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2p: Feature selection, extraction, and aggregation

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1-1: Neural Networks Models
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11-3: Deep neural networks

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Louisiana State University, United States; Ailectric, United States

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Louisiana State University, United States

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Universidade Federal do Espirito Santo, Brazil

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Universidade Federal de Minas Gerais, Brazil

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Northumbria University, United Kingdom; Northumbria Healthcare NHS, United Kingdom; Teesside University, United Kingdom

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Robert Gordon University, United Kingdom; Oxford Brookes University, United Kingdom

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Graduate School of Fundamental Science and Engineering, Waseda University, Japan

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Imperial College London, United Kingdom

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Institute of Automation, Chinese Academy of Sciences, China

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SS3: Special Session on Complex-Valued and Quaternionic Neural Networks**Tuesday, July 10, 8:00AM-10:00AM****Oceania 10****Session Chair(s): Marcos Eduardo Valle, Igor Aizenberg, Akira Hirose, and Danilo Mandic****Quaternionic Recurrent Correlation Neural Networks 1542***Marcos Eduardo Valle**Universidade Estadual de Campinas, Brazil***Image Recognition using MLMVN and Frequency Domain Features 1550***Igor Aizenberg and Alexander Gonzalez**Manhattan College, United States***Performance of entire-spectrum-processing complex-valued neural-network filter to generate digital elevation model in interferometric radar 1558***Kohei Oyama and Akira Hirose**The University of Tokyo, Japan***Deep Quaternion Networks 1565***Chase Gaudet and Anthony Maida**University of Louisiana at Lafayette, United States***iBQPSO: an Improved BQPSO Algorithm for Feature Selection 1573***Qing Wu, Yuanfeng Shen, Zheping Ma, Jin Fan and Ruiquan Ge**Hangzhou Dianzi University, China***A comparison between ANN and SVM classifiers for Parkinson's disease by using a model-free computer-assisted handwriting analysis based on biometric signals 1580***Claudio Loconsole, Giacomo Donato Cascarano, Antonio Lattarulo, Antonio Brunetti, Gianpaolo Francesco Trotta, Domenico Buongiorno, Iaria Bortone, Irio De Feudis, Giacomo Losavio, Vitoantonio Bevilacqua and Eugenio Di Sciascio*
*Department of Electrical and Information Engineering (DEI), Polytechnic University of Bari, Italy; Department of Mechanics, Mathematics and Management (DMMM), Polytechnic University of Bari, Italy; Institute of Clinical Physiology (IFC), National Council of Research (CNR), Italy; Medica Sud s.r.l., Italy***11-4: Deep neural networks****Tuesday, July 10, 2:10PM-4:10PM****Oceania 4****Session Chair(s): Juarez Monteiro and Jaime Davila****Lateral Representation Learning in Convolutional Neural Networks 1588***Pedro Ballester, Ulisses Correa and Ricardo Araujo**Federal University of Pelotas, Brazil***Evaluating the Feasibility of Deep Learning for Action Recognition in Small Datasets 1596***Juarez Monteiro, Roger Granada, Joao Aires and Rodrigo Barros**PUCRS, Brazil***Multi-granularity Hierarchical Attention Siamese Network for Visual Tracking 1604***Xing Chen, Xiang Zhang, Huibin Tan, Long Lan, Zhigang Luo and Huang Xuhui**College of Computer, National University of Defense Technology, China***Semantic Image Segmentation Based on Attentions to Intra Scales and Inner Channels 1612***Hongchao Lu, Zhidong Deng and Xiaolong Liu**Tsinghua University, China***Enhanced Rotational Invariant Convolutional Neural Network for Supernovae Detection 1620***Esteban Reyes, Pablo Estevez, Ignacio Reyes, Guillermo Cabrera-Vives, Pablo Huijse, Rodrigo Carrasco and Francisco Forster**Dept Electrical Engineering, University of Chile, Chile; Dept Computer Science, University of Concepcion, Chile, Chile; CMM, University of Chile, Chile*

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2a-1: Supervised learning
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Audio Research Group, Lab. of Signal Processing, Tampere University of Technology, Finland; Fraunhofer IDMT - Technical University of Ilmenau, Germany; Montreal Institute for Learning Algorithms, University of Montreal, Canada

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Universita' Politecnica delle Marche, Italy

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Session Chair(s): Marcio Rubbo and William Severa

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Dept. of EE, IIT Bombay, India

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Sandia National Laboratories, United States

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Session Chair(s): Maciej Jaworski and Mahmood Azimi-Sadjadi

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Maciej Jaworski, Piotr Duda and Leszek Rutkowski

Czestochowa University of Technology, Poland

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University of Auckland, New Zealand

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School of Electronic and Information Engineering, Xi'an Jiaotong University, China

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6a-6c: NEUROENGINEERING

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Deakin University, Australia

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PhD Candidate, EE Dept, IIT Delhi, India; Professor, EE Dept, IIT Delhi, India

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Zan Wen, Zhou Chuan, Yang Hong, Hu Yue and Guo Li
Institute of Information Engineering, Chinese Academy of Sciences, China; Centre for Artificial Intelligence, University of Technology Sydney, Australia

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Session Chair(s): Eduardo Max and Ronaldo Prati

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Universidade Federal de Mato Grosso do Sul, Brazil

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Federal University of Sao Paulo, Brazil; Federal University of Sao Paulo and Technological Institute of Aeronautics, Brazil

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UFABC, Brazil

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Federal University of Piaui, Brazil; Federal University of Maranhao, Brazil*

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Wednesday, July 11, 8:00AM-10:00AM

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Session Chair(s): Giacomo Boracchi, Robi Polikar, Manuel Roveri, Gregory Ditzler

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*Diana Haidar and Mohamed Medhat Gaber
Miss, United Kingdom; Prof., United Kingdom*

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*Jorge C. Chamby-Diaz, Mariana Recamonde-Mendoza, Ana L. C. Bazzan and Ricardo Grunitzki
Universidade Federal do Rio Grande do Sul, Brazil*

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Shanghai Jiao Tong University, China; China Railway Lanzhou Group Co., Ltd., China; China Academy of Railway
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Shanghai Jiao Tong University, China*

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University of Leicester, United Kingdom*

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Rowan University, United States*

8a-1: Applications of deep networks

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*Lu Shao-Yi and Hsiang Tien-Ruey
National Taiwan University of Science and Technology, Taiwan*

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Escola Politecnica - Universidade de Sao Paulo, Brazil*

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University of Sao Paulo, Brazil; Leipzig University, Germany; University of Orleans, France; Federal University of Sao Paulo, Brazil

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Universidade Federal do Piaui, Brazil

8a-2: Applications of deep networks

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Institute of Computing Technology, Chinese Academy of Sciences, China

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IBM Research, Brazil; IBM Research, PUC-Rio, Brazil

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University of Jaen, Spain; University of Granada, Spain

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Ph.D. Candidate, EE Dept, IIT Delhi, India; Professor, EE Dept, IIT Delhi, India

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8n-2: Data mining and knowledge discovery

Thursday, July 12, 8:00AM-10:00AM

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- Learning Insulators Segmentation from Synthetic Samples** 3795
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Department of Electrical Engineering and Information Technologies, University of Naples Federico II, Italy; Department of Physics, University of Naples Federico II, Italy

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Session Chair(s): Alexander Katzmann and Carolina Carvalho

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Siemens Healthcare GmbH, Germany; University Hospital Grosshadern, Ludwig-Maximilians-University Munich, Germany; University of Technology Ilmenau, Germany

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Federal University of Rio Grande do Norte (UFRN), Brazil; Federal Rural University of Semi-Arido, Brazil

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Lucas Valem, Daniel Pedronette, Fabricio Breve and Ivan Rizzo
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Universidade Federal do Rio Grande do Sul - UFRGS, Brazil

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SS2-2: Special Session on Machine Learning and Deep Learning Methods applied to Vision and Robotics (MLDLMVR)

Thursday, July 12, 8:00AM-10:00AM

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Session Chair(s): Jose Garcia-Rodriguez, Alexandra Psarrou, Isabelle Guyon, Andrew Lewis

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University of Malaga, Spain; General Foundation of the University of Malaga, Spain

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Universidade Federal de Santa Catarina, Brazil; Universidade do Estado de Santa Catarina, Brazil

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University of Waterloo, Canada; Amirkabir University of Technology, Iran

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Institute of Automation, Chinese Academy of Sciences, China

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UNSW Canberra, Australia

8s: Manufacturing and industrial applications

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Session Chair(s): Siddharth Dadhich and Igor Sousa

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Lulea University of Technology, Sweden

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*National University of Singapore, Singapore; Singapore Institute of Manufacturing Technology, A*STAR, Singapore*

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<i>Gabriel Dusil and Dalibor Cerny</i> <i>Co-founder, Adel, Czech Republic; Finance Lawyer, Czech Republic</i>	
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<i>Aaron Cohen, Luke Duncan and Alex Edwards</i> <i>EtherSat, Inc., United States</i>	
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<i>Alex Norta</i> <i>Large-Scale-Systems Group Tallinn University of Technology, 19086, Tallinn, Estonia, Estonia</i>	
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<i>Alexander Norta, Daniel Hawthorne and Serafin Engel</i> <i>Large-Scale-Systems Group, Tallinn University of Technology, Akadeemia tee 15a, 12616 Tallinn, Estonia, Estonia;</i> <i>Pnyks Inc., 55E 3rd Ave San Mateo, CA 94401, USA, United States</i>	
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University of Sydney, Australia

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Infoblox, United States; University of Washington Tacoma, United States

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Department of Electrical and Computer Engineering, HPC2 Distributed Analytics and Security Institute, Mississippi State University, United States; Department of Physics and Astronomy, HPC2 Center for Computational Sciences, Mississippi State University, United States

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Diego Galeano and Alberto Paccanaro

Royal Holloway, University of London, United Kingdom

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National University of Singapore, Singapore; Agency for Science, Technology and Research, Singapore

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Diego Bruno, Norian Marranghello, Fernando Osorio and Aledir Pereira

University of Sao Paulo, Brazil; UNESP - Paulista State University, Brazil

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Telecom ParisTech, France; AgroParisTech, France

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Session Chair(s): Yun Li and Tao Li

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Rowan University, United States

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Miaomiao Wu and Yun Li

School of Computer Science, Nanjing University of Posts and Telecommunications, China

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Zhongfeng Liu, Yun Li and Wei Ji

School of Computer Science, Nanjing University of Posts and Telecommunications, China; School of Telecommunications and Information Engineering, Nanjing University of Posts and Telecommunications, China

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Nils Worzyk and Oliver Kramer

University of Oldenburg, Germany

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<i>VEDECOM, France; UHA, France; UTBM, France</i>	

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<i>UFMG, Brazil; CEFET-MG, Brazil</i>	

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<i>Universidade Estadual de Campinas, Brazil; Universidade de Sao Paulo, Brazil; Faculdade Campo Limpo Paulista e Universidade Federal de Sao Carlos, Brazil</i>	

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<i>Robotics and Technology of Computers Lab. (University of Seville), Spain; Advanced Processor Technologies Group, United Kingdom</i>	

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<i>Universidade Federal do Espirito Santo, Brazil</i>	

SS2-3: Special Session on Machine Learning and Deep Learning Methods applied to Vision and Robotics (MLDLMVR)

Thursday, July 12, 2:10PM-4:10PM

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PUCRS, Brazil

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CDSS15-1: Special Session on Computational Intelligence for Cognitive Robotics and Smart Grids Security

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Session Chair(s): Mariacarla Staffa and Stefano Squartini

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