

Advances in Neural Networks and Applications 2018 (ANNA'18)



Plenary Lecturers

Leon O. Chua (UC Berkeley, USA)
Ronald Tetzlaff (Technical University Dresden, Germany)
Fernando Corinto (Technical University Turin, Italy)
Plamen Angelov (Lancaster University, UK)
Jurgen Schmidhuber (Chief Scientist, NNAISENSE)
Demis Hassabis (DeepMind)
Nikola Kasabov (FIEEE, FRNSZ, DVF RAE UK)
Alexander Gegov (University of Portsmouth, United Kingdom)

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Call for Papers

<https://www.anna2018.eu>

Advances in Neural Networks and Applications 2018 (ANNA'18)

Frédéric Joliot-Curie International House of Scientists
15-17 September 2018, St. St. Konstantin and Elena Resort, Bulgaria

Neural Networks are dramatically changing in recent years. Besides the general progression in multi-core and many-core designs there is a strong demand for emerging nano-scale technologies with low power dissipation, intelligent, bio-inspired machines, massively-parallel architectures with learning capabilities, and memristive systems.

The workshop on Advances in Neural Networks and Applications 2018 (ANNA'18) will cover advanced aspects of the Neural Networks theory with strong emphasis on different applications in both the science and real practice. It is a platform for postgraduate training of Ph.D. students and young scientists where well-known experts of the field will present advanced aspects of neural network theory and applications. Apart from the educational part of the workshop a conference with original authors' papers will take place. Potential authors are invited to submit their papers on the workshop topics. The workshop on Advances in Neural Networks and Applications 2018 (ANNA'18) is under the methodological supervision of IEEE CAS Cellular Nanoscale and Array Computing Technical Committee. It is technically co-sponsored by the International Neural Network Society (INNS) and is a regular John Atanasoff Society of Automatics and Informatics (SAI) event.

Prospective authors are invited to submit their papers on topics included but not limited to

NEURAL NETWORKS (NNs)

Contemporary NN structures and learning algorithms; Self-organizing NNs; Optimization and stability of NNs; Computer aspects of NNs algorithms; Languages, tools and environments for NN-based systems; Cellular Nanoscale Networks; Other topics in neural networks

DEEP LEARNING (DL)

DL – advances in theory and trends; DL as a research tool for physics, chemistry, biology, neuroscience, engineering, statistics, econometrics; Extension of DL – hierarchical, distributed, deep sets; Software tools and research platforms in DL; Other topics in deep learning

APPLICATIONS OF NNs IN SCIENCE

Image processing and pattern recognition; Computational optimization; Control systems; Circuit theory and Electronics; Reasoning systems; Operational research and DSS; Computational linguistic; Computational neuroscience; Advanced analytics; Data mining and knowledge discovery; Cyber-physical systems; Large-scale applications; Big Data and Data Science; Other applications of NNs in science

REAL PRACTICE APPLICATIONS

Process industries; Manufacturing and robotics; Power systems; Transportation systems; Medical; Business; Education; Eco-innovation processes; Security systems; Other applications of NNs in real practice.

The workshop will be held at Frédéric Joliot-Curie International House of Scientists, 15-17 September 2018, St. St. Konstantin and Elena Resort, Bulgaria. (<http://ihsvarna.com/en/>).

• **Proposals for Special Sessions - April 15th, 2018**

The proposals should be sent by e-mail to Prof. Slavova (slavova@math.bas.bg) or (angela.slavova@gmail.com).

• **Special sessions acceptance - May 1st, 2018**

Special sessions organizers will be responsible for collection and review the papers for their sessions.

• **Papers submission - May 1st, 2018**

The submission Web page for ANNA'18 is <https://easychair.org/conferences/?conf=anna18>.

• Notification of papers acceptance - May 15th, 2018

• Camera-ready submission - May 31st, 2018

• Early registration - May 31st, 2018

• Deadline for late registration - June 15th, 2018

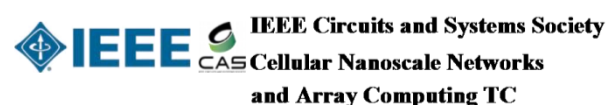
Authors without confirmed registration after this date risk inclusion of their papers in the proceedings.

• Conference dates - September 15-17, 2018

Submitted papers must present previously unpublished research. The manuscript should be of sufficient detail to permit reasonable evaluation by experts in the field. Accepted papers will appear in the conference proceedings published by the [VDE Verlag GmbH](http://www.vde.com) and will be included in IEEE Xplore digital library. All submissions must be written in English. Initial as well as final papers will be limited to a length of 6 pages and must be prepared according to the typing instructions at www.vde.com/typing-instructions

Papers prepared according to the IEEE template at http://www.ieee.org/conferences_events/conferences/publishing/templates.html will also be accepted. Please make sure that an A4 format (not letter size) will be submitted. The work should contain a concise presentation of the main contribution, its relevance, and its relation to prior work. All submitted papers will be peer reviewed for their quality, correctness, originality, and relevance.

Authors will be asked to submit a final manuscript (maximum 6 pages) after their paper has been accepted by the reviewers. The conference proceedings will only contain papers that are presented in the conference. Therefore, at least one author must register for full rate until the deadline for registration. One full registration can cover up one paper. Failure to register before the deadline will result in withdrawal of the paper from the conference program and the proceedings. Any paper included in the conference program, but not being presented at the conference according to the published schedule will not appear in the official proceedings in IEEE Xplore.



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