UNIVERSITÀ DEGLI STUDI
DI GENOVA

COMUNE DI GENOVA

2ND INTERNATIONAL SUMMER SCHOOL ON DEEP LEARNING 2018

23th — 27th July 2018, Genoa, Italy

Organized by: University of Genova
IRDTA - Brussels/London

GENOA and Deep Learning

Genoa is a dynamic city that with The Italian Institute of Technology (IIT) and the Erzelli technological park, but also thanks to the multitude of companies on new technologies, is opening up to the dynamics and the new perspectives of the technological future.

The Deep Learning school wants to insert itself in this context of dynamism and innovation and has chosen Genoa to establish the primacy that the city can acquire in the specific sector in the next years.

The civic administration of Genoa has enthusiastically welcomed this project by collaborating in its realization.The prestige that an initiative of this level brings to Genoa is such that the Mayor in first person will open the conference works, welcoming the numerous guests; in fact, a significant event is expected both in terms of expected numbers and for the topic as much as possible. Press and media will in fact be pre-alerted for the importance of the event and the actors that will gravitate around it.

In recent decades we have witnessed a growing investment by all economic sectors in the acquisition of ever larger volumes of data and this led to the coining of the term Big-Data. It is estimated that the amount of data that will be produced in 2018 globally will amount to about twenty zettabytes, where a zettabyte, also referred to as ZB, corresponds a number of characters (or bytes) difficult to imagine consisting of equal to a 1 followed from 21 zeros. Most of the data that is produced is stored in the cloud or in data servers and only a small fraction of the information contained in it can be used through conventional processing techniques. The implicit informational content of such data can be transformed into an asset of enormous value for companies, but to extract the most valuable content from big-data it is necessary to employ the most advanced artificial intelligence techniques, based on machine learning. Analysts point to artificial intelligence as a major technological challenge that can open new scenarios for companies and which could double the growth rate of developed economies (including Italy) by 2035 and increase labor productivity in increments until at 40%.

DeepLearn2018will take place in Genoa, the capital city of Liguria, inscribed on the UNESCO World Heritage List, and this will be an opportunity to discover the wonders of the Ligurian territory like Portofino, San Fruttuoso di Camogli, etc

THE EVENT

DeepLearn2018 is an international event that offers an excellent opportunity to learn and be updated on some of the latest advances in **artificial intelligence.**

The 2nd INTERNATIONAL SUMMER SCHOOL ON DEEP LEARNING (DeepLearn 2018) which will take place in Genova 23rd to 27th in 2018 at Magazzini del Cotone focuses on the training of specialists in the field of deep learning, which is one of the most advanced and active fields of artificial intelligence. In recent years the results of research in this sector have generated significant consequences in the field of machine learning and industrial innovation by providing increasingly efficient algorithms able to handle large-scale data in a variety of application fields ranging from neuroscience, automatic vision, speech recognition, language processing, human-computer interaction, the discovery of new drugs, health care, recommendation systems, robotics and games. The school is an important opportunity to get in touch with eminent academics and experts and to test the potential of deep learning in the various fields of application. The school will also include an Industrial Session where companies operating in the field of artificial intelligence will present the deep learning applications they have developed.

Companies will also have an exhibition space and organize an Employer Session to meet experts in the field.

ARTIFICIAL INTELLIGENCE AND ITS APPLICATION

Deep learning involves several areas transversally: neurosciences, computer vision, speech recognition, language processing, human-computer interaction, drug discovery, biomedical informatics, healthcare, recommender systems, learning theory, robotics, games, etc.

WHO WILL ATTEND

The prestige of the event will allow an exchange between participants. Last year's edition, held in Bilbao, recorded over 1500 participants from 81 countries.

Master'students, PhD students, postdocs, and industry practitioners will be able to interact with a range of outstanding international experts.

A rich program awaits the participants: 2 keynote lectures, 24 six-hour courses and 1 round table, which will tackle the most active and promising topics.

WHY SHOULD YOU SPONSOR DEEPLEARN SUMMER SCHOOL 2018?

- to move your company to an issue that belongs to it and to qualify it as an innovative company that is projected towards the future
- interview young experts but also get in touch with researchers and research institutes
- show your products.

NUMBERS FROM DEEP LEARN 2017:

Participants: more than1300

Countries: 81

Keynote speakers: 30

School days: 5

Parallel sessions: 4

Get together sessions: 1

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 title, authors, and summary of the research to david.silva409@yahoo.com by July 15, 2018.

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. At least one of the people participating in the demonstration must register for the event.

EMPLOYERS SESSION:

Firms searching for personnel well skilled in deep learning will have a space reserved for one-to-one contacts. At least one of the people in charge of the search must register for the event.

SOME PACKAGE OPPORTUNITIES:

EXHIBITOR PACKAGE: ~~€ 1,500~~ **reduced amount € 1,000**

Participation of a delegate

Logo published on the website of the event

Logo published on banners, folders

Booth (1 table + 4 chairs) to interview and show your products.

SOME OTHER POSSIBILITIES:

All the following possibilities include the exhibitor package benefits, plus:

ConferenceT-Shirts for the Event Staff ~~€ 2,000~~ **reduced amount € 1,000**

Provide a scholarship for 1 young participant (4 nights in a 3 star + registration)

~~€ 2,000~~ **reduced amount € 1,000**

Delegatebags ~~€ 2,800~~ **reduced amount € 1,500**

Keynote speakersponsorship ~~€ 4,500~~ **reduced amount € 2,500**

Sign a Lunch ~~€ 22,000~~ **reduced amount € 10,000**

ORGANIZING SECRETARIAT:

Dott.ssa Chiara Paola Codebò

Ph: 3927089590

c.codebo@promoest.com

Dott.ssa Tiziana Ginocchio

Responsabile Relazioni con Aziende e Fundraising
Comune di Genova

Gabinetto del Sindaco

Palazzo Tursi, Via Garibaldi 9 - 16124 Genova

mob. +39.335.5699378 e-mail
tginocchio@comune.genova.it

PROFESSORS AND COURSES

Tülay Adalı *University of Maryland, Baltimore County* introductory/intermediate
Data Fusion through Matrix and Tensor Decompositions: Linear, Multilinear, and Nonlinear Models and their Applications

Pierre Baldi *University of California, Irvine* intermediate/advanced
Deep Learning: Theory, Algorithms, and Applications to the Natural Sciences

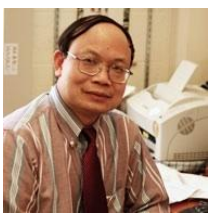
Thomas Breuel *NVIDIA Corporation* intermediate
Design and Implementation of Deep Learning Applications

Joachim M. Buhmann *Swiss Federal Institute of Technology Zurich* introductory/advanced
Model Selection by Algorithm Validation

Sergei V. Gleyzer *University of Florida* introductory/intermediate
Feature Extraction, End-end Deep Learning and Applications to Very Large Scientific Data: Rare Signal Extraction, Uncertainty Estimation and Realtime Machine Learning Applications in Software and Hardware

Michael Gschwind *IBM Global Chief Data Office* introductory/intermediate
Deploying Deep Learning at Enterprise Scale

Namkug Kim *Asan Medical Center* intermediate
Deep Learning for Computer Aided Detection/Diagnosis in Radiology and Pathology



Sun-Yuan Kung *Princeton University* introductory
A Methodical and Cost-effective Approach to Optimization/Generalization of Deep Learning Networks

Li Erran Li *Uber ATG* intermediate/advanced
Deep Reinforcement Learning: Foundations, Recent Advances and Frontiers

Dimitris N. Metaxas *Rutgers University* advanced
Adversarial, Discriminative, Recurrent, and Scalable Deep Learning Methods for Human Motion Analytics, Medical Image Analysis, Scene Understanding and Image Generation

Hermann Ney *RWTH Aachen University* intermediate/advanced
Speech Recognition and Machine Translation: From Statistical Decision Theory to Machine Learning and Deep Neural Networks

Jose C. Principe *University of Florida* introductory/advanced
Cognitive Architectures for Object Recognition in Video

Douglas A. Reynolds & Najim Dehak *Massachusetts Institute of Technology & Johns Hopkins University* introductory/intermediate
More than Words can Say: Machine and Deep Learning for Speaker, Language, and Emotion Recognition from Speech

Björn Schuller *Imperial College London* intermediate/advanced
Deep Learning for Signal Analysis

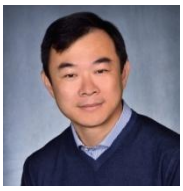
Michèle Sebag *French National Center for Scientific Research, Gif-sur-Yvette* intermediate
Representation Learning, Domain Adaptation and Generative Models with Deep Learning

Ponnuthurai N Suganthan *Nanyang Technological University* introductory/intermediate
Learning Algorithms for Classification, Forecasting and Visual Tracking

Johan Suykens *KU Leuven* introductory/intermediate
Deep Learning and Kernel Machines

Kenji Suzuki *Tokyo Institute of Technology* introductory/advanced
Deep Learning in Medical Image Processing, Analysis and Diagnosis

René Vidal *Johns Hopkins University* intermediate/advanced
Mathematics of Deep Learning



Eric P. Xing *Carnegie Mellon University* intermediate/advanced
A Statistical Machine Learning Perspective of Deep Learning: Algorithm, Theory, Scalable Computing

Ming-Hsuan Yang *University of California, Merced* intermediate/advanced
Learning to Track Objects

Mohammed J. Zaki *Rensselaer Polytechnic Institute* introductory
Introductory Tutorial on Regression and Deep Learning

Yudong Zhang *University of Leicester* introductory/intermediate
Convolutional Neural Network and Its Variants