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4th INTERNATIONAL SUMMER SCHOOL ON DEEP LEARNING

DeepLearn 2020

León, Guanajuato, Mexico

July 27-31, 2020

Co-organized by:

Center for Research in Mathematics, A.C. (CIMAT-CONACyT)
Guanajuato

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

https://deeplearn2020.irdta.eu/

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--- Early registration deadline: February 25, 2020 ---

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SCOPE:

DeepLearn 2020 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 and Warsaw.

Deep learning is a branch of artificial intelligence covering a spectrum of current exciting research and industrial innovation that provides more efficient algorithms to deal with large-scale data in neurosciences, computer vision, speech recognition, language processing, human-computer interaction, drug discovery, biomedical informatics, healthcare, recommender systems, learning theory, robotics, games, 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 2 keynote lectures and 24 four-hour and a half courses, which will tackle the most active and promising topics. The organizers are convinced that outstanding speakers will attract the brightest and most motivated students. Interaction will be a main component of the event.

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 recruitment profiles.

ADDRESSED TO:

Master's students, PhD students, postdocs, and industry practitioners will be typical profiles of participants. However, there are no formal pre-requisites for attendance in terms of academic degrees. Since there will be a variety of levels, specific knowledge background may be assumed for some of the courses. Overall, DeepLearn 2020 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 and discuss with major researchers, industry leaders and innovators.

VENUE:

DeepLearn 2020 will take place in León, the most populous city in the state of Guanajuato, in central Mexico, and a major economic pole in the country with specialization in leather industry. The venue will be:

Poliforum León
Blvd. Adolfo López Mateos esq. Blvd. Francisco Villa
Col. Oriental, León, Gto., Mexico, C.P. 37510

STRUCTURE:

3 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.

KEYNOTE SPEAKER:

Maja Pantic (Imperial College London), Artificial Emotional Intelligence, Faces, Deep Fakes and Other Topics

PROFESSORS AND COURSES: (to be completed)

Rick S. Blum (Lehigh University), [introductory/intermediate] Deep Learning and Cybersecurity

Ben Brown (Lawrence Berkeley National Laboratory), [introductory/advanced] Explainable AI (XAI) Techniques for Science and Engineering -- Toward Statistical Inference for the 21st Century

Georgios Giannakis (University of Minnesota), [advanced] Ensembles for Interactive and Deep Learning Machines with Scalability, Expressivity, and Adaptivity

Çağlar Gülçehre (DeepMind), [intermediate/advanced] Deep Reinforcement Learning

Vincent Lepetit (ENPC ParisTech), [intermediate] Deep Learning and 3D Geometry

Geert Leus (Delft University of Technology), [introductory/intermediate] Graph Signal Processing: Introduction and Connections to Distributed Optimization and Deep Learning

Andy Liaw (Merck Research Labs), [introductory] Deep Learning and Statistics: Better Together

Abdelrahman Mohamed (Facebook AI Research), [introductory/advanced] Recent Advances in Automatic Speech Recognition

Jan Peters (Technical University of Darmstadt), [intermediate] Robot Learning

Massimiliano Pontil (Italian Institute of Technology), [intermediate/advanced] Statistical Learning Theory

Jose Principe (University of Florida), [intermediate/advanced] Cognitive Architectures for Object Recognition in Video

Fedor Ratnikov (National Research University Higher School of Economics), [introductory] Specifics of Applying Machine Learning to Problems in Natural Science

Salim Roukos (IBM Research AI), [intermediate/advanced] Deep Learning Methods for Natural Language Processing

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

Alex Smola (Amazon), [introductory/advanced] Dive into Deep Learning

Sargur N. Srihari (University at Buffalo), [introductory] Generative Models in Deep Learning

Kunal Talwar (Google Brain), [intermediate] Differentially Private Machine Learning

René Vidal (Johns Hopkins University), [intermediate/advanced] Mathematics of Deep Learning

Haixun Wang (WeWork), [introductory/intermediate] Conceptual Understanding and Machine Learning

Ming-Hsuan Yang (University of California, Merced), [intermediate/advanced] Learning to Track Objects

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 19, 2020.

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 participating in the demonstration must register for the event. Expressions of interest have to be submitted to david@irdta.eu by July 19, 2020.

EMPLOYER SESSION:

Firms 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 company 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 19, 2020.

ORGANIZING COMMITTEE:

Teresa Efigenia Alarcón Martínez (Guadalajara)
Oscar Dalmau Cedeño (Guanajuato, co-chair)
Sara Morales (Brussels)
Manuel J. Parra-Royón (Granada)
David Silva (London, co-chair)

REGISTRATION:

It has to be done at

https://deeplearn2020.irdta.eu/registration/

The selection of up to 8 courses requested in the registration template is only tentative and non-binding. For the sake of organization, 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.

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 is 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.

ACCOMMODATION:

Suggestions for accommodation will be available in due time.

CERTIFICATE:

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

QUESTIONS AND FURTHER INFORMATION:

david@irdta.eu

ACKNOWLEDGMENTS:

Centro de Investigación en Matemáticas, A.C. (CIMAT-CONACyT) – Guanajuato

Centro Universitario de los Valles, Universidad de Guadalajara

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