****

10th INTERNATIONAL GRAN CANARIA SCHOOL ON DEEP LEARNING

DeepLearn 2023 Summer

Las Palmas de Gran Canaria, Spain

July 17-21, 2023

https://irdta.eu/deeplearn/2023su/

****

Co-organized by:

University of Las Palmas de Gran Canaria

Institute for Research Development, Training and Advice – IRDTA
Brussels/London

****

Early registration: February 15, 2023

****

FRAMEWORK:

DeepLearn 2023 Summer is part of a multi-event called **Deep&Big 2023** consisting also of BigDat 2023 Summer. DeepLearn 2023 Summer participants will have the opportunity to attend lectures in the program of BigDat 2023 Summer as well if they are interested.

SCOPE:

DeepLearn 2023 Summer will be a research training event with a global scope aiming at updating participants on the most recent advances in the critical and fast developing area of deep learning. Previous events were held in Bilbao, Genova, Warsaw, Las Palmas de Gran Canaria, Guimarães, Las Palmas de Gran Canaria, Luleå, Bournemouth and Bari.

Deep learning is a branch of artificial intelligence covering a spectrum of current frontier research and industrial innovation that provides more efficient algorithms to deal with large-scale data in a huge variety of environments: computer vision, neurosciences, speech recognition, language processing, human-computer interaction, drug discovery, health informatics, medical image analysis, recommender systems, advertising, fraud detection, robotics, games, finance, biotechnology, physics experiments, biometrics, communications, climate sciences, geographic information

systems, signal processing, genomics, etc. etc. Renowned academics and industry pioneers will lecture and share their views with the audience.

Most deep learning subareas will be displayed, and main challenges identified through 24 four-hour and a half courses and 2 keynote lectures, which will tackle the most active and promising topics. The organizers are convinced that outstanding speakers will attract the brightest and most motivated students. Face to face interaction and networking will be main ingredients of the event. It will be also possible to fully participate in vivo remotely.

An open session will give participants the opportunity to present their own work in progress in 5 minutes. Moreover, there will be two special sessions with industrial and employment profiles.

ADDRESSED TO:

Graduate students, postgraduate students and industry practitioners will be typical profiles of participants. However, there are no formal pre-requisites for attendance in terms of academic degrees, so people less or more advanced in their career will be welcome as well. Since there will be a variety of levels, specific knowledge background may be assumed for some of the courses. Overall, DeepLearn 2023 Summer is addressed to students, researchers and practitioners who want to keep themselves updated about recent developments and future trends. All will surely find it fruitful to listen to and discuss with major researchers, industry leaders and innovators.

VENUE:

DeepLearn 2023 Summer will take place in Las Palmas de Gran Canaria, on the Atlantic Ocean, with a mild climate throughout the year, sandy beaches and a renowned carnival. The venue will be:

Institución Ferial de Canarias
Avenida de la Feria, 1
35012 Las Palmas de Gran Canaria

https://www.infecar.es/

STRUCTURE:

2 courses will run in parallel during the whole event. Participants will be able to freely choose the courses they wish to attend as well as to move from one to another.

Also, if interested, participants will be able to attend courses developed in BigDat 2023 Summer, which will be held in parallel and at the same venue.

Full live online participation will be possible. The organizers highlight, however, the importance of face to face interaction and networking in this kind of research training event.

KEYNOTE SPEAKERS:

Alex Voznyy (University of Toronto), Comparison of Graph Neural Network Architectures for Predicting the Electronic Structure of Molecules and Solids

Aidong Zhang (University of Virginia), Concept-Based Models for Robust and Interpretable Deep Learning

PROFESSORS AND COURSES: (to be completed)

Eneko Agirre (University of the Basque Country), [introductory/intermediate] Natural Language Processing in the Large Language Model Era

Pierre Baldi (University of California Irvine), [intermediate/advanced] Deep Learning in Science

Daniel Cremers (Technical University of Munich), [intermediate] Deep Networks for 3D Computer Vision

Stefano Giagu (Sapienza University of Rome), [introductory/intermediate] Quantum Machine Learning on Parameterized Quantum Circuits

Georgios Giannakis (University of Minnesota), tba

Tae-Kyun Kim (Korea Advanced Institute of Science and Technology), [intermediate/advanced] Deep 3D Pose Estimation

Marcus Liwicki (Luleå University of Technology), [intermediate/advanced] Methods for Learning with Few Data

Chen Change Loy (Nanyang Technological University), [introductory/intermediate] Image and Video Restoration

Ivan Oseledets (Skolkovo Institute of Science and Technology), [introductory/intermediate] Tensor Methods for Approximation of High-Dimensional Arrays and Their Applications in Machine Learning

Deepak Pathak (Carnegie Mellon University), [intermediate/advanced] Continually Improving Agents for Generalization in the Wild

Kaushik Roy (Purdue University), [introductory/advanced] Neuromorphic Computing

Carlo Sansone (University of Naples Federico II), tba

Björn Schuller (Imperial College London), [introductory/intermediate] Deep Multimedia Processing

Amos Storkey (University of Edinburgh), [intermediate] Meta-Learning and Contrastive Learning for Robust Representations

Ponnuthurai N. Suganthan (Qatar University), [introductory/intermediate] Randomization-Based Deep and Shallow Learning Algorithms and Architectures

Jiliang Tang (Michigan State University), [introductory/advanced] Graph Neural Networks: Models, Applications and Advances

Savannah Thais (Columbia University), [intermediate] Applications of Graph Neural Networks: Physical and Societal Systems

Z. Jane Wang (University of British Columbia), [introductory/intermediate] Adversarial Deep Learning in Digital Image Security & Forensics

Andrew Gordon Wilson (New York University), tba

Li Xiong (Emory University), [introductory] Deep Learning and Privacy Enhancing Technology

Lihi Zelnik-Manor (Technion - Israel Institute of Technology), [introductory] Introduction to Computer Vision and the Ethical Questions It Raises

OPEN SESSION:

An open session will collect 5-minute voluntary presentations of work in progress by participants. They should submit a half-page abstract containing the title, authors, and summary of the research to david@irdta.eu by July 9, 2023.

INDUSTRIAL SESSION:

A session will be devoted to 10-minute demonstrations of practical applications of deep learning in industry. Companies interested in contributing are welcome to submit a 1-page abstract containing the program of the demonstration and the logistics needed. People in charge of the demonstration must register for the event. Expressions of interest have to be submitted to david@irdta.eu by July 9, 2023.

EMPLOYER SESSION:

Organizations searching for personnel well skilled in deep learning will have a space reserved for one-to-one contacts. It is recommended to produce a 1-page .pdf leaflet with a brief description of the organization and the profiles looked for to be circulated among the participants prior to the event. People in charge of the search must register for the event. Expressions of interest have to be submitted to david@irdta.eu by July 9, 2023.

ORGANIZING COMMITTEE:

Carlos Martín-Vide (Tarragona, program chair)
Sara Morales (Brussels)
David Silva (London, organization chair)

REGISTRATION:

It has to be done at

https://irdta.eu/deeplearn/2023su/registration/

The selection of 8 courses requested in the registration template is only tentative and non-binding. For logistical reasons, it will be helpful to have an estimation of the respective demand for each course. During the event, participants will be free to attend the courses they wish as well as eventually courses in BigDat 2023 Summer.

Since the capacity of the venue is limited, registration requests will be processed on a first come first served basis. The registration period will be closed and the on-line registration tool disabled when the capacity of the venue will have got exhausted. It is highly recommended to register prior to the event.

FEES:

Fees comprise access to all courses and lunches. There are several early registration deadlines. Fees depend on the registration deadline.

The fees for on site and for online participation are the same.

ACCOMMODATION:

Accommodation suggestions will be available in due time at

https://irdta.eu/deeplearn/2023su/accommodation/

CERTIFICATE:

A certificate of successful participation in the event will be delivered indicating the number of hours of lectures.

Participants will be recognized 2 ECTS credits by University of Las Palmas de Gran Canaria.

QUESTIONS AND FURTHER INFORMATION:

david@irdta.eu

ACKNOWLEDGMENTS:

Cabildo de Gran Canaria

Universidad de Las Palmas de Gran Canaria - Fundación Parque Científico Tecnológico

Universitat Rovira i Virgili