTION	1901
<i>Zhuoyi Wang ; Hemeng Tao ; Zelun Kong ; Swarup Chandra ; Latifur Khan</i>	
NEUROMEMBRISTIVE MULTI-LAYER RANDOM PROJECTION NETWORK WITH ON- DEVICE LEARNING	1909
<i>Abdullah M. Ziyarah ; Dhireesha Kudithipudi</i>	
A TIME-FREQUENCY BASED MACHINE LEARNING SYSTEM FOR BRAIN STATES CLASSIFICATION VIA EEG SIGNAL PROCESSING	1917
<i>Cosimo Ieracitano ; Nadia Mammone ; Alessia Bramanti ; Silvia Marino ; Amir Hussain ; Francesco Carlo Morabito</i>	

AGE AND GENDER ESTIMATION VIA DEEP DICTIONARY LEARNING REGRESSION	1925
<i>Vanika Singhal ; Angshul Majumdar</i>	
ADVERSARIAL DOMAIN ADAPTATION VIA CATEGORY TRANSFER	1933
<i>Lusi Li ; Haibo He ; Jie Li ; Guang Yang</i>	
IMAGE STEGANOGRAPHY USING TEXTURE FEATURES AND GANS.....	1941
<i>Jinjing Huang ; Shaoyin Cheng ; Songhao Lou ; Fan Jiang</i>	
DEEP RULE-BASED AERIAL SCENE CLASSIFIER USING HIGH-LEVEL ENSEMBLE FEATURE DESCRIPTOR	1949
<i>Xiaowei Gu ; Plamen P. Angelov</i>	
A LOW-MEMORY LEARNING FORMULATION FOR A KERNEL-AND-RANGE NETWORK	1956
<i>Huiping Zhuang ; Zhiping Lin ; Kar-Ann Toh</i>	
ONLINE ESTIMATION OF MULTIPLE DYNAMIC GRAPHS IN PATTERN SEQUENCES	1962
<i>Jimmy Gaudreault ; Arunabh Saxena ; Hideaki Shimazaki</i>	
IMPROVING ROBUSTNESS OF RERAM-BASED SPIKING NEURAL NETWORK ACCELERATOR WITH STOCHASTIC SPIKE-TIMING-DEPENDENT-PLASTICITY	1970
<i>Xueyuan She ; Yun Long ; Saibal Mukhopadhyay</i>	
DIMENSIONALITY REDUCTION IN MULTILABEL CLASSIFICATION WITH NEURAL NETWORKS.....	1978
<i>Jacek Mandziuk ; Adam Zychowski</i>	
ISANON: FLOW-BASED ANONYMITY NETWORK TRAFFIC IDENTIFICATION USING EXTREME GRADIENT BOOSTING.....	1986
<i>Zhenzhen Cai ; Bo Jiang ; Zhigang Lu ; Junrong Liu ; Pingchuan Ma</i>	
A NEURAL FIELD MODEL FOR SUPERVISED AND UNSUPERVISED LEARNING OF THE MNIST DATASET	1994
<i>Michael Connolly Brady</i>	
IMAGE RETRIEVAL AND PATTERN SPOTTING USING SIAMESE NEURAL NETWORK.....	2002
<i>Kelly L. Wiggers ; Alceu S. Britto ; Laurent Heutte ; Alessandro L. Koerich ; Luiz S. Oliveira</i>	
DEEPIST: TOWARDS A DEEP LEARNING-BASED COMPUTATIONAL HISTORY OF TRENDS IN THE NIPS	2010
<i>Amna Dridi ; Mohamed Medhat Gaber ; R. Muhammad Atif Azad ; Jagdev Bhogal</i>	
CLOSED-LOOP CENTRAL PATTERN GENERATOR CONTROL OF HUMAN GAITS IN OPENSIM SIMULATOR	2018
<i>Andrii Shachykov ; Oleksandr Shuliak ; Patrick Hénaff</i>	
IDEAL NEIGHBOURHOOD MASK FOR SPEECH ENHANCEMENT USING DEEP NEURAL NETWORKS.....	2026
<i>Christian Arcos ; Marley Vellasco ; Abraham Alcaim</i>	
DATA-TO-TEXT GENERATION WITH ATTENTION RECURRENT UNIT	2031
<i>Hechong Wang ; Wei Zhang ; Yuesheng Zhu ; Zhiqiang Bai</i>	
ABSTRACTIVE SUMMARIZATION WITH KEYWORD AND GENERATED WORD ATTENTION	2039
<i>Qianlong Wang ; Jiangtao Ren</i>	
OPTIMAL PEDESTRIAN EVACUATION IN BUILDING WITH CONSECUTIVE DIFFERENTIAL DYNAMIC PROGRAMMING.....	2047
<i>Yuanheng Zhu ; Haibo He ; Dongbin Zhao ; Zhongsheng Hou</i>	
THE CONDITIONAL BOUNDARY EQUILIBRIUM GENERATIVE ADVERSARIAL NETWORK AND ITS APPLICATION TO FACIAL ATTRIBUTES	2055
<i>Ahmed Marzouk ; Pablo Barros ; Manfred Epe ; Stefan Wermter</i>	
COMBINING STREET-LEVEL AND AERIAL IMAGES FOR DENGUE INCIDENCE RATE ESTIMATION	2062
<i>Virginia Ortiz Andersson ; Cristian Cechinel ; Ricardo Matsumura Araujo</i>	
MULTIPLE-VALUED ARTIFICIAL NEURAL NETWORKS	2070
<i>Alexander Makarenko</i>	
FINE-GRAINED ADVERSARIAL IMAGE INPAINTING WITH SUPER RESOLUTION	2076
<i>Yang Li ; Bitao Jiang ; Yao Lu ; Li Shen</i>	
AUXBLOCKS: DEFENSE ADVERSARIAL EXAMPLES VIA AUXILIARY BLOCKS	2084
<i>Yueyao Yu ; Pengfei Yu ; Wenye Li</i>	
AN INITIAL STUDY ON THE RELATIONSHIP BETWEEN META FEATURES OF DATASET AND THE INITIALIZATION OF NNRW	2092
<i>Weipeng Cao ; Muhammed J. A. Patwary ; Pengfei Yang ; Xizhao Wang ; Zhong Ming</i>	

ANALYZING THE IMPACT OF DATA REPRESENTATIONS IN CLASSIFICATION PROBLEMS USING CLUSTERING	2100
<i>Felipe Costa Farias ; Teresa Bernarda Ludermir ; Carmelo J. A. Bastos-Filho Ecomp ; Flávio Rosendo Da Silva Oliveira</i>	
ADVERSARIAL ATTACKS ON DEEP NEURAL NETWORKS FOR TIME SERIES CLASSIFICATION.....	2106
<i>Hassan Ismail Fawaz ; Germain Forestier ; Jonathan Weber ; Lhassane Idoumghar ; Pierre-Alain Muller</i>	
TOWARDS A SMART FAULT TOLERANT INDOOR LOCALIZATION SYSTEM THROUGH RECURRENT NEURAL NETWORKS.....	2114
<i>Eduardo C. Carvalho ; Bruno V. Ferreira ; Geraldo P. R. Filho ; Pedro H. Gomes ; Gustavo M. Freitas ; Patrícia A. Vargas ; Jó Ueyama ; Gustavo Pessin</i>	
EXTREME DIMENSIONALITY REDUCTION FOR NETWORK ATTACK VISUALIZATION WITH AUTOENCODERS	2121
<i>Daniel C. Ferreira ; Félix Iglesias Vázquez ; Tanja Zseby</i>	
HYBRID K-MEANS AND IMPROVED SELF-ADAPTIVE PARTICLE SWARM OPTIMIZATION FOR DATA CLUSTERING	2131
<i>Luciano D. S. Pacifico ; Teresa B. Ludermir</i>	
A COMPUTATIONAL MODEL FOR A MULTI-GOAL SPATIAL NAVIGATION TASK INSPIRED BY RODENT STUDIES.....	2138
<i>Martin Llofriu ; Pablo Scleidorovich ; Gonzalo Tejera ; Marco Contreras ; Tatiana Pelc ; Jean-Marc Fellous ; Alfredo Weitzenfeld</i>	
REAL-TIME ACCURATE OBJECT COUNTING FOR SMART FARMS.....	2146
<i>Hao Shang ; Rui Li ; Xu He ; Jilong Wang ; Xinhui Peng</i>	
A SEMI-SUPERVISED CLASSIFICATION USING GATED LINEAR MODEL.....	2154
<i>Yanni Ren ; Weite Li ; Jinglu Hu</i>	
END-TO-END NETWORK FOR MONOCULAR VISUAL ODOMETRY BASED ON IMAGE SEQUENCE.....	2161
<i>Mingwei Yao ; Hongyan Quan</i>	
DEEP NEURAL NETWORKS FOR NETWORK ROUTING	2167
<i>Joao Reis ; Miguel Rocha ; Truong Khoa Phan ; David Griffin ; Franck Le ; Miguel Rio</i>	
COLLABORATION OF MACHINES AND ROBOTS IN CYBER PHYSICAL SYSTEMS BASED ON EVOLUTIONARY COMPUTATION APPROACH	2175
<i>Fu-Shiung Hsieh</i>	
ADVERSARIAL COLLABORATIVE AUTO-ENCODER FOR TOP-N RECOMMENDATION.....	2183
<i>Feng Yuan ; Lina Yao ; Boualem Benatallah</i>	
HETEROCLINIC ORBITS AND CHAOS IN A RING OF THREE UNIDIRECTIONALLY COUPLED NONMONOTONIC NEURONS.....	2191
<i>Yo Horikawa ; Ken Ichi Fujimoto</i>	
A RIEMANNIAN PRIMAL-DUAL ALGORITHM BASED ON PROXIMAL OPERATOR AND ITS APPLICATION IN METRIC LEARNING	2199
<i>Shijun Wang ; Baocheng Zhu ; Lintao Ma ; Yuan Qi</i>	
PARAMETER REDUCTION FOR DEEP NEURAL NETWORK BASED ACOUSTIC MODELS USING SPARSITY REGULARIZED FACTORIZATION NEURONS	2207
<i>Hoon Chung ; Euisok Chung ; Jeon Gue Park ; Ho-Young Jung</i>	
IMPROVING UNIVERSAL LANGUAGE MODEL FINE-TUNING USING ATTENTION MECHANISM	2212
<i>Flávio A. O. Santos ; K. L. Ponce-Guevara ; David Macêdo ; Cleber Zanchettin</i>	
APPROXIMATING BINARIZATION IN NEURAL NETWORKS.....	2219
<i>Caglar AYTEKIN ; Francesco Cricri ; Jani Lainema ; Emre Aksu ; Miska Hannuksela</i>	
DECODING NEURAL RESPONSES IN MOUSE VISUAL CORTEX THROUGH A DEEP NEURAL NETWORK	2224
<i>Asim Iqbal ; Phil Dong ; Christopher M Kim ; Heeun Jang</i>	
RPR-BP: A DEEP REINFORCEMENT LEARNING METHOD FOR AUTOMATIC HYPERPARAMETER OPTIMIZATION	2231
<i>Jia Wu ; Senpeng Chen ; Xiuyun Chen</i>	
AN END-TO-END JOINT UNSUPERVISED LEARNING OF DEEP MODEL AND PSEUDO-CLASSES FOR REMOTE SENSING SCENE REPRESENTATION	2239
<i>Zhiqiang Gong ; Ping Zhong ; Weidong Hu ; Fang Liu ; Bingwei Hui</i>	
A NEW FEATURE SELECTION METHOD BASED ON MONARCH BUTTERFLY OPTIMIZATION AND FISHER CRITERION	2246
<i>Xiaodong Qin ; Xiabi Liu ; Said Boumaraf</i>	

NON-TRADITIONAL INPUT ENCODING SCHEMES FOR SPIKING NEUROMORPHIC SYSTEMS	2252
<i>Catherine D. Schuman ; James S. Plank ; Grant Bruer ; Jeremy Anantharaj</i>	
NEURAL NETWORKS APPLIED IN THE PREDICTION OF TOP OIL TEMPERATURE OF TRANSFORMER	2262
<i>Pan Wenxia ; Zhao Kun ; Gao Tianao ; Gao Congchuang</i>	
DYNAMIC FUSION OF CONVOLUTIONAL FEATURES BASED ON SPATIAL AND TEMPORAL ATTENTION FOR VISUAL TRACKING	2269
<i>Dongcheng Zhao ; Yi Zeng</i>	
A POSITION-AWARE TRANSFORMATION NETWORK FOR ASPECT-LEVEL SENTIMENT CLASSIFICATION	2277
<i>Tao Jiang ; Jiahai Wang ; Youwei Song ; Yanghui Rao</i>	
MULTI-TASK LEARNING WITH BIDIRECTIONAL LANGUAGE MODELS FOR TEXT CLASSIFICATION	2285
<i>Qi Yang ; Lin Shang</i>	
GENERATIVE ADVERSARIAL NETWORK FOR RADAR SIGNAL SYNTHESIS	2293
<i>Thomas Truong ; Svetlana Yanushkevich</i>	
DEEP STRUCTURED CROSS-MODAL ANOMALY DETECTION	2300
<i>Yuening Li ; Ninghao Liu ; Jundong Li ; Mengnan Du ; Xia Hu</i>	
DEEP REINFORCEMENT LEARNING WITH DUAL TARGETING ALGORITHM	2308
<i>Naoki Kodama ; Taku Harada ; Kazuteru Miyazaki</i>	
FROM CONTENT TEXT ENCODING PERSPECTIVE: A HYBRID DEEP MATRIX FACTORIZATION APPROACH FOR RECOMMENDER SYSTEM	2314
<i>Jianing Zhou ; Junhao Wen ; Shun Li ; Wei Zhou</i>	
NEURALAS: DEEP WORD-BASED SPOOFED URLS DETECTION AGAINST STRONG SIMILAR SAMPLES	2322
<i>Jing Ya ; Tingwen Liu ; Panpan Zhang ; Jinqiao Shi ; Li Guo ; Zhaojun Gu</i>	
LAMBDAGAN: GENERATIVE ADVERSARIAL NETS FOR RECOMMENDATION TASK WITH LAMBDA STRATEGY	2329
<i>Yang Wang ; Hai-Tao Zheng ; Wang Chen ; Rui Zhang</i>	
GANEMOTION: INCREASE VITALITY OF CHARACTERS IN VIDEOS BY GENERATIVE ADVERSARY NETWORKS	2337
<i>Muhammad Hassan ; Yutong Liu ; Linghe Kong ; Ziming Wang ; Guihai Chen</i>	
MULTI-LEVEL COMPARE-AGGREGATE MODEL FOR TEXT MATCHING	2345
<i>Chunlin Xu ; Zhiwei Lin ; Hui Wang ; Shengli Wu</i>	
DGFFM: GENERALIZED FIELD-AWARE FACTORIZATION MACHINE BASED ON DENSENET	2352
<i>Qing-Long Zhang ; Lu Rao ; Yubin Yang</i>	
TWITTER BREAKING NEWS DETECTOR IN THE 2018 BRAZILIAN PRESIDENTIAL ELECTION USING WORD EMBEDDINGS AND CONVOLUTIONAL NEURAL NETWORKS	2360
<i>Kenzo Miranda Sakiyama ; Andre Quintiliano Bezerra Silva ; Edson Takashi Matsubara</i>	
RSLIME: AN EFFICIENT FEATURE IMPORTANCE ANALYSIS APPROACH FOR INDUSTRIAL RECOMMENDATION SYSTEMS	2368
<i>Fan Zhu ; Min Jiang ; Yiming Qiu ; Chenglong Sun ; Min Wang</i>	
BAYESIAN TENSOR FACTORISATION FOR BOTTOM-UP HIDDEN TREE MARKOV MODELS	2374
<i>Daniele Castellana ; Davide Bacciu</i>	
ACCELERATING DEEP UNSUPERVISED DOMAIN ADAPTATION WITH TRANSFER CHANNEL PRUNING	2382
<i>Chaohui Yu ; Jindong Wang ; Yiqiang Chen ; Zijing Wu</i>	
PROACTIVE MINIMIZATION OF CONVOLUTIONAL NETWORKS	2390
<i>Bendegúz Jenei ; Gábor Berend ; László Varga</i>	
BEHAVIORS OF RESERVOIR COMPUTING MODELS FOR TEXTUAL DOCUMENTS CLASSIFICATION	2397
<i>Nils Schaetti</i>	
AN MCTS-BASED ADVERSARIAL TRAINING METHOD FOR IMAGE RECOGNITION	2404
<i>Yi-Ling Liu ; Alessio Lomuscio</i>	
LEARNING WITH COHERENCE PATTERNS IN MULTIVARIATE TIME-SERIES DATA VIA DYNAMIC MODE DECOMPOSITION	2412
<i>Takehito Bito ; Masashi Hiraoka ; Yoshinobu Kawahara</i>	

THE EMERGENT-CONTEXT EMERGENT-INPUT FRAMEWORK FOR TEMPORAL PROCESSING	2420
<i>Xiang Wu ; Juyang Weng</i>	
ATTENTION-BASED ADVERSARIAL TRAINING FOR SEAMLESS NUDITY CENSORSHIP	2428
<i>Gabriel S. Simões ; Jónatas Wehrmann ; Rodrigo C. Barros</i>	
CELLULAR COMPUTATIONAL NETWORK FOR DISTRIBUTED POWER FLOW INFERENCE IN ELECTRIC DISTRIBUTION SYSTEMS	2436
<i>Hasala Dharmawardena ; Ganesh K. Venayagamoorthy</i>	
GENERATIVE ADVERSARIAL NETWORKS FOR ROAD CRACK IMAGE SEGMENTATION	2444
<i>Ziping Gao ; Bo Peng ; Tianrui Li ; Cong Gou</i>	
PREDICTABLE UNCERTAINTY-AWARE UNSUPERVISED DEEP ANOMALY SEGMENTATION	2452
<i>Kazuki Sato ; Kenta Hama ; Takashi Matsubara ; Kuniaki Uehara</i>	
PAIN ASSESSMENT FROM FACIAL EXPRESSION: NEONATAL CONVOLUTIONAL NEURAL NETWORK (N-CNN)	2459
<i>Ghada Zamzmi ; Rahul Paul ; Dmitry Goldgof ; Rangachar Kasturi ; Yu Sun</i>	
PROGRAMMING STYLE ANALYSIS WITH RECURRENT NEURAL NETWORK TO AUTOMATIC PULL REQUEST APPROVAL	2466
<i>Lucas Roque ; Altino Dantas ; Celso G. Camilo-Junior</i>	
FUSION STRATEGIES FOR LEARNING USER EMBEDDINGS WITH NEURAL NETWORKS	2473
<i>Philipp Blandfort ; Tushar Karayil ; Federico Raue ; Jörn Hees ; Andreas Dengel</i>	
RIT2FIS: A RECURRENT INTERVAL TYPE 2 FUZZY INFERENCE SYSTEM AND ITS RULE BASE ESTIMATION	2481
<i>Subhrajit Samanta ; Andre Hartanto ; Mahardhika Pratama ; Suresh Sundaram ; Narasimalu Srikanth</i>	
COSINE-SIMILARITY PENALTY TO DISCRIMINATE SOUND CLASSES IN WEAKLY-SUPERVISED SOUND EVENT DETECTION	2489
<i>Thomas Pellegrini ; Léo Cances</i>	
TOWARD NEXT GENERATION OF AUTONOMOUS SYSTEMS WITH AI	2497
<i>Danil Prokhorov</i>	
ATTENTION-GUIDED GENERATIVE ADVERSARIAL NETWORKS FOR UNSUPERVISED IMAGE-TO-IMAGE TRANSLATION	2502
<i>Hao Tang ; Dan Xu ; Nicu Sebe ; Yan Yan</i>	
A CHAOTIC BOLTZMANN MACHINE WORKING AS A RESERVOIR AND ITS ANALOG VLSI IMPLEMENTATION	2510
<i>Masatoshi Yamaguchi ; Yuichi Katori ; Daichi Kamimura ; Hakaru Tamukoh ; Takashi Morie</i>	
EVOLVING AND ENSEMBLING DEEP CNN ARCHITECTURES FOR IMAGE CLASSIFICATION	2517
<i>Ben Fielding ; Tom Lawrence ; Li Zhang</i>	
ROAD DETECTION VIA DEEP RESIDUAL DENSE U-NET	2525
<i>Xiaofei Yang ; Xutao Li ; Yunming Ye ; Xiaofeng Zhang ; Haijun Zhang ; Xiaohui Huang ; Boweng Zhang</i>	
NETWORK SEARCH FOR BINARY NETWORKS	2532
<i>Jiajun Du ; Yu Qin ; Hongtao Lu</i>	
ROBUST NEURO-ADAPTIVE ASYMPTOTIC CONSENSUS FOR A CLASS OF UNCERTAIN MULTI-AGENT SYSTEMS: AN EDGE-BASED PARADIGM	2540
<i>Dongdong Yue ; Qi Li ; Jinde Cao ; Xuegang Tan</i>	
A SYNCHRO-PHASOR ASSISTED OPTIMAL FEATURES BASED SCHEME FOR FAULT DETECTION AND CLASSIFICATION	2547
<i>Homanga Bharadhwaj ; Avinash Kumar ; Abheejeet Mohapatra</i>	
PROSTATE SEGMENTATION USING 2D BRIDGED U-NET	2555
<i>Wanli Chen ; Yue Zhang ; Junjun He ; Yu Qiao ; Yifan Chen ; Hongjian Shi ; Ed X. Wu ; Xiaoying Tang</i>	
MODULATION OF ACTIVATION FUNCTION IN TRIANGULAR RECURRENT NEURAL NETWORKS FOR TIME SERIES MODELING	2562
<i>Shyamala Sivakumar ; Seshadri Sivakumar</i>	
ATTENTION-DRIVEN DRIVING MANEUVER DETECTION SYSTEM	2570
<i>Xishuai Peng ; Ava Zhao ; Song Wang ; Yi Lu Murphey ; Yuanxiang Li</i>	
ESPANNET: EVOLVING SPIKE PATTERN ASSOCIATION NEURAL NETWORK FOR SPIKE-BASED SUPERVISED INCREMENTAL LEARNING AND ITS APPLICATION FOR SINGLE-TRIAL BRAIN COMPUTER INTERFACES	2578
<i>Kaushalya Kumarasinghe ; Denise Taylor ; Nikola Kasabov</i>	
PARAPHRASE GENERATION WITH COLLABORATION BETWEEN THE FORWARD AND THE BACKWARD DECODER	2586
<i>Qianlong Wang ; Jiangtao Ren</i>	

METODEEP: A DEEP LEARNING APPROACH FOR PREDICTION OF METHIONINE OXIDATION SITES IN PROTEINS	2594
<i>Guillermo López-García ; José M. Jerez ; Daniel Urda ; Francisco J. Veredas</i>	
ANALYSIS OF TWO VARIOUS APPROACHES FOR ATTRIBUTES CLASSIFICATION BASED ON USER-SUBMITTED PHOTOS	2602
<i>Wendy D. W. T. Bayu ; May Iffah Rizki ; Lintang Matahari Hasani ; Valian Fil Ahli ; Ari Wibisono ; Petrus Mursanto</i>	
ABSTRACTIVE TEXT SUMMARIZATION WITH MULTI-HEAD ATTENTION	2609
<i>Jinpeng Li ; Chuang Zhang ; Xiaojun Chen ; Yanan Cao ; Pengcheng Liao ; Peng Zhang</i>	
AUTOMATIC DETECTION OF THE SUPPORT POINTS IN RELATIONAL CLUSTERING	2617
<i>Parisa Rastin ; Younès Bennani ; Rosanna Verde</i>	
QUANTUM-INSPIRED NEURAL ARCHITECTURE SEARCH	2625
<i>Daniela Szwarcman ; Daniel Civitarese ; Marley Vellasco</i>	
PINNING CONTROL FOR SYNCHRONIZATION OF DRIVE-RESPONSE MEMRISTIVE NEURAL NETWORKS WITH NONIDENTICAL PARAMETERS	2633
<i>Yueheng Li ; Biao Luo ; Derong Liu ; Zhe Dong ; Zhanyu Yang</i>	
ADAPTIVE MODEL LEARNING OF NEURAL NETWORKS WITH UUB STABILITY FOR ROBOT DYNAMIC ESTIMATION	2641
<i>Pedram Agand ; Mahdi Aliyari Shooorhdeli</i>	
ON EVALUATING THE ONLINE LOCAL POOL GENERATION METHOD FOR IMBALANCE LEARNING	2647
<i>Mariana A. Souza ; George D. C. Cavalcanti ; Rafael M. O. Cruz ; Robert Sabourin</i>	
URBAN AREA VEHICLE RE-IDENTIFICATION WITH SELF-ATTENTION STAIR FEATURE FUSION AND TEMPORAL BAYESIAN RE-RANKING	2655
<i>Chenghuan Liu ; Du Q. Huynh ; Mark Reynolds</i>	
DO FRACTIONAL NORMS AND QUASINORMS HELP TO OVERCOME THE CURSE OF DIMENSIONALITY?	2663
<i>Evgeny M. Mirkes ; Jeza Allohobi ; Alexander N. Gorban</i>	
USING DEEP LEARNING FOR MOBILE MARKETING USER CONVERSION PREDICTION	2671
<i>Luís Miguel Matos ; Paulo Cortez ; Rui Mendes ; Antoine Moreau</i>	
AGGREGATION CONNECTION NETWORK FOR TINY FACE DETECTION	2679
<i>Chan Zhang ; Tao Li ; Song Guo ; Ning Li ; Yingqi Gao ; Kai Wang</i>	
COUPLED DICTIONARY LEARNING FOR MULTI-LABEL EMBEDDING	2687
<i>Sijia Niu ; Qian Xu ; Pengfei Zhu ; Qinghua Hu ; Hong Shi</i>	
CLASSIFICATION OF STARS USING STELLAR SPECTRA COLLECTED BY THE SLOAN DIGITAL SKY SURVEY	2695
<i>Michael Brice ; Razvan Andonie</i>	
SIAMESE DEEP DICTIONARY LEARNING	2703
<i>Vanika Singhal ; Angshul Majumdar ; Mayank Vatsa ; Richa Singh</i>	
A NOVEL DEEP LEARNING-BASED ENCODER-DECODER MODEL FOR REMAINING USEFUL LIFE PREDICTION	2709
<i>Hui Liu ; Zhenyu Liu ; Weiqiang Jia ; Xianke Lin</i>	
A SPIKING NEURAL NETWORK WITH DISTRIBUTED KEYPOINT ENCODING FOR ROBUST SOUND RECOGNITION	2717
<i>Yanli Yao ; Qiang Yu ; Longbiao Wang ; Jianwu Dang</i>	
DEEPSHAPESKETCH : GENERATING HAND DRAWING SKETCHES FROM 3D OBJECTS	2725
<i>Meijuan Ye ; Shizhe Zhou ; Hongbo Fu</i>	
ADVERSARIAL ACTION DATA AUGMENTATION FOR SIMILAR GESTURE ACTION RECOGNITION	2733
<i>Di Wu ; Junjun Chen ; Nabin Sharma ; Shirui Pan ; Guodong Long ; Michael Blumenstein</i>	
EFFICIENT CONVOLUTIONAL NEURAL NETWORKS FOR MULTI-SPECTRAL IMAGE CLASSIFICATION	2741
<i>Jacob J. Senecal ; John W. Sheppard ; Joseph A. Shaw</i>	
DEALING WITH LIMITED ACCESS TO DATA: COMPARISON OF DEEP LEARNING APPROACHES	2749
<i>Andreas Look ; Stefan Riedelbauch</i>	
IMPROVING RETRIEVAL-BASED QUESTION ANSWERING WITH DEEP INFERENCE MODELS	2757
<i>George-Sebastian Pirtocica ; Traian Rebedea ; Stefan Ruseti</i>	
UNBOUNDED RECURRENT FUZZY MIN-MAX NEURAL NETWORK FOR PATTERN CLASSIFICATION	2765
<i>Jaishri M. Waghmare ; Uday V. Kulkarni</i>	

TEXT CLASSIFICATION USING GATED AND TRANSPOSED ATTENTION NETWORKS	2773
<i>Kang He ; Min Zhu</i>	
A KERNEL DISCRIMINANT INFORMATION APPROACH TO NON-LINEAR FEATURE SELECTION	2780
<i>Zejiang Hou ; S. Y. Kung</i>	
ON THE LINEAR SEPARABILITY OF RANDOM POINTS IN THE D-DIMENSIONAL SPHERICAL LAYER AND IN THE D-DIMENSIONAL CUBE	2790
<i>S. V. Sidorov ; N. Yu. Zolotykh</i>	
DEEP CONVOLUTIONAL NEURAL NETWORKS FOR TEXT LOCALISATION IN FIGURES FROM BIOMEDICAL LITERATURE	2794
<i>Ibrahim Almakky ; Vasile Palade ; Ariel Ruiz-Garcia</i>	
CHAOTIC NEURAL NETWORK RESERVOIR	2799
<i>Yoshihiko Horio</i>	
SE-GAN: A SWAP ENSEMBLE GAN FRAMEWORK	2804
<i>Licheng Shen ; Yan Yang</i>	
EMERGENT MULTILINGUAL LANGUAGE ACQUISITION USING DEVELOPMENTAL NETWORKS	2812
<i>Juan L. Castro-Garcia ; Juyang Weng</i>	
ESTIMATING BETTI NUMBERS USING DEEP LEARNING	2820
<i>Rahul Paul ; Stephan Chalup</i>	
BEYOND THE POWER OF MERE REPETITION: FORMS OF SOCIAL COMMUNICATION ON TWITTER THROUGH THE LENS OF INFORMATION FLOWS AND ITS EFFECT ON TOPIC EVOLUTION	2827
<i>Yunwei Zhao ; Can Wang ; Chi-Hung Chi ; Willem-Jan Van Den Heuvel ; Kwok-Yan Lam ; Min Shu</i>	
AN END-TO-END LOCATION AND REGRESSION TRACKER WITH ATTENTION-BASED FUSED FEATURES	2835
<i>Qinyi Zhang ; Shishuai Du ; Huihua Yang</i>	
CONVTIMENET: A PRE-TRAINED DEEP CONVOLUTIONAL NEURAL NETWORK FOR TIME SERIES CLASSIFICATION	2842
<i>Kathan Kashiparekh ; Jyoti Narwariya ; Pankaj Malhotra ; Lovekesh Vig ; Gautam Shroff</i>	
GROUP LEARNING FOR HIGH-DIMENSIONAL SPARSE DATA	2850
<i>Vladimir Cherkassky ; Hsiang-Han Chen ; Han-Tai Shiau</i>	
SI-GCN: STRUCTURE-INDUCED GRAPH CONVOLUTION NETWORK FOR SKELETON-BASED ACTION RECOGNITION	2860
<i>Rong Liu ; Chunyan Xu ; Tong Zhang ; Wenting Zhao ; Zhen Cui ; Jian Yang</i>	
FIGURENET : A DEEP LEARNING MODEL FOR QUESTION-ANSWERING ON SCIENTIFIC PLOTS	2868
<i>Revanth Reddy ; Rahul Ramesh ; Ameet Deshpande ; Mitesh M. Khapra</i>	
AN ADVERSARIAL PERTURBATION APPROACH AGAINST CNN-BASED SOFT BIOMETRICS DETECTION	2876
<i>Stefano Marrone ; Carlo Sansone</i>	
IMPROVING PREDICTION ACCURACY IN BUILDING PERFORMANCE MODELS USING GENERATIVE ADVERSARIAL NETWORKS (GANS)	2884
<i>Chanachok Chokwitthaya ; Edward Collier ; Yimin Zhu ; Supratik Mukhopadhyay</i>	
PREEMPTING CATASTROPHIC FORGETTING IN CONTINUAL LEARNING MODELS BY ANTICIPATORY REGULARIZATION	2893
<i>Alaa El Khatib ; Fakhri Karray</i>	
NEURAL NETWORKS FOR LUNG CANCER DETECTION THROUGH RADIOMIC FEATURES	2900
<i>Luca Brunese ; Francesco Mercaldo ; Alfonso Reginelli ; Antonella Santone</i>	
A ROBUST EMBEDDING METHOD FOR ANOMALY DETECTION ON ATTRIBUTED NETWORKS	2910
<i>Le Zhang ; Jun Yuan ; Zeyi Liu ; Yang Pei ; Lei Wang</i>	
UNDERWATER FISH DETECTION WITH WEAK MULTI-DOMAIN SUPERVISION	2918
<i>Dmitry A. Konovalov ; Alzayat Saleh ; Michael Bradley ; Mangalam Sankupellay ; Simone Marini ; Marcus Sheaves</i>	
TWO-STAGE UNSUPERVISED VIDEO ANOMALY DETECTION USING LOW-RANK BASED UNSUPERVISED ONE-CLASS LEARNING WITH RIDGE REGRESSION	2926
<i>Jingtao Hu ; En Zhu ; Siqi Wang ; Siwei Wang ; Xinwang Liu ; Jianping Yin</i>	
DEEP STRUCTURE LEARNING FOR RUMOR DETECTION ON TWITTER	2934
<i>Qi Huang ; Chuan Zhou ; Jia Wu ; Mingwen Wang ; Bin Wang</i>	

DEEP SALIENT OBJECT DETECTION WITH FUZZY SUPERPIXEL EXTRACTION AND CONTROLLED FILTER CONVOLUTION	2942
<i>Yang Liu ; Bo Wu ; Bo Lang</i>	
MATRIX PRODUCT OPERATOR RESTRICTED BOLTZMANN MACHINES	2950
<i>Cong Chen ; Kim Batselier ; Ching-Yun Ko ; Ngai Wong</i>	
ICNET: INCORPORATING INDICATOR WORDS AND CONTEXTS TO IDENTIFY FUNCTIONAL DESCRIPTION INFORMATION	2958
<i>Qu Liu ; Zhenyu Zhang ; Yanzeng Li ; Tingwen Liu ; Diying Li ; Jinqiao Shi</i>	
SEQUENCING THE MUSICAL SECTIONS WITH DEEP LEARNING	2966
<i>Xuange Cui ; Mingxue Liao ; Pin Lv ; Changwen Zheng</i>	
TACTILEGCN: A GRAPH CONVOLUTIONAL NETWORK FOR PREDICTING GRASP STABILITY WITH TACTILE SENSORS	2973
<i>Alberto Garcia-Garcia ; Brayán S. Zapata-Impata ; Sergio Orts-Escolano ; Pablo Gil ; Jose Garcia-Rodriguez</i>	
DEEP GENERATIVE STATE-SPACE MODELING OF FMRI IMAGES FOR PSYCHIATRIC DISORDER DIAGNOSIS	2981
<i>Koki Kusano ; Tetsuo Tashiro ; Takashi Matsubara ; Kuniaki Uehara</i>	
EXPLORING WRITING PATTERN WITH POP CULTURE INGREDIENTS FOR SOCIAL USER MODELING	2988
<i>Chiyu Cai ; Linjing Li ; Daniel Zeng ; Hongyuan Ma</i>	
CORAL CLASSIFICATION USING DENSENET AND CROSS-MODALITY TRANSFER LEARNING	2996
<i>Lian Xu ; Mohammed Bennamoun ; Farid Boussaid ; Senjian An ; Ferdous Sohel</i>	
MMF: ATTRIBUTE INTERPRETABLE COLLABORATIVE FILTERING	3004
<i>Yixin Su ; Sarah Monazam Erfani ; Rui Zhang</i>	
HDL: HIERARCHICAL DEEP LEARNING MODEL BASED HUMAN ACTIVITY RECOGNITION USING SMARTPHONE SENSORS	3012
<i>Tongtong Su ; Huazhi Sun ; Chunmei Ma ; Lifan Jiang ; Tongtong Xu</i>	
UNSUPERVISED CHANGE DETECTION IN SATELLITE IMAGES USING CONVOLUTIONAL NEURAL NETWORKS	3020
<i>Kevin Louis De Jong ; Anna Sergeevna Bosman</i>	
NONMODULAR ARCHITECTURES OF COGNITIVE SYSTEMS BASED ON ACTIVE INFERENCE	3028
<i>Manuel Baltieri ; Christopher L. Buckley</i>	
GATED TASK INTERACTION FRAMEWORK FOR MULTI-TASK SEQUENCE TAGGING	3036
<i>Isaac K. E. Ampomah ; Zhiwei Lin ; Sally McClean ; Glenn Hawe</i>	
RNN-BASED SPEECH SYNTHESIS USING A CONTINUOUS SINUSOIDAL MODEL	3044
<i>Mohammed Salah Al-Radhi ; Tamás Gábor Csapó ; Géza Németh</i>	
RECOGNITION OF PATTERNS OF OPTIMAL DIEL VERTICAL MIGRATION OF ZOOPLANKTON USING NEURAL NETWORKS	3052
<i>Oleg Kuzenkov ; Andrew Morozov ; Galina Kuzenkova</i>	
ANGULAR VELOCITY ESTIMATION OF IMAGE MOTION MIMICKING THE HONEYBEE TUNNEL CENTRING BEHAVIOUR	3058
<i>Huatian Wang ; Qinbing Fu ; Hongxin Wang ; Jigen Peng ; Paul Baxter ; Cheng Hu ; Shigang Yue</i>	
BACTERIA SHAPE CLASSIFICATION BY THE USE OF REGION COVARIANCE AND CONVOLUTIONAL NEURAL NETWORK	3065
<i>Dawid Polap ; Marcin Wozniak</i>	
LATENT SPACE EMBEDDING FOR UNSUPERVISED FEATURE SELECTION VIA JOINT DICTIONARY LEARNING	3072
<i>Yang Fan ; Jianhua Dai ; Qilai Zhang</i>	
GATE-LAYER AUTOENCODERS WITH APPLICATION TO INCOMPLETE EEG SIGNAL RECOVERY	3080
<i>Heba El-Fiqi ; Kathryn Kasmarik ; Anastasios Bezerianos ; Kay Chen Tan ; Hussein A. Abbass</i>	
DISCRIMINATIVE REGULARIZATION WITH CONDITIONAL GENERATIVE ADVERSARIAL NETS FOR SEMI-SUPERVISED LEARNING	3088
<i>Qianqian Xie ; Min Peng ; Jimin Huang ; Bin Wang ; Hua Wang</i>	
META-LEARNING FOR USER COLD-START RECOMMENDATION	3096
<i>Homanga Bharadhwaj</i>	
UNSUPERVISED SYNTHESIS OF ANOMALIES IN VIDEOS: TRANSFORMING THE NORMAL	3104
<i>Abhishek Joshi ; Vinay P. Namboodiri</i>	
A HYBRID INCREMENTAL REGRESSION NEURAL NETWORK FOR UNCERTAIN DATA STREAMS	3112
<i>Hang Yu ; Jie Lu ; Jialu Xu ; Guangquan Zhang</i>	

GAINING EXTRA SUPERVISION VIA MULTI-TASK LEARNING FOR MULTI-MODAL VIDEO QUESTION ANSWERING	3120
<i>Junyeong Kim ; Minuk Ma ; Kyungsu Kim ; Sungjin Kim ; Chang D. Yoo</i>	
DIMENSION ESTIMATION AND TOPOLOGICAL MANIFOLD LEARNING	3128
<i>Hajime Tasaki ; Reiner Lenz ; Jinhui Chao</i>	
DOUBLE TRANSFER LEARNING FOR BREAST CANCER HISTOPATHOLOGIC IMAGE CLASSIFICATION	3135
<i>Jonathan De Matos ; Alceu De S. Britto ; Luiz E. S. Oliveira ; Alessandro L. Koerich</i>	
DEEPSQUEEZENET-CRF: A LIGHTWEIGHT DEEP MODEL FOR SEMANTIC IMAGE SEGMENTATION	3143
<i>Danyu Lai ; Yique Deng ; Long Chen</i>	
PROCESSING ACOUSTIC DATA WITH SIAMESE NEURAL NETWORKS FOR ENHANCED ROAD ROUGHNESS CLASSIFICATION	3151
<i>Leonardo Gabrielli ; Livio Ambrosini ; Fabio Vesperini ; Valeria Bruschi ; Stefano Squartini ; Luca Cattani</i>	
A MULTIVARIATE FUZZY KOHONEN CLUSTERING NETWORK	3158
<i>Rodrigo B. De C. Cavalcanti ; Bruno A. Pimentel ; Carlos W. D. De Almeida ; Renata M. C. R. De Souza</i>	
COLLABORATIVE MULTI-KEY LEARNING WITH AN ANONYMIZATION DATASET FOR A RECOMMENDER SYSTEM	3165
<i>Linh Nguyen ; Tsukasa Ishigaki</i>	
MULTI-HIERARCHY ATTRIBUTE RELATIONSHIP MINING BASED OUTLIER DETECTION FOR CATEGORICAL DATA	3174
<i>Xiaoyu Hu ; Yijie Wang ; Li Cheng</i>	
A MULTIPLE LOCAL MODEL LEARNING FOR NONLINEAR AND TIME-VARYING MICROWAVE HEATING PROCESS	3182
<i>Tong Liu ; Shan Liang ; Sheng Chen ; Chris J. Harris</i>	
FAST SEGMENTATION FOR LARGE AND SPARSELY LABELED CORAL IMAGES	3190
<i>Xi Yu ; Ying Ma ; Stephanie Farrington ; John Reed ; Bing Ouyang ; Jose C. Principe</i>	
LEVERAGING RECURSIVE PROCESSING FOR NEURAL-SYMBOLIC AFFECT-TARGET ASSOCIATIONS	3196
<i>Alexander Sutherland ; Sven Magg ; Stefan Wermter</i>	
RISK PREDICTION FOR IMBALANCED DATA IN CYBER SECURITY : A SIAMESE NETWORK-BASED DEEP LEARNING CLASSIFICATION FRAMEWORK	3202
<i>Degang Sun ; Zhengrong Wu ; Yan Wang ; Qiuqian Lv ; Bo Hu</i>	
A DISTANT SUPERVISED RELATION EXTRACTION MODEL WITH TWO DENOISING STRATEGIES	3210
<i>Zikai Zhou ; Yi Cai ; Jingyun Xu ; Jiayuan Xie ; Qing Li ; Haoran Xie</i>	
EPILEPSY DETECTION USING MULTICLASS CLASSIFIER BASED ON SPECTRAL FEATURES	3218
<i>Jefferson Tales Oliva ; João Luis Garcia Rosa</i>	
A MULTI-GRANULARITY NEURAL NETWORK FOR ANSWER SENTENCE SELECTION	3226
<i>Chengcong Zhang ; Weijuan Zhang ; Daren Zha ; Pengjie Ren ; Nan Mu</i>	
SPATIAL AND CHANNEL RESTRAINT FOR COMPLEMENTARY FEATURE LEARNING	3233
<i>Donghui Liu ; Wei Fang ; Ziwei Wang</i>	
DEEP NEURAL NETWORK ENSEMBLES FOR TIME SERIES CLASSIFICATION	3241
<i>Hassan Ismail Fawaz ; Germain Forestier ; Jonathan Weber ; Lhassane Idoumghar ; Pierre-Alain Muller</i>	
EDGE FOCUSED SUPER-RESOLUTION OF THERMAL IMAGES	3247
<i>Yannick Wend Kuni Zoetgnande ; Jean-Louis Dillenseger ; Javad Alirezaei</i>	
AUTOMATIC SOURCE CODE SUMMARIZATION WITH EXTENDED TREE-LSTM	3255
<i>Yusuke Shido ; Yasuaki Kobayashi ; Akihiro Yamamoto ; Atsushi Miyamoto ; Tadayuki Matsumura</i>	
MISSING ENTITY SYNERGISTIC COMPLETION ACROSS MULTIPLE ISOMERIC ONLINE KNOWLEDGE LIBRARIES	3263
<i>Bowen Dong ; Jiawei Zhang ; Chenwei Zhang ; Yang Yang ; Philip S. Yu</i>	
HIERARCHICAL INTENTION ENHANCED NETWORK FOR AUTOMATIC DIALOGUE COHERENCE ASSESSMENT	3271
<i>Yunxiao Zhou ; Man Lan ; Wenting Wang</i>	
FACE AGE TRANSFORMATION WITH PROGRESSIVE RESIDUAL ADVERSARIAL AUTOENCODER	3279
<i>Xuexiang Zhang ; Ping Wei ; Nanning Zheng</i>	
TRANSFER LEARNING FOR NETWORK CLASSIFICATION	3287
<i>Bowen Dong ; Charu C. Aggarwal ; Philip S. Yu</i>	
DEEP Q-LEARNING FOR ILLUMINATION AND ROTATION INVARIANT FACE DETECTION	3295
<i>Ariel Ruiz-Garcia ; Vasile Palade ; Ibrahim Almakky ; Mark Elshaw</i>	

PRUNED SETS FOR MULTI-LABEL STREAM CLASSIFICATION WITHOUT TRUE LABELS	3303
<i>Joel D. Costa Júnior ; Elaine R. Faria ; Jonathan A. Silva ; João Gama ; Ricardo Cerri</i>	
A NOVEL GROUP-AWARE PRUNING METHOD FOR FEW-SHOT LEARNING	3311
<i>Yin-Dong Zheng ; Yun-Tao Ma ; Ruo-Ze Liu ; Tong Lu</i>	
A SHORTCUT-STACKED DOCUMENT ENCODER FOR EXTRACTIVE TEXT SUMMARIZATION	3318
<i>Peng Yan ; Linjing Li ; Daniel Zeng</i>	
PREDICTING PARKINSON'S DISEASE USING LATENT INFORMATION EXTRACTED FROM DEEP NEURAL NETWORKS	3326
<i>Ilianna Kollia ; Andreas-Georgios Stafylopatis ; Stefanos Kollias</i>	
LEARNING A DOMAIN-INVARIANT EMBEDDING FOR UNSUPERVISED PERSON RE-IDENTIFICATION	3334
<i>Nan Pu ; Georgiou T. K ; Erwin M. Bakker ; Michael S. Lew</i>	
SKIP-GANOMALY: SKIP CONNECTED AND ADVERSARIALLY TRAINED ENCODER-DECODER ANOMALY DETECTION	3342
<i>Samet Akçay ; Amir Atapour-Abarghouei ; Toby P. Breckon</i>	
ADAPTIVE NEURAL NETWORK TIME-VARYING FORMATION TRACKING CONTROL FOR MULTI-AGENT SYSTEMS VIA MINIMAL LEARNING PARAMETER APPROACH	3350
<i>Tianyi Xiong ; Zhiqiang Pu ; Jianqiang Yi ; Zezhi Sui</i>	
DAGCN: DUAL ATTENTION GRAPH CONVOLUTIONAL NETWORKS	3358
<i>Fengwen Chen ; Shirui Pan ; Jing Jiang ; Huan Huo ; Guodong Long</i>	
SPATIAL MAP LEARNING WITH SELF-ORGANIZING ADAPTIVE RECURRENT INCREMENTAL NETWORK	3366
<i>Wei Hong Chin ; Naoyuki Kubota ; Chu Kiong Loo ; Zhaojie Ju ; Honghai Liu</i>	
MULTI-OBJECTIVE ENSEMBLE MODEL FOR SHORT-TERM PRICE FORECASTING IN CORN PRICE TIME SERIES	3372
<i>Matheus Henrique Dal Molin Ribeiro ; Victor Henrique Alves Ribeiro ; Gilberto Reynoso-Meza ; Leandro Dos Santos Coelho</i>	
AUTHOR DISAMBIGUATION THROUGH ADVERSARIAL NETWORK REPRESENTATION LEARNING	3380
<i>Liwen Peng ; Siqi Shen ; Dongsheng Li ; Jun Xu ; Yongquan Fu ; Huayou Su</i>	
EXPLORING TRANSFERABILITY IN DEEP NEURAL NETWORKS WITH FUNCTIONAL DATA ANALYSIS AND SPATIAL STATISTICS	3388
<i>Richard McAllister ; John Sheppard</i>	
SPINAL STENOSIS DETECTION IN MRI USING MODULAR COORDINATE CONVOLUTIONAL ATTENTION NETWORKS	3398
<i>Uddeshya Upadhyay ; Badrinath Singhal ; Meenakshi Singh</i>	
A MULTIPLE KERNEL MACHINE WITH INCREMENTAL LEARNING USING SPARSE REPRESENTATION	3406
<i>Ali Pezeshki ; Mahmood R. Azimi-Sadjadi ; Christopher Robbiano</i>	
TRAINING A V1 LIKE LAYER USING GABOR FILTERS IN CONVOLUTIONAL NEURAL NETWORKS	3414
<i>Jun Bai ; Yi Zeng ; Yuxuan Zhao ; Feifei Zhao</i>	
COLLABORATIVE AND PRIVACY-PRESERVING MACHINE TEACHING VIA CONSENSUS OPTIMIZATION	3422
<i>Yufei Han ; Yuzhe Ma ; Christopher Gates ; Kevin Roundy ; Yun Shen</i>	
TO COMPREHEND THE NEW: ON MEASURING THE FRESHNESS OF A DOCUMENT	3430
<i>Tirthankar Ghosal ; Abhishek Shukla ; Asif Ekbal ; Pushpak Bhattacharyya</i>	
A TEMPORAL ENCODING METHOD BASED ON EXPANSION REPRESENTATION	3438
<i>Yan Dai ; Mengwen Yuan ; Huajin Tang ; Rui Yan</i>	
STOCHASTIC VARIATIONAL INFERENCE FOR BAYESIAN SPARSE GAUSSIAN PROCESS REGRESSION	3446
<i>Haibin Yu ; Trong Nghia ; Bryan Kian Hsiang Low ; Patrick Jaillet</i>	
COMPENSATING SUPERVISION INCOMPLETENESS WITH PRIOR KNOWLEDGE IN SEMANTIC IMAGE INTERPRETATION	3454
<i>Ivan Donadello ; Luciano Serafini</i>	
ADAPTIVE EDGE CACHING BASED ON POPULARITY AND PREDICTION FOR MOBILE NETWORKS	3462
<i>Li Li ; Chien Aun Chan ; Sarah Erfani ; Christopher Leckie</i>	
VIDEO SUPER RESOLUTION WITH ESTIMATION OF MOTION INFORMATION BY USING HIGHER RESOLUTION IMAGES OBTAINED BY SINGLE IMAGE SUPER RESOLUTION	3472
<i>Jonathan Mojoo ; Motaz Sabri ; Takio Kurita</i>	

EXPLOITING ACTION-VALUE UNCERTAINTY TO DRIVE EXPLORATION IN REINFORCEMENT LEARNING	3480
<i>Carlo D'Eramo ; Andrea Cini ; Marcello Restelli</i>	
UNSUPERVISED LEARNING OF EYE GAZE REPRESENTATION FROM THE WEB	3488
<i>Neeru Dubey ; Shreya Ghosh ; Abhinav Dhall</i>	
STRONG-BACKGROUND RESTRAINED CROSS ENTROPY LOSS FOR SCENE TEXT DETECTION	3495
<i>Randong Huang ; Bo Xu</i>	
DEEP CYCLIC GROUP NETWORKS	3502
<i>Zhe-Cheng Fan ; Tak-Shing Chan ; Yi-Hsuan Yang ; Jyh-Shing Roger Jang</i>	
TA-STAN: A DEEP SPATIAL-TEMPORAL ATTENTION LEARNING FRAMEWORK FOR REGIONAL TRAFFIC ACCIDENT RISK PREDICTION	3510
<i>Lei Zhu ; Tianrui Li ; Shengdong Du</i>	
COMMUNITY DETECTION WITH INDIRECT NEIGHBORS BASED ON GRANULAR COMPUTING IN SOCIAL NETWORKS	3518
<i>Naiyue Chen ; Jie He ; Xiang Wang ; Zhiyuan Zhang ; Ping Yang ; Yanning Fu</i>	
A HUMAN-LIKE AGENT BASED ON A HYBRID OF REINFORCEMENT AND IMITATION LEARNING	3526
<i>Rousslan Fernand Julien Dossa ; Xinyu Lian ; Hirokazu Nomoto ; Takashi Matsubara ; Kuniaki Uehara</i>	
MULTI-GRAINED CASCADE ADABOOST EXTREME LEARNING MACHINE FOR FEATURE REPRESENTATION	3534
<i>Hongwei Ge ; Weiting Sun ; Mingde Zhao ; Kai Zhang ; Liang Sun ; Chao Yu</i>	
BOOSTED GAN WITH SEMANTICALLY INTERPRETABLE INFORMATION FOR IMAGE INPAINTING	3542
<i>Ang Li ; Jianzhong Qi ; Rui Zhang ; Ramamohanarao Kotagiri</i>	
FLEXIBLE KERNEL SELECTION IN MULTITASK SUPPORT VECTOR REGRESSION	3550
<i>Carlos Ruiz ; Carlos M. Alaz ; Alejandro Catalina ; José R. Dorronsoro</i>	
ENHANCED MATCHING NETWORK FOR MULTI-TURN RESPONSE SELECTION IN RETRIEVAL-BASED CHATBOTS	3558
<i>Hui Deng ; Xiang Xie ; Xuejun Zhang</i>	
ACTION ACQUISITION METHOD FOR CONSTRUCTING COGNITIVE DEVELOPMENT SYSTEM THROUGH INSTRUCTED LEARNING	3565
<i>Ryosuke Tanaka ; Jinseok Woo ; Naoyuki Kubota</i>	
MELODIOUS MICRO-FRISSONS: DETECTING MUSIC GENRES FROM SKIN RESPONSE	3571
<i>Jessica Sharmín Rahman ; Tom Gedeon ; Sabrina Caldwell ; Richard Jones ; Md Zakir Hossain ; Xuanying Zhu</i>	
MULTIPLE FAKE CLASSES GAN FOR DATA AUGMENTATION IN FACE IMAGE DATASET	3579
<i>Adamu Ali-Gombe ; Eyad Elyan ; Chrisina Jayne</i>	
CLUSTERING-ENHANCED POINTCNN FOR POINT CLOUD CLASSIFICATION LEARNING	3587
<i>Yikuan Yu ; Fei Li ; Yu Zheng ; Min Han ; Xinyi Le</i>	
STOCHASTIC RESONANCE ENABLES BPP/LOG* COMPLEXITY AND UNIVERSAL APPROXIMATION IN ANALOG RECURRENT NEURAL NETWORKS	3593
<i>Emmett Redd ; A. Steven Younger ; Tayo Obafemi-Ajayi</i>	
STABLE NETWORK MORPHISM	3601
<i>Tao Wei ; Changhu Wang ; Chang Wen Chen</i>	
CONVOLUTIONAL RECURRENT NEURAL NETWORKS FOR TEXT CLASSIFICATION	3609
<i>Ruishuang Wang ; Zhao Li ; Jian Cao ; Tong Chen ; Lei Wang</i>	
DYNAMIC UNIT SURGERY FOR DEEP NEURAL NETWORK COMPRESSION AND ACCELERATION	3615
<i>Minsam Kim ; James T. Kwok</i>	
GUESSING THE CODE: LEARNING ENCODING MAPPINGS USING THE BACK PROPAGATION ALGORITHM	3623
<i>Amrutha Machireddy ; Shayan Srinivasa Garani</i>	
ENCODING ROBUST REPRESENTATION FOR GRAPH GENERATION	3631
<i>Dongmian Zou ; Gilad Lerman</i>	
MULTI-TASK SENTENCE ENCODING MODEL FOR SEMANTIC RETRIEVAL IN QUESTION ANSWERING SYSTEMS	3640
<i>Qiang Huang ; Jianhui Bu ; Weijian Xie ; Shengwen Yang ; Weijia Wu ; Liping Liu</i>	
PHYSICAL ACTIVITY RECOGNITION USING MULTI-SENSOR FUSION AND EXTREME LEARNING MACHINES	3648
<i>Honggang Wang ; Weizhong Yan ; Shaopeng Liu</i>	
NEURAL REGRESSION TREES	3655
<i>Shahan Ali Memon ; Wenbo Zhao ; Bhiksha Raj ; Rita Singh</i>	

EXECUTING DECLARATIVE PARALLEL REPRESENTATIONS OF SEQUENCES WITH TEMPORAL POOLING	3663
<i>Daniel Slack ; Alistair Knott ; Brendan McCane</i>	
MODIFIED STATE OBSERVER BASED TWO-WAY ETNAC DESIGN FOR UNCERTAIN LINEAR SYSTEMS	3671
<i>A. Ghafoor ; S. N. Balakrishnan</i>	
MULTI-OBJECTIVE AUTOENCODER FOR FAULT DETECTION AND DIAGNOSIS IN HIGHER-ORDER DATA	3679
<i>Ali Anaissi ; Seid Miad Zandavi</i>	
A SUPER-RESOLUTION GENERATIVE ADVERSARIAL NETWORK WITH SIMPLIFIED GRADIENT PENALTY AND RELATIVISTIC DISCRIMINATOR	3687
<i>Hui Yu ; Haitao Sa ; Dafang Zou ; Jiafa Mao ; Weiguo Sheng</i>	
DEEPER CAPSULE NETWORK FOR COMPLEX DATA	3695
<i>Yi Xiong ; Guiping Su ; Shiwe Ye ; Yuan Sun ; Yi Sun</i>	
COMPOSING MULTI-INSTRUMENTAL MUSIC WITH RECURRENT NEURAL NETWORKS	3703
<i>David Samuel ; Martin Pilát</i>	
ADVERSARIAL ATTACKS ON REMOTE USER AUTHENTICATION USING BEHAVIOURAL MOUSE DYNAMICS	3711
<i>Yi Xiang Marcus Tan ; Alfonso Iacovazzi ; Ivan Homoliak ; Yuval Elovici ; Alexander Binder</i>	
NEURO-ROBOTIC HAPTIC OBJECT CLASSIFICATION BY ACTIVE EXPLORATION ON A NOVEL DATASET	3721
<i>Matthias Kerzel ; Erik Strahl ; Connor Gaede ; Emil Gasanov ; Stefan Wermter</i>	
AGILE DOMAIN ADAPTATION	3729
<i>Jingjing Li ; Mengmeng Jing ; Yue Xie ; Ke Lu ; Zi Huang</i>	
κ-ENTROPY BASED RESTRICTED BOLTZMANN MACHINES	3737
<i>Leandro Aparecido Passos ; Marcos Cleison Santana ; Thierry Moreira ; João Paulo Papa</i>	
A TRANSFORMER-BASED VARIATIONAL AUTOENCODER FOR SENTENCE GENERATION	3745
<i>Danyang Liu ; Gongshen Liu</i>	
MAPEL: MULTI-AGENT PURSUER-EVADER LEARNING USING SITUATION REPORT	3752
<i>Sagar Verma ; Richa Verma ; P. B. Sujit</i>	
EXTRACTING TABLES FROM DOCUMENTS USING CONDITIONAL GENERATIVE ADVERSARIAL NETWORKS AND GENETIC ALGORITHMS	3760
<i>Nataliya Le Vine ; Matthew Zeigenfuse ; Mark Rowan</i>	
CLASSIFICATION AND REGRESSION ANALYSIS OF LUNG TUMORS FROM MULTI-LEVEL GENE EXPRESSION DATA	3768
<i>Pratheeba Jeyananthan ; Mahesan Niranjana</i>	
DEEP FUSION: AN ATTENTION GUIDED FACTORIZED BILINEAR POOLING FOR AUDIO-VIDEO EMOTION RECOGNITION	3776
<i>Yuanyuan Zhang ; Zi-Rui Wang ; Jun Du</i>	
GATED NEURAL NETWORK WITH REGULARIZED LOSS FOR MULTI-LABEL TEXT CLASSIFICATION	3784
<i>Yunlai Xu ; Xiangying Ran ; Wei Sun ; Xiangyang Luo ; Chongjun Wang</i>	
KEYPHRASE GUIDED BEAM SEARCH FOR NEURAL ABSTRACTIVE TEXT SUMMARIZATION	3792
<i>Xuewen Chen ; Jinlong Li ; Haihan Wang</i>	
SHUFFLENETS: EFFICIENT CNN MODELS THROUGH MODIFIED EFFICIENT NEURAL ARCHITECTURE SEARCH	3801
<i>Kevin A. Laube ; Andreas Zell</i>	
ATTENTION-BASED MULTI-INSTANCE NEURAL NETWORK FOR MEDICAL DIAGNOSIS FROM INCOMPLETE AND LOW QUALITY DATA	3807
<i>Zeyuan Wang ; Josiah Poon ; Shiding Sun ; Simon Poon</i>	
CYBERTHREAT DETECTION FROM TWITTER USING DEEP NEURAL NETWORKS	3815
<i>Nuno Dionísio ; Fernando Alves ; Pedro M. Ferreira ; Alysson Bessani</i>	
KERNEL STOCHASTIC SEPARATION THEOREMS AND SEPARABILITY CHARACTERIZATIONS OF KERNEL CLASSIFIERS	3823
<i>Ivan Y. Tyukin ; Alexander N Gorban ; Bogdan Grechuk ; Stephen Green</i>	
SPATIO-TEMPORAL ACTIVE LEARNING FOR VISUAL TRACKING	3829
<i>Chenfeng Liu ; Pengfei Zhu ; Qinghua Hu</i>	
DILATED CONVOLUTIONAL NETWORKS INCORPORATING SOFT ENTITY TYPE CONSTRAINTS FOR DISTANT SUPERVISED RELATION EXTRACTION	3837
<i>Min Peng ; Weilong Hu ; Gang Tian ; Bin Wang ; Hua Wang ; Gang Wang</i>	

LMLSTM:EXTRACT EVENT-ORIENTED KEYPHRASE FROM NEWS STREAM	3844
<i>Lin Zhao ; Longtao Huang ; Liangjun Zang ; Jizhong Han ; Songlin Hu</i>	
AN ATTENTION-BASED HYBRID LSTM-CNN MODEL FOR ARRHYTHMIAS CLASSIFICATION	3851
<i>Fan Liu ; Xingshe Zhou ; Tianben Wang ; Jinli Cao ; Zhu Wang ; Hua Wang ; Yanchun Zhang</i>	
EYE GESTURE BASED COMMUNICATION FOR PEOPLE WITH MOTOR DISABILITIES IN DEVELOPING NATIONS	3859
<i>Sharan Pai ; Anish Bhardwaj</i>	
SUBWORD SEMANTIC HASHING FOR INTENT CLASSIFICATION ON SMALL DATASETS	3867
<i>Kumar Shridhar ; Ayushman Dash ; Amit Sahu ; Gustav Grund Pihlgren ; Pedro Alonso ; Vinaychandran Pondenkandath ; György Kovács ; Foteini Simistira ; Marcus Liwicki</i>	
AN APPROACH TO CROSS-LINGUAL VOICE CONVERSION	3873
<i>Sai Sirisha Rallabandi ; Suryakanth V Gangashetty</i>	
MULTI-TURN INTENT DETERMINATION FOR GOAL-ORIENTED DIALOGUE SYSTEMS	3880
<i>Waheed Ahmed Abro ; Guilin Qi ; Huan Gao ; Muhammad Asif Khan ; Zafar Ali</i>	
VIEWPOINT-ROBUST PERSON RE-IDENTIFICATION VIA DEEP RESIDUAL EQUIVARIANT MAPPING AND FINE-GRAINED FEATURES	3888
<i>Liang Yang ; Xiao-Yuan Jing ; Fulin He ; Fei Ma ; Li Cheng</i>	
SUPERVISED KERNEL TRANSFORM LEARNING	3898
<i>Jyoti Maggu ; Angshul Majumdar</i>	
PERSONALIZED POINT-OF-INTEREST RECOMMENDATION ON RANKING WITH POISSON FACTORIZATION	3906
<i>Yijun Su ; Xiang Li ; Wei Tang ; Daren Zha ; Ji Xiang ; Neng Gao</i>	
ADVERSARIALY ERASED LEARNING FOR PERSON RE-IDENTIFICATION BY FULLY CONVOLUTIONAL NETWORKS	3914
<i>Shuangwei Liu ; Yunzhou Zhang ; Lin Qi ; Sonya Coleman ; Dermot Kerr ; Shangdong Zhu</i>	
FEATURE SELECTION FOR ORTHOGONAL BROAD LEARNING SYSTEM BASED ON MUTUAL INFORMATION	3922
<i>Zhicheng Liu ; Bao Chen ; Bingxue Xie ; Huangping Qiang ; Ziqi Zhu</i>	
A UNIFIED MULTI-OUTPUT SEMI-SUPERVISED NETWORK FOR 3D FACE RECONSTRUCTION	3930
<i>Pengrui Wang ; Yi Tian ; Wujun Che ; Bo Xu</i>	
UNSUPERVISED META-LEARNING FOR CLUSTERING ALGORITHM RECOMMENDATION	3938
<i>Bruno Almeida Pimentel ; André C. P. L. F. De Carvalho</i>	
EXPLORING MACHINE LEARNING AND DEEP LEARNING FRAMEWORKS FOR TASK-ORIENTED DIALOGUE ACT CLASSIFICATION	3946
<i>Tulika Saha ; Saurabh Srivastava ; Mauajama Firdaus ; Sriparna Saha ; Asif Ekbal ; Pushpak Bhattacharyya</i>	
REPRESENTATION-DIMENSIONALITY TRADE-OFF IN BIOLOGICAL SEQUENCE-BASED INFERENCE	3954
<i>Bahman Asadi ; Mahesan Niranjan</i>	
RECURRENT LAYER AGGREGATION USING LSTM	3961
<i>Yu Qin ; Jiajun Du ; Xinyao Wang ; Hongtao Lu</i>	
SOM-BASED ALGORITHM FOR MULTI-ARMED BANDIT PROBLEM	3969
<i>Nobuhito Manome ; Shuji Shinohara ; Kouta Suzuki ; Kosuke Tomonaga ; Shunji Mitsuyoshi</i>	
AUTOENCODER-BASED ARTICULATORY-TO-ACOUSTIC MAPPING FOR ULTRASOUND SILENT SPEECH INTERFACES	3975
<i>Gábor Gosztolya ; Ádám Pintér ; László Tóth ; Tamás Grósz ; Alexandra Markó ; Tamás Gábor Csapó</i>	
SELF-ATTENTION BASED NETWORK FOR MEDICAL QUERY EXPANSION	3983
<i>Su Chen ; Qinmin Vivian Hu ; Yang Song ; Yun He ; Huaying Wu ; Liang He</i>	
INTELLIGENT RESERVOIR GENERATION FOR LIQUID STATE MACHINES USING EVOLUTIONARY OPTIMIZATION	3992
<i>John J. M. Reynolds ; James S. Plank ; Catherine D. Schuman</i>	
FORMATION CONTROL WITH COLLISION AVOIDANCE THROUGH DEEP REINFORCEMENT LEARNING	4000
<i>ZeZhi Sui ; Zhiqiang Pu ; Jianqiang Yi ; Tianyi Xiong</i>	
RESPONSE CHARACTERIZATION FOR AUDITING CELL DYNAMICS IN LONG SHORT-TERM MEMORY NETWORKS	4008
<i>Ramin Hasani ; Alexander Amini ; Mathias Lechner ; Felix Naser ; Radu Grosu ; Daniela Rus</i>	
VEHICLE RE-IDENTIFICATION: AN EFFICIENT BASELINE USING TRIPLET EMBEDDING	4016
<i>Ramesh Kuma ; Edwin Weill ; Farzin Aghdasi ; Parthasarathy Sriram</i>	

SOCIAL NETWORK POLLUTING CONTENTS DETECTION THROUGH DEEP LEARNING TECHNIQUES.....	4025
<i>Fabio Martinelli ; Francesco Mercaldo ; Antonella Santone</i>	
UNSUPERVISED DOMAIN ADAPTATION WITH SPHERE RETRACTING TRANSFORMATION	4035
<i>Zhen Fang ; Jie Lu ; Feng Liu ; Guangquan Zhang</i>	
A TOI BASED CNN WITH LOCATION REGRESSION FOR INSURANCE CONTRACT ANALYSIS	4043
<i>Kai Zhang ; Lin Sun ; Fule Ji</i>	
IMPROVING THE REALISM OF SYNTHETIC IMAGES THROUGH A COMBINATION OF ADVERSARIAL AND PERCEPTUAL LOSSES.....	4051
<i>Charith Atapattu ; Banafsheh Rekabdar</i>	
DEEP REPRESENTATION LEARNING FOR CODE SMELLS DETECTION USING VARIATIONAL AUTO-ENCODER.....	4058
<i>Mouna Hadj-Kacem ; Nadia Bouassida</i>	
A GAUSSIAN PROCESS-BASED SELF-ORGANIZING INCREMENTAL NEURAL NETWORK.....	4066
<i>Xiaoyu Wang ; Giona Casiraghi ; Yan Zhang ; Jun-Ichi Imura</i>	
A CONVOLUTIONAL NEURAL NETWORK WITH TWO-CHANNEL INPUT FOR IMAGE SUPER-RESOLUTION	4074
<i>Purbaditya Bhattacharya ; Udo Zölzer</i>	
TRAFFIC LIGHT RECOGNITION USING DEEP LEARNING AND PRIOR MAPS FOR AUTONOMOUS CARS	4081
<i>Lucas C. Possatti ; Råník Guidolini ; Vinicius B. Cardoso ; Rodrigo F. Berriel ; Thiago M. Paixão ; Claudine Badue ; Alberto F. De Souza ; Thiago Oliveira-Santos</i>	
NEURAL MORPHOLOGICAL SEGMENTATION MODEL FOR MONGOLIAN.....	4089
<i>Weihua Wang ; Rashel Fam ; Feilong Bao ; Yves Lepage ; Guanglai Gao</i>	
CASCADE LEARNING FOR MOBILE MALWARE FAMILIES DETECTION THROUGH QUALITY AND ANDROID METRICS.....	4096
<i>Fausto Fasano ; Fabio Martinelli ; Francesco Mercaldo ; Antonella Santone</i>	
NETWORK IMPLOSION: EFFECTIVE MODEL COMPRESSION FOR RESNETS VIA STATIC LAYER PRUNING AND RETRAINING	4106
<i>Yasutoshi Ida ; Yasuhiro Fujiwara</i>	
SEQ-DNC-SEQ: CONTEXT AWARE DIALOG GENERATION SYSTEM THROUGH EXTERNAL MEMORY	4114
<i>Donghyun Kang ; Minh Lee</i>	
GENERALIZED ALIGNMENT FOR MULTIMODAL PHYSIOLOGICAL SIGNAL LEARNING	4121
<i>Yuchi Liu ; Yue Yao ; Zhengjie Wang ; Josephine Plested ; Tom Gedeon</i>	
DEEP DIFFUSION AUTOENCODERS	4131
<i>Sara Dorado ; Ángela Fernández ; José R. Dorronsoro</i>	
BIDIRECTIONAL LEARNING FOR ROBUST NEURAL NETWORKS.....	4139
<i>Sidney Pontes-Filho ; Marcus Livicki</i>	
RASE: RELATIONSHIP AWARE SOCIAL EMBEDDING.....	4147
<i>Aravind Sankar ; Adit Krishnan ; Zongjian He ; Carl Yang</i>	
EMOTION INTENSITY ESTIMATION FROM VIDEO FRAMES USING DEEP HYBRID CONVOLUTIONAL NEURAL NETWORKS	4155
<i>Selvarajah Thuseethan ; Sutharshan Rajasegarar ; John Yearwood</i>	
DEEPER MONOCULAR DEPTH PREDICTION VIA LONG AND SHORT SKIP CONNECTION.....	4165
<i>Zhaokai Wang ; Limin Xiao ; Rongbin Xu ; Shubin Su ; Shupan Li ; Yao Song</i>	
SHORT-TERM PREDICTION OF HYPERCHAOTIC FLOW USING ECHO STATE NETWORK	4172
<i>Aren Sinozaki ; Kota Shiozawa ; Kazuki Kajita ; Takaya Miyano ; Yoshihiko Horio</i>	
MIXING UPDATE Q-VALUE FOR DEEP REINFORCEMENT LEARNING	4177
<i>Zhunan Li ; Xinwen Hou</i>	
DIRECTIONAL ATTENTION BASED VIDEO FRAME PREDICTION USING GRAPH CONVOLUTIONAL NETWORKS.....	4183
<i>Prateep Bhattacharjee ; Sukhendu Das</i>	
POINTCLOUD: A SHAPE PATTERN AGGREGATION MODULE FOR DEEP LEARNING ON POINT CLOUD	4193
<i>Shuxin Zhao ; Chaochen Gu ; Changsheng Lu ; Ye Huang ; Kaijie Wu ; Xinping Guan</i>	
LEARNING SEMANTIC COHERENCE FOR MACHINE GENERATED SPAM TEXT DETECTION	4201
<i>Mengjiao Bao ; Jianxin Li ; Jian Zhang ; Hao Peng ; Xudong Liu</i>	

DEEP MULTIMODAL RECONSTRUCTION OF RETINAL IMAGES USING PAIRED OR UNPAIRED DATA	4209
<i>Álvaro S. Hervella ; José Rouco ; Jorge Novo ; Marcos Ortega</i>	
SYNTHETIC-TO-REAL DOMAIN ADAPTATION FOR OBJECT INSTANCE SEGMENTATION	4217
<i>Hui Zhang ; Yonglin Tian ; Kunfeng Wang ; Haibo He ; Fei-Yue Wang</i>	
ACCELERATE MINI-BATCH MACHINE LEARNING TRAINING WITH DYNAMIC BATCH SIZE FITTING	4224
<i>Baohua Liu ; Wenfeng Shen ; Peng Li ; Xin Zhu</i>	
CSSD: CASCADE SINGLE SHOT FACE DETECTOR	4232
<i>Shuainan Wang ; Tong Xu ; Wei Li ; Haifeng Sun</i>	
VN-GAN: IDENTITY-PRESERVED VARIATION NORMALIZING GAN FOR GAIT RECOGNITION	4240
<i>Peng Zhang ; Qiang Wu ; Jingsong Xu</i>	
COMPETITIVE STDP-BASED FEATURE REPRESENTATION LEARNING FOR SOUND EVENT CLASSIFICATION	4248
<i>Jibin Wu ; Malu Zhang ; Haizhou Li ; Yansong Chua</i>	
SETUP OF A RECURRENT NEURAL NETWORK AS A BODY MODEL FOR SOLVING INVERSE AND FORWARD KINEMATICS AS WELL AS DYNAMICS FOR A REDUNDANT MANIPULATOR	4256
<i>Malte Schilling</i>	
COMBINING SELF-REPORTED CONFIDENCES FROM UNCERTAIN ANNOTATORS TO IMPROVE LABEL QUALITY	4264
<i>Christoph Sandrock ; Marek Herde ; Adrian Calma ; Daniel Kotke ; Bernhard Sick</i>	
MULTIPLE-INSTANCE LEARNING THROUGH OPTIMUM-PATH FOREST	4272
<i>Luis C. S. Afonso ; Danilo Colombo ; Clayton R. Pereira ; Kelton A. P. Costa ; João P. Papa</i>	
EVALUATING INCOMPLETE DCOP ALGORITHMS ON LARGE-SCALE PROBLEMS	4279
<i>Allan Leite ; Fabricio Enembreck</i>	
UTILIZING GENERATIVE ADVERSARIAL NETWORKS FOR RECOMMENDATION BASED ON RATINGS AND REVIEWS	4287
<i>Wang Chen ; Hai-Tao Zheng ; Yang Wang ; Wei Wang ; Rui Zhang</i>	
MUTUAL INFORMATION GENERATION FOR IMPROVING GENERALIZATION AND INTERPRETATION IN NEURAL NETWORKS	4295
<i>Ryotaro Kamimura</i>	
LABEL DISTRIBUTION FEATURE SELECTION BASED ON MUTUAL INFORMATION IN FUZZY ROUGH SET THEORY	4303
<i>Yingyao Wang ; Jianhua Dai</i>	
SCALABLE IMPLEMENTATION OF MEASURING DISTANCES IN A RIEMANNIAN MANIFOLD BASED ON THE FISHER INFORMATION METRIC	4310
<i>Raúl V. Casaña-Eslava ; José D. Martín-Guerrero ; Sandra Ortega-Martorell ; Paulo J. Lisboa ; Ian H. Jarman</i>	
ACROSS-SENSOR FEATURE LEARNING FOR ENERGY-EFFICIENT ACTIVITY RECOGNITION ON MOBILE DEVICES	4317
<i>Yuriy Gavrilin ; Adil Khan</i>	
TWEET ACT CLASSIFICATION : A DEEP LEARNING BASED CLASSIFIER FOR RECOGNIZING SPEECH ACTS IN TWITTER	4324
<i>Tulika Saha ; Sriparna Saha ; Pushpak Bhattacharyya</i>	
MODULAR MULTILAYER NEURAL NETWORKS INTEGRATE MULTISENSORY INFORMATION NEAR-OPTIMALLY	4332
<i>Bat-Amgalan Bat-Erdene ; He Wang ; K. Y. Michael Wong</i>	
HIERARCHICAL MULTI-DIMENSIONAL ATTENTION MODEL FOR ANSWER SELECTION	4338
<i>Wei Liu ; Lei Zhang ; Longxuan Ma ; Pengfei Wang ; Feng Zhang</i>	
ADABOOST WITH NEURAL NETWORKS FOR YIELD AND PROTEIN PREDICTION IN PRECISION AGRICULTURE	4346
<i>Amy Peerlinck ; John Sheppard ; Jacob Senecal</i>	
ACTIVELY SEMI-SUPERVISED DEEP RULE-BASED CLASSIFIER APPLIED TO ADVERSE DRIVING SCENARIOS	4354
<i>Eduardo Soares ; Plamen Angelov ; Bruno Costa ; Marcos Castro</i>	
BCI AND MULTIMODAL FEEDBACK BASED ATTENTION REGULATION FOR LOWER LIMB REHABILITATION	4362
<i>Jiaxing Wang ; Weiqun Wang ; Zeng-Guang Hou ; Weiguo Shi ; Xu Liang ; Shixin Ren ; Liang Peng ; Yan-Jie Zhou</i>	

LEARNING DISTRIBUTED COORDINATED POLICY IN CATCHING GAME WITH MULTI-AGENT REINFORCEMENT LEARNING	4369
<i>Xiangyu Liu ; Ying Tan</i>	
SHORT TEXT TOPIC MODELING WITH FLEXIBLE WORD PATTERNS.....	4376
<i>Xiaobao Wu ; Chungping Li</i>	
PARALLELIZING BASIS PURSUIT DENOISING	4383
<i>Cory Kromer-Edwards ; Suelly Oliveira ; David Stewart</i>	
DESIGN SPACE EVALUATION OF A MEMRISTOR CROSSBAR BASED MULTILAYER PERCEPTRON FOR IMAGE PROCESSING	4388
<i>Chris Yakopcic ; B. Rasitha Fernando ; Tarek M. Taha</i>	
NEURAL POPULATION CODING FOR EFFECTIVE TEMPORAL CLASSIFICATION	4396
<i>Zihan Pan ; Jibin Wu ; Malu Zhang ; Haizhou Li ; Yansong Chua</i>	
FINE-GRAINED ROAD MINING FROM SATELLITE IMAGES WITH BILATERAL XCEPTION AND DEEPLAB.....	4404
<i>Lele Cao</i>	
A MUSIC RECOMMENDATION SYSTEM BASED ON LOGISTIC REGRESSION AND EXTREME GRADIENT BOOSTING.....	4412
<i>Haoye Tian ; Haini Cai ; Junhao Wen ; Shun Li ; Yingqiao Li</i>	
STRATEGY SELECTION IN COMPLEX GAME ENVIRONMENTS BASED ON TRANSFER REINFORCEMENT LEARNING	4418
<i>Hongwei Ge ; Mingde Zhao ; Kai Zhang ; Liang Sun</i>	
STOCHASTIC IMPUTATION AND UNCERTAINTY-AWARE ATTENTION TO EHR FOR MORTALITY PREDICTION.....	4426
<i>Eunji Jun ; Ahmad Wisnu Mulyadi ; Heung-Il Suk</i>	
PERIODIC NEURAL NETWORKS FOR MULTIVARIATE TIME SERIES ANALYSIS AND FORECASTING.....	4433
<i>Nurilla Avazov ; Jiamou Liu ; Bakhadyr Khoussainov</i>	
BIO-INSPIRED FOVEATED TECHNIQUE FOR AUGMENTED-RANGE VEHICLE DETECTION USING DEEP NEURAL NETWORKS.....	4441
<i>Pedro Azevedo ; Sabrina S. Panceri ; Rânik Guidolini ; Vinicius B. Cardoso ; Claudine Badue ; Thiago Oliveira-Santos ; Alberto F. De Souza</i>	
μL2Q: AN ULTRA-LOW LOSS QUANTIZATION METHOD FOR DNN COMPRESSION	4449
<i>Cheng Gong ; Tao Li ; Ye Lu ; Cong Hao ; Xiaofan Zhang ; Deming Chen ; Yao Chen</i>	
CARL: AGGREGATED SEARCH WITH CONTEXT-AWARE MODULE EMBEDDING LEARNING.....	4457
<i>Xinting Huang ; Jianzhong Qi ; Yu Sun ; Rui Zhang ; Hai-Tao Zheng</i>	
STRUCTURED PRUNING FOR EFFICIENT CONVNETS VIA INCREMENTAL REGULARIZATION	4465
<i>Huan Wang ; Qiming Zhang ; Yuehai Wang ; Lu Yu ; Haoji Hu</i>	
COMPARATIVE STUDY BETWEEN DEEP FACE, AUTOENCODER AND TRADITIONAL MACHINE LEARNING TECHNIQUES AIMING AT BIOMETRIC FACIAL RECOGNITION	4473
<i>Jonnathann S. Finizola ; Jonas M. Targino ; Felipe G. S. Teodoro ; Clodoaldo A. M Lima</i>	
DISTANT SUPERVISED WHY-QUESTION GENERATION WITH PASSAGE SELF-MATCHING ATTENTION	4481
<i>Jiaxin Hu ; Zhixu Li ; Renshou Wu ; Hongling Wang ; An Liu ; Jiajie Xu ; Pengpeng Zhao ; Lei Zhao</i>	
A SEMI-SUPERVISED SELF-ORGANIZING MAP WITH ADAPTIVE LOCAL THRESHOLDS	4489
<i>Pedro H. M. Braga ; Hansenclever F. Bassani</i>	
PREDICTING GROUP COHESIVENESS IN IMAGES	4498
<i>Shreya Ghosh ; Abhinav Dhall ; Nicu Sebe ; Tom Gedeon</i>	
GATED SEQUENTIAL RECOMMENDATION WITH DYNAMIC MEMORY NETWORK	4506
<i>Yunxiao Li ; Jiaying Song ; Xiao Li ; Weidong Liu</i>	
PROBABILISTIC MARGIN-AWARE MULTI-LABEL FEATURE SELECTION BY PRESERVING SPATIAL CONSISTENCY	4514
<i>Yu Yin ; Shuai An ; Jun Wang ; Jinmao Wei ; Jianhua Ruan</i>	
APPROXIMATE BAYESIAN NEURAL NETWORK TRAINED WITH ENSEMBLE KALMAN FILTER	4522
<i>Chao Chen ; Xiao Lin ; Yuan Huang ; Gabriel Terejanu</i>	
DETECTING ADVERSARIAL PERTURBATIONS THROUGH SPATIAL BEHAVIOR IN ACTIVATION SPACES	4530
<i>Ziv Katzir ; Yuval Elovici</i>	
KNOWLEDGE ADAPTIVE NEURAL NETWORK FOR NATURAL LANGUAGE INFERENCE.....	4539
<i>Qi Zhang ; Yan Yang ; Chengcai Chen ; Liang He ; Zhou Yu</i>	

A NOVEL TWO-FACTOR ATTENTION ENCODER-DECODER NETWORK THROUGH COMBINING TEMPORAL AND PRIOR KNOWLEDGE FOR WEATHER FORECASTING	4547
<i>Minglei Yuan ; Xiaozhong Ji ; Tong Lu ; Pengfei Chen ; Hualu Zhang</i>	
A SUPPORT TENSOR TRAIN MACHINE	4555
<i>Cong Chen ; Kim Batselier ; Ching-Yun Ko ; Ngai Wong</i>	
FACE ATTRIBUTE PREDICTION IN LIVE VIDEO USING FUSION OF FEATURES AND DEEP NEURAL NETWORKS	4563
<i>Sudarsini Tekkam Gnanasekar ; Svetlana Yanushkevich</i>	
USING A RECURRENT KERNEL LEARNING MACHINE FOR SMALL-SAMPLE IMAGE CLASSIFICATION.....	4571
<i>M. Cudic ; Jose C. Principe</i>	
DATA COMPLEXITY MEASURES IN FEATURE SELECTION	4577
<i>Lucas C. Okimoto ; Ana C. Lorena</i>	
FOCALNET - FOVEAL ATTENTION FOR POST-PROCESSING DNN OUTPUTS.....	4585
<i>Burhan A. Mudassar ; Saibal Mukhopadhyay</i>	
SYNTHETIC LUNG NODULE 3D IMAGE GENERATION USING AUTOENCODERS	4593
<i>Steve Kommrusch ; Louis-Noël Pouchet</i>	
REPRESENTATION LEARNING VS. HANDCRAFTED FEATURES FOR MUSIC GENRE CLASSIFICATION.....	4602
<i>Rodolfo M. Pereira ; Yandre M. G. Costa ; Rafael L. Aguiar ; Alceu S. Britto ; Luiz E. S. Oliveira ; Carlos N. Silla</i>	
MUSIC ARTIST CLASSIFICATION WITH CONVOLUTIONAL RECURRENT NEURAL NETWORKS.....	4610
<i>Zain Nasrullah ; Yue Zhao</i>	
UNIFYING UNSUPERVISED DOMAIN ADAPTATION AND ZERO-SHOT VISUAL RECOGNITION.....	4618
<i>Qian Wang ; Penghui Bu ; Toby P. Breckon</i>	
AUTOMATIC IMAGE ANNOTATION BASED ON CO-TRAINING	4626
<i>Zhixin Li ; Lan Lin ; Canlong Zhang ; Huifang Ma ; Weizhong Zhao</i>	
EXPLORING DEEP MODELS FOR COMPREHENSION OF DEICTIC GESTURE-WORD COMBINATIONS IN COGNITIVE ROBOTICS.....	4634
<i>Gabriella Pizzuto ; Angelo Cangelosi</i>	
NOVEL CEILING NEURON MODEL AND ITS APPLICATIONS	4641
<i>Rama Murthy Garimella ; Sai Dileep Munugoti ; Anil Rayala</i>	
SPREADOUT: A KERNEL WEIGHT INITIALIZER FOR CONVOLUTIONAL NEURAL NETWORKS.....	4649
<i>Matheus I. Hertzog ; Ulisses Brisolaro Corrêa ; Ricardo M. Araujo</i>	
DEEP SPIKING NEURAL NETWORK WITH SPIKE COUNT BASED LEARNING RULE	4656
<i>Jibin Wu ; Yansong Chua ; Malu Zhang ; Qu Yang ; Guoqi Li ; Haizhou Li</i>	
DYNAMIC NETWORK EMBEDDING BY SEMANTIC EVOLUTION.....	4662
<i>Yujing Zhou ; Weile Liu ; Yang Pei ; Lei Wang ; Daren Zha ; Tianshu Fu</i>	
PROJECTRON – A SHALLOW AND INTERPRETABLE NETWORK FOR CLASSIFYING MEDICAL IMAGES.....	4670
<i>Aditya Sriram ; Shivam Kalra ; H. R. Tizhoosh</i>	
SFSEGNET: PARSE FREEHAND SKETCHES USING DEEP FULLY CONVOLUTIONAL NETWORKS.....	4679
<i>Junkun Jiang ; Ruomei Wang ; Shujin Lin ; Fei Wang</i>	
DEPTH-CONTROLLABLE VERY DEEP SUPER-RESOLUTION NETWORK	4687
<i>Dohyun Kim ; Joongheon Kim ; Junseok Kwon ; Tae-Hyung Kim</i>	
NOT ALL ADVERSARIAL EXAMPLES REQUIRE A COMPLEX DEFENSE: IDENTIFYING OVER-OPTIMIZED ADVERSARIAL EXAMPLES WITH IQR-BASED LOGIT THRESHOLDING.....	4695
<i>Utku Ozbulak ; Arnout Van Messem ; Wesley De Neve</i>	
DISTANT PEDESTRIAN DETECTION IN THE WILD USING SINGLE SHOT DETECTOR WITH DEEP CONVOLUTIONAL GENERATIVE ADVERSARIAL NETWORKS.....	4703
<i>Ranjith Dinakaran ; Philip Easom ; Li Zhang ; Ahmed Bouridane ; Richard Jiang ; Eran Edirisinghe</i>	
SPATIAL-TEMPORAL ATTENTION NETWORK FOR MALWARE DETECTION USING MICRO-ARCHITECTURE FEATURES	4710
<i>Fang Li ; Jinrong Han ; Ziyuan Zhu ; Dan Meng</i>	
EVALUATING COMPETENCE MEASURES FOR DYNAMIC REGRESSOR SELECTION.....	4718
<i>Thiago J. M. Moura ; George D. C. Cavalcanti ; Luiz S. Oliveira</i>	
ACTIVE LEARNING WITH INTERPRETABLE PREDICTOR.....	4726
<i>Yusuke Taguchi ; Keisuke Kameyama ; Hideitsu Hino</i>	

EFFICIENT AND SCALABLE EXPLORATION VIA ESTIMATION-ERROR	4734
<i>Chuxiong Sun ; Rui Wang ; Ruiying Li ; Jiao Wu ; Xiaohui Hu</i>	
GRAPH CONVOLUTIONAL NETWORKS WITH STRUCTURAL ATTENTION MODEL FOR ASPECT BASED SENTIMENT ANALYSIS	4742
<i>Junjie Chen ; Hongxu Hou ; Yatu Ji ; Jing Gao</i>	
INTEGER SELF-ORGANIZING MAPS FOR DIGITAL HARDWARE	4749
<i>Denis Kleyko ; Evgeny Osipov ; Daswin De Silva ; Urban Wiklund ; Dammina Alahakoon</i>	
CHARTNET: VISUAL REASONING OVER STATISTICAL CHARTS USING MAC-NETWORKS	4757
<i>Monika Sharma ; Shikha Gupta ; Arindam Chowdhury ; Lovekesh Vig</i>	
ROBUST AND ACCURATE SHORT-TERM LOAD FORECASTING: A CLUSTER ORIENTED ENSEMBLE LEARNING APPROACH	4764
<i>Fateme Fahiman ; Sarah M. Erfani ; Christopher Leckie</i>	
HIGH SPEED COGNITIVE DOMAIN ONTOLOGIES FOR ASSET ALLOCATION USING LOIHI SPIKING NEURONS	4772
<i>Chris Yakopcic ; Nayim Rahman ; Tanvir Atahary ; Tarek M. Taha ; Alex Beigh ; Scott Douglass</i>	
A NOVEL HARDWARE-EFFICIENT CPG MODEL FOR A HEXAPOD ROBOT BASED ON NONLINEAR DYNAMICS OF COUPLED ASYNCHRONOUS CELLULAR AUTOMATON OSCILLATORS	4780
<i>Kentaro Takeda ; Hiroyuki Torikai</i>	
INTEGRATING SOCIAL CIRCLES AND NETWORK REPRESENTATION LEARNING FOR ITEM RECOMMENDATION	4788
<i>Yonghong Yu ; Qiang Wang ; Li Zhang ; Can Wang ; Sifan Wu ; Boyu Qi ; Xiaotian Wu</i>	
JSAC: A NOVEL FRAMEWORK TO DETECT MALICIOUS JAVASCRIPT VIA CNNs OVER AST AND CFG	4796
<i>Hongliang Liang ; Yuxing Yang ; Lu Sun ; Lin Jiang</i>	
SPEEDING UP AFFORDANCE LEARNING FOR TOOL USE, USING PROPRIOCEPTIVE AND KINESTHETIC INPUTS	4804
<i>Khuong N. Nguyen ; Jaewook Yoo ; Yoonsuck Choe</i>	
SIMPLE 1-D CONVOLUTIONAL NETWORKS FOR RESTING-STATE FMRI BASED CLASSIFICATION IN AUTISM	4812
<i>Ahmed El Gazzar ; Leonardo Cerliani ; Guido Van Wingen ; Rajat Mani Thomas</i>	
LEARNING SYNTACTIC AND DYNAMIC SELECTIVE ENCODING FOR DOCUMENT SUMMARIZATION	4818
<i>Haiyang Xu ; Yahao He ; Kun Han ; Junwen Chen ; Xiangang Li</i>	
IMPROVING ROUTE CHOICE MODELS BY INCORPORATING CONTEXTUAL FACTORS VIA KNOWLEDGE DISTILLATION	4826
<i>Qun Liu ; Supratik Mukhopadhyay ; Yimin Zhu ; Ravindra Gudishala ; Sanaz Saeidi ; Alimire Nabijiang</i>	
RECONFIGURATION OF ELECTRIC POWER DISTRIBUTION NETWORKS USING UNINEURON AND NULLNEURON	4834
<i>Mariane M. Santana ; Pyramo P. Da Costa ; Maury M. Gouvêa ; Fabricio P. Lucas</i>	
MUSIC CLASSIFICATION USING AN IMPROVED CRNN WITH MULTI-DIRECTIONAL SPATIAL DEPENDENCIES IN BOTH TIME AND FREQUENCY DIMENSIONS	4842
<i>Zhen Wang ; Suresh Muknahallipatna ; Maohong Fan ; Austin Okray ; Chao Lan</i>	
DR-NET: A STACKED CONVOLUTIONAL CLASSIFIER FRAMEWORK FOR DETECTION OF DIABETIC RETINOPATHY	4850
<i>Sathiya Narayan Chakravarthy ; Himanshu Singhal ; Narasimha Yadav R. P.</i>	
REGULARIZATION AND ITERATIVE INITIALIZATION OF SOFTMAX FOR FAST TRAINING OF CONVOLUTIONAL NEURAL NETWORKS	4857
<i>Qiang Rao ; Bing Yu ; Kun He ; Bailan Feng</i>	
DEEP NETWORKS WITH ADAPTIVE NYSTRÖM APPROXIMATION	4865
<i>Luc Giffon ; Stéphane Ayache ; Thierry Artières ; Hachem Kadri</i>	
MULTI-TASK LEARNING WITH CAPSULE NETWORKS	4873
<i>Kai Lei ; Qiwei Fu ; Yuzhi Liang</i>	
COMPRESSIVE LEARNING OF MULTI-LAYER PERCEPTRONS: AN ERROR ANALYSIS	4881
<i>Ata Kabán</i>	
SPORTS MOTION RECOGNITION BASED ON FOOT TRAJECTORY STATE SEQUENCE MAPPING	4888
<i>Lingjia Huang ; Hao Ma ; Weichao Yan ; Wuda Liu ; Haoyang Liu ; Zaiyue Yang</i>	
SPAMHMM: SPARSE MIXTURE OF HIDDEN MARKOV MODELS FOR GRAPH CONNECTED ENTITIES	4896
<i>Diogo Pernes ; Jaime S. Cardoso</i>	

A FEATURE LEARNING SIAMESE MODEL FOR INTELLIGENT CONTROL OF THE DYNAMIC RANGE COMPRESSOR	4906
<i>Di Sheng ; György Fazekas</i>	
VULNERABILITY OF COVARIATE SHIFT ADAPTATION AGAINST MALICIOUS POISONING ATTACKS	4914
<i>Muhammad Umer ; Christopher Frederickson ; Robi Polikar</i>	
VISUAL CUE INTEGRATION FOR SMALL TARGET MOTION DETECTION IN NATURAL CLUTTERED BACKGROUNDS	4922
<i>Hongxin Wang ; Jigen Peng ; Qinbing Fu ; Huatian Wang ; Shigang Yue</i>	
VIEW-INVARIANT GAIT RECOGNITION BASED ON DETERMINISTIC LEARNING AND KNOWLEDGE FUSION	4929
<i>Muqing Deng ; Haonan Yang ; Jiuwen Cao ; Xiaoreng Feng</i>	
A DEEP BIDIRECTIONAL HIGHWAY LONG SHORT-TERM MEMORY NETWORK APPROACH TO CHINESE SEMANTIC ROLE LABELING	4937
<i>Qi Xia ; Chung-Hsing Yeh ; Xiang-Yu Chen</i>	
DISTANTLY SUPERVISED RELATION EXTRACTION THROUGH A TRADE-OFF MECHANISM	4943
<i>Jun Ni ; Yu Liu ; Kai Wang ; Zhehuan Zhao ; Quan Z. Sheng</i>	
ZERO-SHOT OBJECT DETECTION FOR INDOOR ROBOTS	4950
<i>Abdalwhab Abdalwhab ; Huaping Liu</i>	
SIMULATING BRAIN SIGNALS: CREATING SYNTHETIC EEG DATA VIA NEURAL-BASED GENERATIVE MODELS FOR IMPROVED SSVEP CLASSIFICATION	4958
<i>Nik Khadijah Nik Aznan ; Amir Atapour-Abarghouei ; Stephen Bonner ; Jason D. Connolly ; Noura Al Moubayed ; Toby P. Breckon</i>	
A DEEP NEURAL NETWORK MODEL FOR PREDICTING USER BEHAVIOR ON FACEBOOK	4966
<i>Hanan Ameur ; Salma Jamoussi ; Abdelmajid Ben Hamadou</i>	
ENTROPY-CONSTRAINED TRAINING OF DEEP NEURAL NETWORKS	4974
<i>Simon Wiedemann ; Arturo Marban ; Klaus-Robert Müller ; Wojciech Samek</i>	
FASTER TRAINING BY SELECTING SAMPLES USING EMBEDDINGS	4982
<i>Santiago Gonzalez ; Joshua Landgraf ; Risto Miikkulainen</i>	
MICRO-STATES BASED DYNAMIC BRAIN CONNECTIVITY IN UNDERSTANDING THE COMMONALITY AND DIFFERENCES IN GENDER-SPECIFIC EMOTION PROCESSING	4989
<i>Rakib Al-Fahad ; Mohammed Yeasin</i>	
A METHOD BASED ON CONVOLUTIONAL NEURAL NETWORKS FOR FINGERPRINT SEGMENTATION	4997
<i>Paulo Bruno S. Serafim ; Aldísio G. Medeiros ; Paulo A. L. Rego ; José Gilvan R. Maia ; Fernando A. M. Trinta ; Marcio E. F. Maia ; José Antonio F. Macêdo ; Aloísio V. Lira Neto</i>	
GRAPH NEURAL SOLVER FOR POWER SYSTEMS	5005
<i>Balthazar Donon ; Benjamin Donnot ; Isabelle Guyon ; Antoine Marot</i>	
DEEP UNSUPERVISED STATE REPRESENTATION LEARNING WITH ROBOTIC PRIORS: A ROBUSTNESS ANALYSIS	5013
<i>Timothée Lesort ; Mathieu Seurin ; Xinrui Li ; Natalia Díaz-Rodríguez ; David Filliat</i>	
UNDERSTANDING LANGUAGE DEPENDENCY ON EMOTIONAL SPEECH USING SIAMESE NETWORK	5021
<i>Swaraj Kumar ; Shaurya Chaturvedi ; Sandipan Dutta</i>	
CORRELATION FILTER TRACKING METHOD VIA METRIC LEARNING AND ADAPTIVE MULTI-STAGE APPEARANCE	5029
<i>Yan Hong ; Jing Li ; Yafu Xiao ; Wenfan Zhang ; Chengfang Song ; Shan Xue</i>	
MULTI-AGENT DEEP REINFORCEMENT LEARNING WITH EMERGENT COMMUNICATION	5037
<i>David Simões ; Nuno Lau ; Luís Paulo Reis</i>	
ATTENTIVE DUAL EMBEDDING FOR UNDERSTANDING MEDICAL CONCEPTS IN ELECTRONIC HEALTH RECORDS	5045
<i>Xueping Peng ; Guodong Long ; Shirui Pan ; Jing Jiang ; Zhendong Niu</i>	
DEVELOPMENT OF A SIMULATION EXPERIMENT TO INVESTIGATE IN-FLIGHT STARTLE USING FUZZY COGNITIVE MAPS AND PUPILLOMETRY	5053
<i>Abiodun Brimmo Yusuf ; Ah-Lian Kor ; Hissam Tawfik</i>	
CLUSTERING INTERVAL-VALUED DATA WITH AUTOMATIC VARIABLES WEIGHTING	5063
<i>Sara Inés Rizo Rodríguez ; Francisco De Assis Tenório De Carvalho</i>	
ACTIVE VISUAL OBJECT EXPLORATION AND RECOGNITION WITH AN UNMANNED AERIAL VEHICLE	5071
<i>Uriel Martínez-Hernandez ; Victor Cedeno-Campos ; Adrian Rubio-Solis</i>	

PREDICTION USING LSTM NETWORKS	5078
<i>Sahar Arshi ; Li Zhang ; Rebecca Strachan</i>	
SELECTIVE EXPRESSION FOR EVENT COREFERENCE RESOLUTION ON TWITTER	5086
<i>Wenhan Chao ; Ping Wei ; Zhunchen Luo ; Xiao Liu ; Guobin Sui</i>	
ON CORRELATION OF FEATURES EXTRACTED BY DEEP NEURAL NETWORKS	5094
<i>Babajide O. Ayinde ; Tamer Inanc ; Jacek M. Zurada</i>	
TRANSFORMATION-GATED LSTM: EFFICIENT CAPTURE OF SHORT-TERM MUTATION DEPENDENCIES FOR MULTIVARIATE TIME SERIES PREDICTION TASKS	5102
<i>Jun Hu ; Wendong Zheng</i>	
CHINESE CLINICAL NAMED ENTITY RECOGNITION WITH WORD-LEVEL INFORMATION INCORPORATING DICTIONARIES	5110
<i>Ningjie Lu ; Jun Zheng ; Wen Wu ; Yan Yang ; Kaiwei Chen ; Wenxin Hu</i>	
IMPROVING FAST ADAPTIVE STACKING OF ENSEMBLES	5118
<i>Laura M. P. Mariño ; Juan I. G. Hidalgo ; Roberto S. M. Barros ; Germano C. Vasconcelos</i>	
DEEP LEARNING FOR SYSTEM TRACE RESTORATION	5126
<i>Iliia Sucholutsky ; Apurva Narayan ; Matthias Schonlau ; Sebastian Fischmeister</i>	
SEMI-SUPERVISED ONLINE ELASTIC EXTREME LEARNING MACHINE WITH FORGETTING PARAMETER TO DEAL WITH CONCEPT DRIFT IN DATA STREAMS	5134
<i>Carlos A. S. Da Silva ; Renato A. Krohling</i>	
ABSOLUTE HUMAN POSE ESTIMATION WITH DEPTH PREDICTION NETWORK	5142
<i>Márton Véges ; András Lorincz</i>	
SYNAPTIC LEARNING OF LONG-TERM COGNITIVE NETWORKS WITH INPUTS	5149
<i>Richar Sosa ; Alejandro Alfonso ; Gonzalo Nápoles ; Rafael Bello ; Koen Vanhoof ; Ann Nowé</i>	
ON THE INFLUENCE OF THE COLOR MODEL FOR IMAGE BOUNDARY DETECTION ALGORITHMS BASED ON CONVOLUTIONAL NEURAL NETWORKS	5157
<i>Tiago J. Dos Santos ; Carlos A. B. Mello ; Cleber Zanchettin ; Thiago V. M. De Souza</i>	
IMPROVING VISUAL ROAD CONDITION ASSESSMENT BY EXTENSIVE EXPERIMENTS ON THE EXTENDED GAPS DATASET	5165
<i>Ronny Stricker ; Markus Eisenbach ; Maximilian Sesselmann ; Klaus Debes ; Horst-Michael Gross</i>	
FKIMNET: A FINGER DORSAL IMAGE MATCHING NETWORK COMPARING COMPONENT (MAJOR, MINOR AND NAIL) MATCHING WITH HOLISTIC (FINGER DORSAL) MATCHING	5173
<i>Daksh Thapar ; Gaurav Jaswal ; Aditya Nigam</i>	
WHAT'S IN A WORD? DETECTING PARTISAN AFFILIATION FROM WORD USE IN CONGRESSIONAL SPEECHES	5181
<i>Ulya Bayram ; John Pestian ; Daniel Santel ; Ali A. Minai</i>	
EXPLOITING RANDOMNESS IN DEEP LEARNING ALGORITHMS	5189
<i>Hamed F. Langroudi ; Cory Merkel ; Humza Syed ; Dhireesha Kudithipudi</i>	
AUTOREGRESSIVE MODELS FOR SEQUENCES OF GRAPHS	5197
<i>Daniele Zambon ; Daniele Grattarola ; Lorenzo Livi ; Cesare Alippi</i>	
3D SKELETON ESTIMATION AND HUMAN IDENTITY RECOGNITION USING LIDAR FULL MOTION VIDEO	5205
<i>A. Glandon ; L. Vidyaratne ; N. Sadeghzadehyazdi ; Nibir K. Dhar ; Jide O. Familoni ; Scott T. Acton ; K. M. Iftekharuddin</i>	
LIFTING 2D HUMAN POSE TO 3D : A WEAKLY SUPERVISED APPROACH	5213
<i>Sandika Biswas ; Sanjana Sinha ; Kavya Gupta ; Brojeshwar Bhowmick</i>	
ON ROBUSTNESS OF SPIN-ORBIT-TORQUE BASED STOCHASTIC SIGMOID NEURONS FOR SPIKING NEURAL NETWORKS	5222
<i>Akhilesh Jaiswal ; Amogh Agrawal ; Indranil Chakraborty ; Deboleena Roy ; Kaushik Roy</i>	
DEEP LEARNING AND ONE-CLASS SVM BASED ANOMALOUS CROWD DETECTION	5228
<i>Meng Yang ; Sutharshan Rajasegarar ; Sarah M. Erfani ; Christopher Leckie</i>	
DEEP LEARNING PRICE MOMENTUM IN US EQUITIES	5236
<i>Stephen Choi ; Tyler Renelle</i>	
IMPROVING NOISE TOLERANCE OF MIXED-SIGNAL NEURAL NETWORKS	5244
<i>Michael Klachko ; Mohammad Reza Mahmoodi ; Dmitri Strukov</i>	
GADGET: USING GATED GRU FOR BIOMEDICAL EVENT TRIGGER DETECTION	5252
<i>Cheng Zeng ; Yi Zhang ; Heng-Yang Lu ; Chong-Jun Wang</i>	
LEARNING PRIVATE NEURAL LANGUAGE MODELING WITH ATTENTIVE AGGREGATION	5260
<i>Shaoxiong Ji ; Shirui Pan ; Guodong Long ; Xue Li ; Jing Jiang ; Zi Huang</i>	
LOOKING BACK AT LABELS: A CLASS BASED DOMAIN ADAPTATION TECHNIQUE	5268
<i>Vinod Kumar Kurmi ; Vinay P. Nambodiri</i>	

CLOSER TO OPTIMAL ANGLE-CONSTRAINED PATH PLANNING	5276
<i>Changwu Zhang ; Hengzhu Liu ; Yuchen Tang</i>	
DEEP LEARNING BASED DOMAIN KNOWLEDGE INTEGRATION FOR SMALL DATASETS: ILLUSTRATIVE APPLICATIONS IN MATERIALS INFORMATICS	5284
<i>Zijiang Yang ; Reda Al-Bahrani ; Andrew C. E. Reid ; Stefanos Papanikolaou ; Surya R. Kalidindi ; Wei-Keng Liao ; Alok Choudhary ; Ankit Agrawal</i>	
FSC-CAPSNET: FRACTIONALLY-STRIDED CONVOLUTIONAL CAPSULE NETWORK FOR COMPLEX DATA	5292
<i>Jian-Wei Liu ; Feng Gao ; Run-Kun Lu ; Yuan-Feng Lian ; Dian-Zhong Wang ; Xiong-Lin Luo ; Chu-Ran Wang</i>	
EVIDENCE TRANSFER FOR IMPROVING CLUSTERING TASKS USING EXTERNAL CATEGORICAL EVIDENCE	5299
<i>Athanasios Davvetas ; Iraklis A. Klampanos ; Vangelis Karkaletsis</i>	
NAO INDEX PREDICTION USING LSTM AND CONVLSTM NETWORKS COUPLED WITH DISCRETE WAVELET TRANSFORM	5307
<i>Bin Mu ; Jing Li ; Shijin Yuan ; Xiaodan Luo ; Guokun Dai</i>	
LEARNING IMAGE RELATIONS WITH CONTRAST ASSOCIATION NETWORKS	5315
<i>Yao Lu ; Zhirong Yang ; Juho Kannala ; Samuel Kaski</i>	
DOG IDENTIFICATION USING SOFT BIOMETRICS AND NEURAL NETWORKS	5322
<i>Kenneth Lai ; Xinyuan Tu ; Svetlana Yanushkevich</i>	
AN EFFICIENT FRAMEWORK BY TOPIC MODEL FOR MULTI-LABEL TEXT CLASSIFICATION	5330
<i>Wei Sun ; Xiangying Ran ; Xiangyang Luo ; Chongjun Wang</i>	
PREDICTING HOUSEHOLD WATER CONSUMPTION EVENTS: TOWARDS A PERSONALISED RECOMMENDER SYSTEM TO ENCOURAGE WATER-CONSCIOUS BEHAVIOUR	5337
<i>Md Shamsur Rahim ; Khoi Anh Nguyen ; Rodney Anthony Stewart ; Damien Giurco ; Michael Blumenstein</i>	
QUANTITATIVE TRADING ON STOCK MARKET BASED ON DEEP REINFORCEMENT LEARNING	5345
<i>Jia Wu ; Chen Wang ; Lidong Xiong ; Hongyong Sun</i>	
TESTING THE ROBUSTNESS OF MANIFOLD LEARNING ON EXAMPLES OF THINNED-OUT DATA	5353
<i>Fayeem Aziz ; Stephan Chalup</i>	
A HYBRID CONVOLUTIONAL APPROACH FOR PARKING AVAILABILITY PREDICTION	5361
<i>Hadi Samer Jomaa ; Josif Grabocka ; Lars Schmidt-Thieme ; Alexander Borek</i>	
DEEP LEARNING OF P73 BIOMARKER EXPRESSION IN RECTAL CANCER PATIENTS	5369
<i>Tuan D. Pham ; Chuanwen Fan ; Hong Zhang ; Xiao-Feng Sun</i>	
COMPETITIVE FEATURE EXTRACTION FOR ACTIVITY RECOGNITION BASED ON WAVELET TRANSFORMS AND ADAPTIVE POOLING	5377
<i>Mubarak G. Abdu-Aguye ; Walid Gomaa</i>	
ENSEMBLING 3D CNN FRAMEWORK FOR VIDEO RECOGNITION	5385
<i>Ruolin Huang ; Hongbin Dong ; Guisheng Yin ; Qiang Fu</i>	
DICENET: FINE-GRAINED RECOGNITION VIA DILATED ITERATIVE CONTEXTUAL ENCODING	5392
<i>Abhishek Pal ; Gautham Krishnan ; Manav Rajiv Moorthy ; Narasimha Yadav ; Adithya R Ganesh ; T Sree Sharmila</i>	
COMBINING CONVOLUTIONAL SIDE-OUTPUTS FOR ROAD IMAGE SEGMENTATION	5400
<i>Felipe A. L. Reis ; Raquel Almeida ; Ewa Kijak ; Simon Malinowski ; Silvio Jamil F. Guimarães ; Zenilton K. G. Do Patrocínio</i>	
HEARTBEAT DETECTION BASED ON PULSE NEURON MODEL FOR HEART RATE VARIABILITY ANALYSIS	5408
<i>Takenori Obo ; Daiki Takaguchi ; Daisuke Katagami ; Junji Sone ; Takahito Tomoto ; Yuta Ogai ; Yoshihisa Udagawa</i>	
EFFICIENT AND ROBUST CONVOLUTIONAL NEURAL NETWORKS VIA CHANNEL PRIORITIZATION AND PATH ENSEMBLE	5414
<i>Chun-Min Chang ; Chia-Ching Lin ; Kuan-Ta Chen</i>	
EXPLORING SPATIOTEMPORAL FUNCTIONAL CONNECTIVITY DYNAMICS OF THE HUMAN BRAIN USING CONVOLUTIONAL AND RECURSIVE NEURAL NETWORKS	5422
<i>Zachary J. Harper ; Charles M. Welzig</i>	
FERNN: A FAST AND EVOLVING RECURRENT NEURAL NETWORK MODEL FOR STREAMING DATA CLASSIFICATION	5428
<i>Monidipa Das ; Mahardhika Pratama ; Andri Ashfahani ; Subhrajit Samanta</i>	

REPRESENTATION OF WHITE- AND BLACK-BOX ADVERSARIAL EXAMPLES IN DEEP NEURAL NETWORKS AND HUMANS: A FUNCTIONAL MAGNETIC RESONANCE IMAGING STUDY	5436
<i>Chihye Han ; Wonjun Yoon ; Gihyun Kwon ; Daeshik Kim ; Seungkyu Nam</i>	
POSE ESTIMATOR AND TRACKER USING TEMPORAL FLOW MAPS FOR LIMBS	5444
<i>Jihye Hwang ; Jieun Lee ; Sungheon Park ; Nojun Kwak</i>	
BRAIN DYNAMICS ENCODING FROM VISUAL INPUT DURING FREE VIEWING OF NATURAL VIDEOS	5452
<i>Zhen Liang ; Hiroshi Higashi ; Shigeyuki Oba ; Shin Ishii</i>	
UNSUPERVISED FEATURE LEARNING FOR VISUAL PLACE RECOGNITION IN CHANGING ENVIRONMENTS	5460
<i>Dongye Zhao ; Bailu Si ; Fengzhen Tang</i>	
DEEP LEARNING-BASED STRATEGY FOR MACROMOLECULES CLASSIFICATION WITH IMBALANCED DATA FROM CELLULAR ELECTRON CRYOTOMOGRAPHY	5468
<i>Ziqian Luo ; Xiangrui Zeng ; Zhipeng Bao ; Min Xu</i>	
EFFICIENT LEARNING RATE ADAPTATION FOR CONVOLUTIONAL NEURAL NETWORK TRAINING	5476
<i>Spiros V. Georgakopoulos ; Vassilis P. Plagianakos</i>	
LANE CHANGE DECISION-MAKING THROUGH DEEP REINFORCEMENT LEARNING WITH RULE-BASED CONSTRAINTS	5484
<i>Junjie Wang ; Qichao Zhang ; Dongbin Zhao ; Yaran Chen</i>	
A COUNT-SKETCH TO REDUCE MEMORY CONSUMPTION WHEN TRAINING A MODEL WITH GRADIENT DESCENT	5490
<i>Wissam Siblini ; Frank Meyer ; Pascale Kuntz</i>	
A PRIOR SETTING THAT IMPROVES LDA IN BOTH DOCUMENT REPRESENTATION AND TOPIC EXTRACTION	5498
<i>Juncheng Ding ; Wei Jin</i>	
A MODULAR APPROACH TO CONSTRUCTION OF SPIKING NEURAL NETWORKS	5506
<i>Kyunghee Lee ; Hongchi Shi</i>	
SPARSE AND ONLINE NULL PROXIMAL DISCRIMINANT ANALYSIS FOR ONE CLASS LEARNING IN LARGE-SCALE DATASETS	5514
<i>Franck Dufrenois ; Denis Hamad</i>	
A METHOD OF PEDESTRIAN FINE-GRAINED ATTRIBUTE DETECTION AND RECOGNITION	5522
<i>Xianqin Ma ; Chongchong Yu ; Xin Yang ; Xiuxin Chen ; Jianzhang Chen ; Lan Zhou</i>	
AN ELECTRONIC NEURON WITH INPUT-SPECIFIC SPIKING	5531
<i>Rebecca K. Lee ; Alice C. Parker</i>	
INVESTIGATION OF NEURAL NETWORKS USING SYNAPSE ARRAYS BASED ON GATED SCHOTTKY DIODES	5539
<i>Suhwan Lim ; Dongseok Kwon ; Sung-Tae Lee ; Hyeongsu Kim ; Jong-Ho Bae ; Jong-Ho Lee</i>	
A SPIKING NEURAL NETWORK WITH A GLOBAL SELF-CONTROLLER FOR UNSUPERVISED LEARNING BASED ON SPIKE-TIMING-DEPENDENT PLASTICITY USING FLASH MEMORY SYNAPTIC DEVICES	5547
<i>Won-Mook Kang ; Chul-Heung Kim ; Soochang Lee ; Sung Yun Woo ; Jong-Ho Bae ; Byung-Gook Park ; Jong-Ho Lee</i>	
PARALLEL CONVOLUTION ALGORITHM USING IMPLICIT MATRIX MULTIPLICATION ON MULTI-CORE CPUS	5554
<i>Qinglin Wang ; Songzhu Mei ; Jie Liu ; Chunye Gong</i>	
A HARDWARE/SOFTWARE EXTREME LEARNING MACHINE SOLUTION FOR IMPROVED RIDE COMFORT IN AUTOMOBILES	5561
<i>Óscar Mata-Carballeira ; Inés Del Campo ; Victoria Martínez ; Javier Echanobe</i>	
ST-RNET: A TIME-AWARE POINT-OF-INTEREST RECOMMENDATION METHOD BASED ON NEURAL NETWORK	5569
<i>Lu Gao ; Yuhua Li ; Ruixuan Li ; Zhenlong Zhu ; Xiwu Gu ; Olivier Habimana</i>	
LARGE-MARGIN MULTIPLE KERNEL LEARNING FOR DISCRIMINATIVE FEATURES SELECTION AND REPRESENTATION LEARNING	5577
<i>Babak Hosseini ; Barbara Hammer</i>	
TCOD: A TRAVELING COMPANION DISCOVERY METHOD BASED ON CLUSTERING AND ASSOCIATION ANALYSIS	5585
<i>Yao Ruihong ; Wang Fei ; Chen Shuhui</i>	

CURIOUS META-CONTROLLER: ADAPTIVE ALTERNATION BETWEEN MODEL-BASED AND MODEL-FREE CONTROL IN DEEP REINFORCEMENT LEARNING	5592
<i>Muhammad Burhan Hafez ; Cornelius Weber ; Matthias Kerzel ; Stefan Wermter</i>	
ON THE DISCRIMINATIVE POWER OF LEARNED VS. HAND-CRAFTED FEATURES FOR CROWD DENSITY ANALYSIS	5600
<i>Mohamed Amine Marnissi ; Hajer Fradi ; Jean-Luc Dugelay</i>	
RSYGAN: GENERATIVE ADVERSARIAL NETWORK FOR RECOMMENDER SYSTEMS	5608
<i>Ruiping Yin ; Kan Li ; Jie Lu ; Guangquan Zhang</i>	
VT-GAN: VIEW TRANSFORMATION GAN FOR GAIT RECOGNITION ACROSS VIEWS	5615
<i>Peng Zhang ; Qiang Wu ; Jingsong Xu</i>	
HARDENING DEEP NEURAL NETWORKS VIA ADVERSARIAL MODEL CASCADES	5623
<i>Deepak Vijaykeerthy ; Anshuman Suri ; Sameep Mehta ; Ponnurangam Kumaraguru</i>	
ON THE STABILITY OF INTERPRETABLE MODELS	5631
<i>Riccardo Guidotti ; Salvatore Ruggieri</i>	
PATCHING DEEP NEURAL NETWORKS FOR NONSTATIONARY ENVIRONMENTS	5639
<i>Sebastian Kauschke ; David H. Lehmann ; Johannes Fürnkranz</i>	
TOWARDS OPTIMIZING CONVOLUTIONAL NEURAL NETWORKS FOR ROBOTIC SURGERY SKILL EVALUATION	5647
<i>Dayvid Castro ; Danilo Pereira ; Cleber Zanchettin ; David Macêdo ; Byron L. D. Bezerra</i>	
SCENE RECOGNITION VIA OBJECT-TO-SCENE CLASS CONVERSION: END-TO-END TRAINING	5655
<i>Hongje Seong ; Junhyuk Hyun ; Hyunbae Chang ; Suhyeon Lee ; Suhan Woo ; Euntae Kim</i>	
AN APPLICATION OF CONVOLUTIONAL NEURAL NETWORKS FOR THE EARLY DETECTION OF LATE-ONSET NEONATAL SEPSIS	5661
<i>Yifei Hu ; Vincent C. S. Lee ; Kenneth Tan</i>	
3D ROOM RECONSTRUCTION FROM A SINGLE FISHEYE IMAGE	5669
<i>Mingyang Li ; Yi Zhou ; Ming Meng ; Yuehua Wang ; Zhong Zhou</i>	
A DEEP LEARNING ALGORITHM FOR FULLY AUTOMATIC BRAIN TUMOR SEGMENTATION	5677
<i>Yu Wang ; Changsheng Li ; Ting Zhu ; Chongchong Yu</i>	
AN LSTM BASED ENCODER-DECODER MODEL FOR MULTISTEP TRAFFIC FLOW PREDICTION	5682
<i>Shengdong Du ; Tianrui Li ; Yan Yang ; Xun Gong ; Shi-Jinn Horng</i>	
A COMPARISON OF MACHINE LEARNING ALGORITHMS AS SURROGATE MODEL FOR NET PRESENT VALUE PREDICTION FROM WELLS ARRANGEMENT DATA	5690
<i>João Roberto Bertini Junior ; Mei Abe Funcia ; Antonio Alberto S. Santos ; Denis J. Schiozer</i>	
A MULTI-APPLICATION, SCALABLE AND ADAPTABLE HARDWARE SOM ARCHITECTURE	5698
<i>Mehdi Abadi ; Slavisa Jovanovic ; Khaled Ben Khalifa ; Serge Weber ; Mohamed Hédi Bedoui</i>	
SELF-SUPERVISED DEEP LEARNING FOR RETINAL VESSEL SEGMENTATION USING AUTOMATICALLY GENERATED LABELS FROM MULTIMODAL DATA	5706
<i>Álvaro S. Hervella ; José Rouco ; Jorge Novo ; Marcos Ortega</i>	
REDUCED-GATE CONVOLUTIONAL LSTM ARCHITECTURE FOR NEXT-FRAME VIDEO PREDICTION USING PREDICTIVE CODING	5714
<i>Nelly Elsayed ; Anthony S. Maida ; Magdy Bayoumi</i>	
NESTED VARIANCE ESTIMATING VAE/GAN FOR FACE GENERATION	5723
<i>Hong-You Chen ; Chi-Jen Lu</i>	
MULTI-SCALE STEPWISE TRAINING STRATEGY OF CONVOLUTIONAL NEURAL NETWORKS FOR DIABETIC RETINOPATHY SEVERITY ASSESSMENT	5731
<i>Fangjun Li ; Dongfeng Yuan ; Mingqiang Zhang ; Cong Liang ; Xiaotian Zhou ; Haixia Zhang</i>	
MDLDA: A NEW MULTI-DIMENSION TOPIC APPROACH	5736
<i>Juncheng Ding ; Wei Jin</i>	
BIPOAR FUZZY ROUGH COGNITIVE NETWORK	5744
<i>Hua Zheng</i>	
GROUP K-SPARSE TEMPORAL CONVOLUTIONAL NEURAL NETWORKS: UNSUPERVISED PRETRAINING FOR VIDEO CLASSIFICATION	5751
<i>Zoltán Á. Milacski ; Barnabás Póczos ; András Lorincz</i>	
ADVERSARIAL IMITATION LEARNING VIA RANDOM SEARCH	5761
<i>Myungjae Shin ; Joongheon Kim</i>	
A MULTI-ATTENTIVE PYRAMIDAL MODEL FOR VISUAL SENTIMENT ANALYSIS	5769
<i>Xiaohao He ; Huijun Zhang ; Ningyun Li ; Ling Feng ; Feng Zheng</i>	

ARE TRADITIONAL NEURAL NETWORKS WELL-CALIBRATED?	5777
<i>Ulf Johansson ; Patrick Gabrielsson</i>	
DEEP FEATURE ANALYSIS IN A TRANSFER LEARNING-BASED APPROACH FOR THE AUTOMATIC IDENTIFICATION OF DIABETIC MACULAR EDEMA	5785
<i>Joaquim De Moura ; Jorge Novo ; Marcos Ortega</i>	
TA-BLSTM: TAG ATTENTION-BASED BIDIRECTIONAL LONG SHORT-TERM MEMORY FOR SERVICE RECOMMENDATION IN MASHUP CREATION	5793
<i>Min Shi ; Yufei Tang ; Jianxun Liu</i>	
SPATIAL EVENT PREDICTION VIA MULTIVARIATE TIME SERIES ANALYSIS OF NEIGHBORING SOCIAL UNITS USING DEEP NEURAL NETWORKS	5801
<i>Bonaventure C. Molokwu ; Ziad Kobti</i>	
UNSUPERVISED REPRESENTATION ADVERSARIAL LEARNING NETWORK: FROM RECONSTRUCTION TO GENERATION	5809
<i>Yuqian Zhou ; Kuangxiao Gu ; Thomas Huang</i>	
UNSUPERVISED DOMAIN ADAPTATION USING GRAPH TRANSDUCTION GAMES	5817
<i>Sebastiano Vascon ; Sinem Aslan ; Alessandro Torcinovich ; Twan Van Laarhoven ; Elena Marchiori ; Marcello Pelillo</i>	
USING WINNING LOTTERY TICKETS IN TRANSFER LEARNING FOR CONVOLUTIONAL NEURAL NETWORKS	5825
<i>Ryan Van Soelen ; John W. Sheppard</i>	
SKIP THE QUESTION YOU DON'T KNOW: AN EMBEDDING SPACE APPROACH	5833
<i>Kaiyuan Chen ; Jinghao Zhao</i>	
SPONTANEOUS FACIAL MICRO-EXPRESSION RECOGNITION USING 3D SPATIOTEMPORAL CONVOLUTIONAL NEURAL NETWORKS	5840
<i>Sai Prasanna Teja Reddy ; Surya Teja Karri ; Shiv Ram Dubey ; Snehasis Mukherjee</i>	
A DEEP LEARNING BASED ARCHITECTURE FOR RAINFALL ESTIMATION INTEGRATING HETEROGENEOUS DATA SOURCES	5848
<i>Gianluigi Folino ; Massimo Guarascio ; Francesco Chiaravallotti ; Salvatore Gabriele</i>	
SINGLE VIEW DISTORTION CORRECTION USING SEMANTIC GUIDANCE	5856
<i>Szabolcs-Botond Lorincz ; Szabolcs Pável ; Lehel Csató</i>	
FUSION OF MULTIPLE REPRESENTATIONS EXTRACTED FROM A SINGLE SENSOR'S DATA FOR ACTIVITY RECOGNITION USING CNNs	5862
<i>Farzan Majeed Noori ; Enrique Garcia-Ceja ; Md. Zia Uddin ; Michael Riegler ; Jim Tørresen</i>	
CROSS-DOMAIN CAR DETECTION USING UNSUPERVISED IMAGE-TO-IMAGE TRANSLATION: FROM DAY TO NIGHT	5868
<i>Vinicius F. Arruda ; Thiago M. Paixão ; Rodrigo F. Berriel ; Alberto F. De Souza ; Claudine Badue ; Nicu Sebe ; Thiago Oliveira-Santos</i>	
MULTI-CLASS CLASSIFICATION IN PARKINSON'S DISEASE BY LEVERAGING INTERNAL TOPOLOGICAL STRUCTURE OF THE DATA AND OF THE LABEL SPACE	5876
<i>Alex Frid ; Larry M. Manevitz ; Ohad Mosafi</i>	
EXTRACTING PREREQUISITE RELATIONS AMONG CONCEPTS IN WIKIPEDIA	5885
<i>Yang Zhou ; Kui Xiao</i>	
TRANSFER ENTROPY BASED CONNECTIVITY ESTIMATION OF SPONTANEOUSLY FIRING HIPPOCAMPAL CULTURES ON MULTI ELECTRODE ARRAYS	5893
<i>Nikesh Lama ; Alan Hargreaves ; Bob Stevens ; T. M. McGinnity</i>	
MULTIMODAL DATA ENHANCED REPRESENTATION LEARNING FOR KNOWLEDGE GRAPHS	5901
<i>Zikang Wang ; Linjing Li ; Qiudan Li ; Daniel Zeng</i>	
FEATURE SELECTION VIA MUTUAL INFORMATION: NEW THEORETICAL INSIGHTS	5909
<i>Mario Beraha ; Alberto Maria Metelli ; Matteo Papini ; Andrea Tirinzoni ; Marcello Restelli</i>	
SPEECH EMOTION RECOGNITION WITH EARLY VISUAL CROSS-MODAL ENHANCEMENT USING SPIKING NEURAL NETWORKS	5918
<i>Esma Mansouri-Benssassi ; Juan Ye</i>	
COMPACT CLUSTER-BASED BALANCED DISTRIBUTION ADAPTATION FOR TRANSFER LEARNING	5926
<i>Xu Zhang ; Zuyu Zhang ; Haeyoung Bae</i>	
IMAGE CAPTIONING BASED ON SENTENCE-LEVEL AND WORD-LEVEL ATTENTION	5934
<i>Haiyang Wei ; Zhixin Li ; Canlong Zhang ; Tao Zhou ; Yu Quan</i>	
STEPWISE ACQUISITION OF DIALOGUE ACT THROUGH HUMAN-ROBOT INTERACTION	5942
<i>Akane Matsushima ; Ryosuke Kanajiri ; Yusuke Hattori ; Chie Fukada ; Natsuki Oka</i>	

FULLY AUTOMATIC DUAL-GUIDEWIRE SEGMENTATION FOR CORONARY BIFURCATION LESION	5951
<i>Yan-Jie Zhou ; Xiao-Liang Xie ; Gui-Bin Bian ; Zeng-Guang Hou ; Yu-Dong Wu ; Shi-Qi Liu ; Xiao-Hu Zhou ; Jia-Xing Wang</i>	
GENERATING NATURAL VIDEO DESCRIPTIONS USING SEMANTIC GATE	5957
<i>Hyungmin Lee ; Il-Koo Kim</i>	
HIERARCHICAL CAPSULE BASED NEURAL NETWORK ARCHITECTURE FOR SEQUENCE LABELING	5964
<i>Saurabh Srivastava ; Puneet Agarwal ; Gautam Shroff ; Lovekesh Vig</i>	
EFFICIENT ESTIMATION OF NODE REPRESENTATIONS IN LARGE GRAPHS USING LINEAR CONTEXTS	5972
<i>Tiago Pimentel ; Rafael Castro ; Adriano Veloso ; Nivio Ziviani</i>	
DOMAIN ADAPTATION FOR SEMG-BASED GESTURE RECOGNITION WITH RECURRENT NEURAL NETWORKS	5980
<i>István Ketykó ; Ferenc Kovács ; Krisztián Zsolt Varga</i>	
KNOWLEDGE GRAPH-BASED ENTITY IMPORTANCE LEARNING FOR MULTI-STREAM REGRESSION ON AUSTRALIAN FUEL PRICE FORECASTING	5987
<i>Dennis Chow ; Anjin Liu ; Guangquan Zhang ; Jie Lu</i>	
DISTRIBUTED AND RANDOMIZED TENSOR TRAIN DECOMPOSITION FOR FEATURE EXTRACTION	5995
<i>Krzysztof Fonal ; Rafal Zdunek</i>	
KEYSTROKE ANALYSIS FOR USER IDENTIFICATION USING DEEP NEURAL NETWORKS	6003
<i>Mario Luca Bernardi ; Marta Cimitile ; Fabio Martinelli ; Francesco Mercaldo</i>	
VISUALIZING TIME SERIES DATA WITH TEMPORAL MATCHING BASED T-SNE	6011
<i>Kwan Yeung Wong ; Fu-Lai Chung</i>	
EVOLUTIONARY NEURAL ARCHITECTURE SEARCH FOR IMAGE RESTORATION	6019
<i>Gerard Jacques Van Wyk ; Anna Sergeevna Bosman</i>	
CASCADED NEURAL NETWORK FOR MEMRISTOR BASED NEUROMORPHIC COMPUTING	6027
<i>Sheng-Yang Sun ; Hui Xu ; Jiwei Li ; Haijun Liu ; Qingjiang Li</i>	
A COMPOSITE EXTENDED NEAREST NEIGHBOR MODEL FOR DAY-AHEAD LOAD FORECASTING	6033
<i>Md. Rashedul Haq ; Zhen Ni</i>	
OPTIMIZATION OF A CONVOLUTIONAL NEURAL NETWORK USING A HYBRID ALGORITHM	6041
<i>Chia-Ling Huang ; Yan-Chih Shih ; Chyh-Ming Lai ; Vera Yuk Ying Chung ; Wen-Bo Zhu ; Wei-Chang Yeh ; Xiangjian He</i>	
K-RANDOM FORESTS: A K-MEANS STYLE ALGORITHM FOR RANDOM FOREST CLUSTERING	6049
<i>Manuele Bicego</i>	
APPLICATION INFERENCE USING MACHINE LEARNING BASED SIDE CHANNEL ANALYSIS	6057
<i>Nikhil Chawla ; Arvind Singh ; Monodeep Kar ; Saibal Mukhopadhyay</i>	
DEEP REINFORCEMENT LEARNING FOR CHATBOTS USING CLUSTERED ACTIONS AND HUMAN-LIKENESS REWARDS	6065
<i>Heriberto Cuáyahuilit ; Donghyeon Lee ; Seonghan Ryu ; Sungja Choi ; Inchul Hwang ; Jihie Kim</i>	
BENCHMARKING MULTI-TASK LEARNING IN PREDICTIVE MODELS FOR DRUG DISCOVERY	6073
<i>Philippa Grace McCabe ; Sandra Ortega-Martorell ; Ivan Olier</i>	
SYNTAX TREE AWARE ADVERSARIAL QUESTION REWRITING FOR ANSWER SELECTION	6080
<i>Shuang Qin ; Wenge Rong ; Libin Shi ; Jianxin Yang ; Haodong Yang ; Zhang Xiong</i>	
A NOVEL NEURAL APPROACH FOR NEWS REPRINT PREDICTION	6088
<i>Riheng Yao ; Qiudan Li ; Lei Wang ; Daniel Dajun Zeng</i>	
RECURRENT NETWORK AND MULTI-ARM BANDIT METHODS FOR MULTI-TASK LEARNING WITHOUT TASK SPECIFICATION	6096
<i>Thy Nguyen ; Tayo Obafemi-Ajayi</i>	
COLLECTING INDICATORS OF COMPROMISE FROM UNSTRUCTURED TEXT OF CYBERSECURITY ARTICLES USING NEURAL-BASED SEQUENCE LABELLING	6104
<i>Zi Long ; Lianzhi Tan ; Shengping Zhou ; Chaoyang He ; Xin Liu</i>	

EMBEDDINGS AND CONVOLUTION, IS THAT THE BEST YOU CAN DO WITH SENTIMENT FEATURES?	6112
<i>Ao Feng ; Zhenghao Chen ; Shuang Zhou ; Xi Wu</i>	
SEQ2SEQ DEEP LEARNING MODELS FOR MICROTTEXT NORMALIZATION	6120
<i>Ranjan Satapathy ; Yang Li ; Sandro Cavallari ; Erik Cambria</i>	
DEPERSONALIZED CROSS-SUBJECT VIGILANCE ESTIMATION WITH ADVERSARIAL DOMAIN GENERALIZATION	6128
<i>Bo-Qun Ma ; He Li ; Yun Luo ; Bao-Liang Lu</i>	
A MULTIPLE GRANULARITY CO-REASONING MODEL FOR MULTI-CHOICE READING COMPREHENSION	6136
<i>Hang Miao ; Ruifang Liu ; Sheng Gao</i>	
TARGETED BLACK-BOX ADVERSARIAL ATTACK METHOD FOR IMAGE CLASSIFICATION MODELS	6143
<i>Su Zheng ; Jialin Chen ; Lingli Wang</i>	
A PROOF OF LOCAL CONVERGENCE FOR THE ADAM OPTIMIZER	6151
<i>Sebastian Bock ; Martin Weiß</i>	
RETINA-INSPIRED VISUAL MODULE FOR ROBOT NAVIGATION IN COMPLEX ENVIRONMENTS	6159
<i>Hans Lehnert ; María-José Escobar ; Mauricio Araya</i>	
A DEEP LEARNING BASED APPROACH TO SKIN LESION BORDER EXTRACTION WITH A NOVEL EDGE DETECTOR IN DERMOSCOPY IMAGES	6167
<i>Abder-Rahman Ali ; Jingpeng Li ; Sally Jane O'Shea ; Guang Yang ; Thomas Trappenberg ; Xujiang Ye</i>	
GMM-BASED UNDERSAMPLING AND ITS APPLICATION FOR CREDIT CARD FRAUD DETECTION	6174
<i>Fengjun Zhang ; Guanjun Liu ; Zhenchuan Li ; Chungang Yan ; Changjun Jiang</i>	
AN UNDERCOMPLETE AUTOENCODER TO EXTRACT MUSCLE SYNERGIES FOR MOTOR INTENTION DETECTION	6182
<i>Domenico Buongiorno ; Cristian Camardella ; Giacomo Donato Cascarano ; Luis Pelaez Murciego ; Michele Barsotti ; Irio De Feudis ; Antonio Frisoli ; Vitoantonio Bevilacqua</i>	
PREDICTING PERFORMANCE USING APPROXIMATE STATE SPACE MODEL FOR LIQUID STATE MACHINES	6190
<i>A. Gorad ; V. Saraswat ; U. Ganguly</i>	
Author Index	