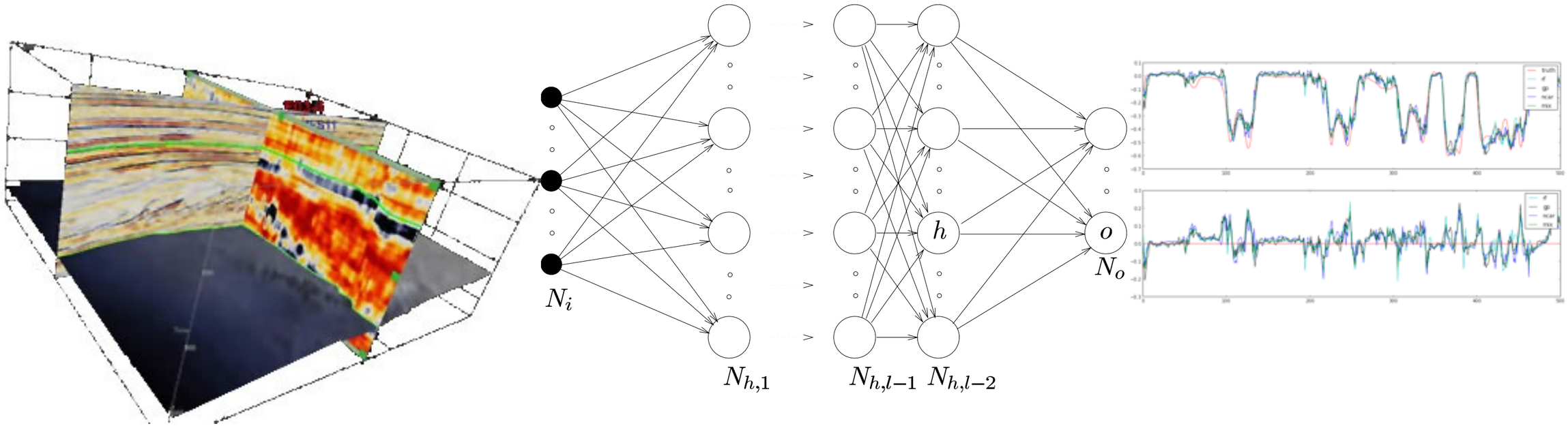
GeoNeurale

Deep Learning and **Neural Networks** for **Petrophysical** and **Seismic Modelling**



modern machine learning techniques solve real-world problems

Using an artificial intelligence technique inspired by theories about how the brain recognizes patterns, technology companies are reporting startling gains in fields as diverse as computer vision, speech recognition and the identification of promising new molecules for designing drugs. New York Times, November 23rd, 2012

There has been a number of stunning new results with deep-learning methods. The kind of jump we are seeing in the accuracy of these systems is very rare indeed. Yann LeCun, Courant Institute, NYU

This is a really breathtaking result because it is the first time that deep learning won, and more significantly it won on a data set that it wouldn't have been expected to win at. Anthony Goldbloom, Kaggle.com

The point about this approach is that it scales beautifully. Basically you just need to keep making it bigger and faster, and it will get better. There's no looking back now. Geoffrey E. Hinton, University of Toronto

programme

day 1

Machine Learning -- Basics

Linear Algebra

Probability Theory

Supervised Learning for Linear Models (Regression, Classification)

Basic unsupervised learning

day 2

Neural Networks

Basics (Architectures, Backpropagation)

Unsupervised Feature Learning and Deep Neural Networks

Recent Advances in Research

day 3

Hands-on Labs

about the instructors

Prof. Dr. Patrick van der Smagt leads the **Biomimetic Robotics and Machine Learning** group in the Computer Science Department of the *Technische Universität München*. His research focuses on machine learning, biomechanics, and brain-machine interfaces. He is the holder of the 2012 *Erwin Schrödinger Award.*

Patrick van der Smagt has received over 20M€ third-party funding, has published nearly 100 scientific articles, and holds several patents. He is editor for various journals and conferences and founder of three companies.

Christian Osendorfer holds a diploma in Computer Science with a minor in Mathematics. For the past 6 years he has worked at the *Technische Universität München* with a wide range of machine learning algorithms in different application domains. His focus is currently on unsupervised learning methods and large scale learning with deep neural networks.

Christian is (co-)author of various machine learning papers, including the widely used scikit-learn machine learning toolkit.

Course fee: 2850 Euro plus 19% VAT

Tuition fees are due and payable in Euro upon enrollment by bank transfer to the bank account given below (please contact us for alternative payment methods). The payment should be received before the date specified in the invoice as payment term to make the enrollment effective.

To register to the course please fill in the registration form and fax or email it along with the confirmation of your bank transfer to:

GeoNeurale
Lichtenbergstrasse 8
85748 Munich-Garching
Germany
phone +49 89 5484 1 or +49 89 8969 1118
fax +49 89 8969 1117

ONLINE REGISTRATION: www.geoneurale.com

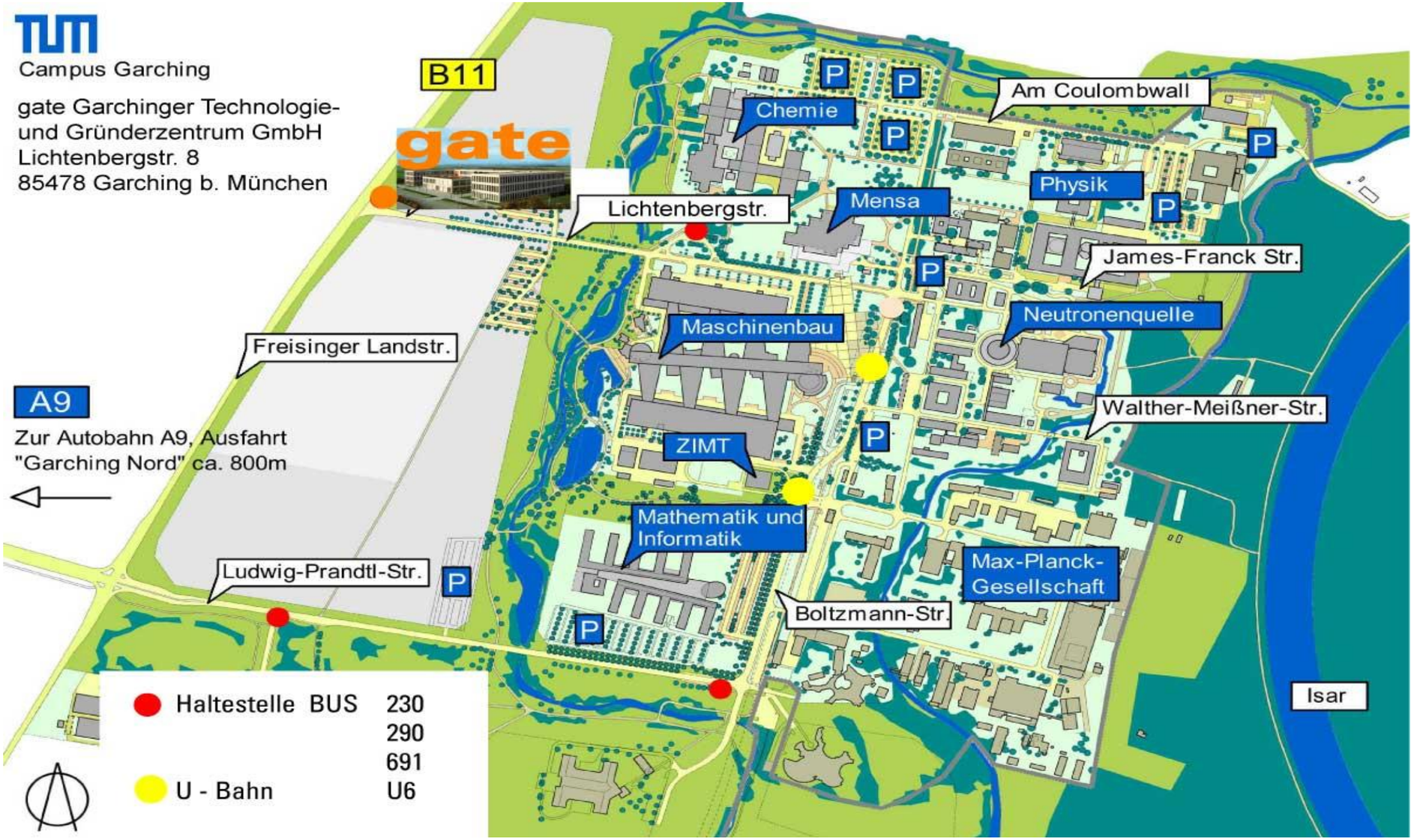
Bank Information: Genossenschaftsbank EG Muenchen
Bank Account N. 519618 BLZ 701 694 64

BIC – Code : GENODEF 1M07, IBAN : DE19 7016 9464 0000 5196 18

Please indicate your name and the purpose: “Neural Networks course fee”

gate GeoNeurale Office and Training Location

at the Munich-Garching Research Center



biomimetic robotics & machine learning

GeoNeurale

Provisions

Tuition fees are due and payable in Euro upon enrollment in the course. Unless otherwise indicated, fees do not include travel costs and living expenses of the participant.

Payments are also accepted via personal or company check, traveler's check, credit card, and Company Purchase Orders.

Cancellations by Participant:

All cancellation are subject to a 100 Euro non-refundable cancellation fee. Cancellation have to be notified to our office, at least 30 days prior to the course start date to receive a refund (less the 100 Euro cancellation fee).

If the participants are unable to cancel prior to the 32 days notification date, they may substitute another person at their place in a course by notifying us prior to the course start date.

Course Cancellations:

GeoNeurale reserves the right to cancel the courses if necessary. The decision to cancel a course is made at least two weeks prior to the course start date. If a course is cancelled, the participant will receive a full reimbursement of the tuition fees (but not of the plane ticket or hotel expenses or any other costs), or will be enrolled in another course upon his decision (the cost of the original course will be applied to the cost of the replacement course).

Before booking any flight or hotel, please wait the written course confirmation on our website. GeoNeurale can not be responsible for any penalties incurred for cancellation or change of flights or hotel reservations.

Refunds:

GeoNeurale will promptly remit all refunds of tuition fees due to cancellations or annulment (less any appropriate non-refundable cancellation fee) within 30 days of the course cancellation.

Force Majeure:

GeoNeurale can not be responsible for cancellations due to “force majeure” events : airplane or airport strikes, emergency situations, natural catastrophes and all situations and incidents independent or outside the human control that can delay or cancel the course. In case of such events related cancellations the course tuition fees will be refunded to the client.

GeoNeurale is not responsible for any delay or absence caused by the training instructor or training instructor company for reasons which are independent or out of the control of GeoNeurale´s decisions.

AGREEMENT: Upon enrollment all parts accept the above mentioned provisions. The above specified provisions shall regulate the agreement between GeoNeurale and the participant and the participant company and will enter into force upon enrollment.