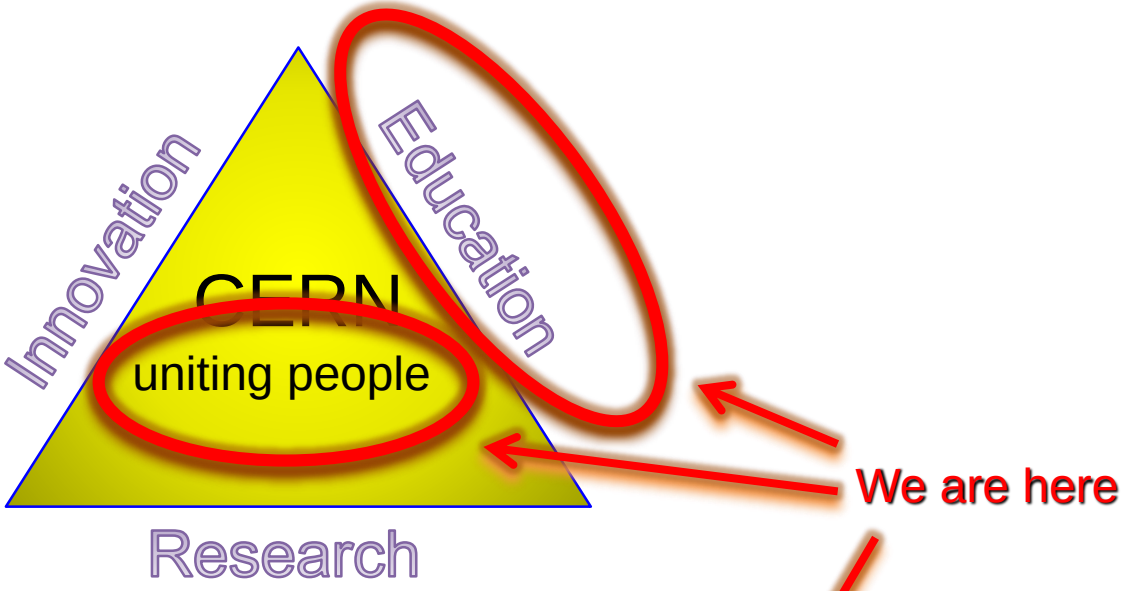
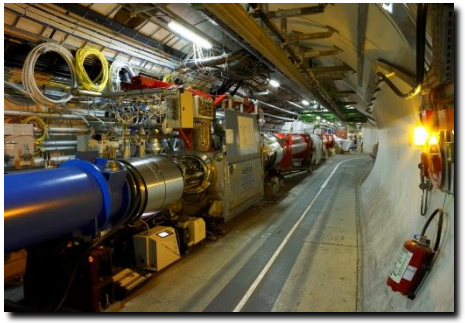
CERN School of Computing (CSC)

Sebastian Lopienski

CSC Director

CERN's mission





Accelerating beams
(accelerators)

Detecting particles
(experiments)

Large-scale
computing
(analysis)

Discovery

CSC - a school with a long history

- The school was created in 1970
  - 41st edition in 2018

- 2700 students of ~80 different nationalities have followed the school
  - usually 60-80 per year
  - alumni web site: http://cern.ch/CSC/alumni

- The school has visited 21 countries
  - http://cern.ch/CSC/past-schools
  - recent: Spain, Belgium, Greece, Portugal, Cyprus, Sweden

Mandate and mission

Create a common culture in scientific computing
among young scientists and engineers involved
in particle physics or other sciences
as a strategic direction to promote mobility
and to facilitate the development of
large computing-oriented transnational projects.

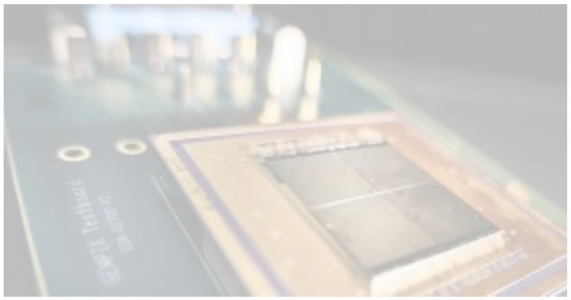
Bridging science and computing

- Technological evolution in computing empowers science
  - especially in data-intensive domains such as High Energy Physics
  - computing is the main strategy for many scientific fields to do research efficiently on a large scale

- It is nowadays essential that:
  - scientists master computing technologies as a main tool for their research
  - computer engineers understand the scientific needs in order to deliver computing services to research projects

Three CERN Schools of Computing

iCSC 2018



Inverted school

5 Mar - 8 Mar 2018

CERN | Geneva | Switzerland

tCSC 2018

Thematic school

3 Jun - 9 Jun 2018

MEDILS | Split | Croatia

CSC 2018

Main school

1 Oct - 14 Oct 2018

Tel Aviv University | Tel Aviv | Israel

We are here

CERN

TEL AVIV UNIVERSITY

CERN School of Computing 2018

- A two week long, intensive school
- Academic programme composed of three tracks
  - *Base Technologies*
  - *Physics Computing*
  - *Data Technologies*
- 55 hours of tuition
  - lectures
  - hands-on exercises (students working in pairs)
  - guest lectures
  - student presentations
- Exam → diploma

Academic dimension

CERN School of Computing is…

- not a conference

  (lecturers do not present
  their work or promote their projects)

- not a training session

  (not a replication of training courses
  commonly available at home institutes)

We focus on persistent knowledge,
less on know-how

Scientific, social and sport programme

- Tuesday afternoon: visits at Tel Aviv University
- Tuesday evening: opening dinner
- Wednesday evening: Japanika dinner and pub quiz
- Sunday afternoon: beach sports (paddle, surf, kayak)
- Monday evening: special talk: future of humanity
- Tuesday excursion: visit to Jerusalem and the Dead Sea
- Wednesday afternoon: traditional CSC football match
- Wednesday evening: Tel Aviv guided visit
- Thursday evening: special talk: history of Internet
- Saturday evening: closing dinner & party

Local Organizing Committee

TEL AVIV UNIVERSITY

- prof. Erez Etzion (chairperson)
- dr Yan Benhammou
- Riki Cohen
- Meny Raviv Moshe

Administrative manager: Joelma Tolomeo

Technical manager: Nikos Kasioumis

But what gives the most value to the School?

CSC 2018 participants

71 students invited

- 41 different institutes (universities, labs) from 21 countries

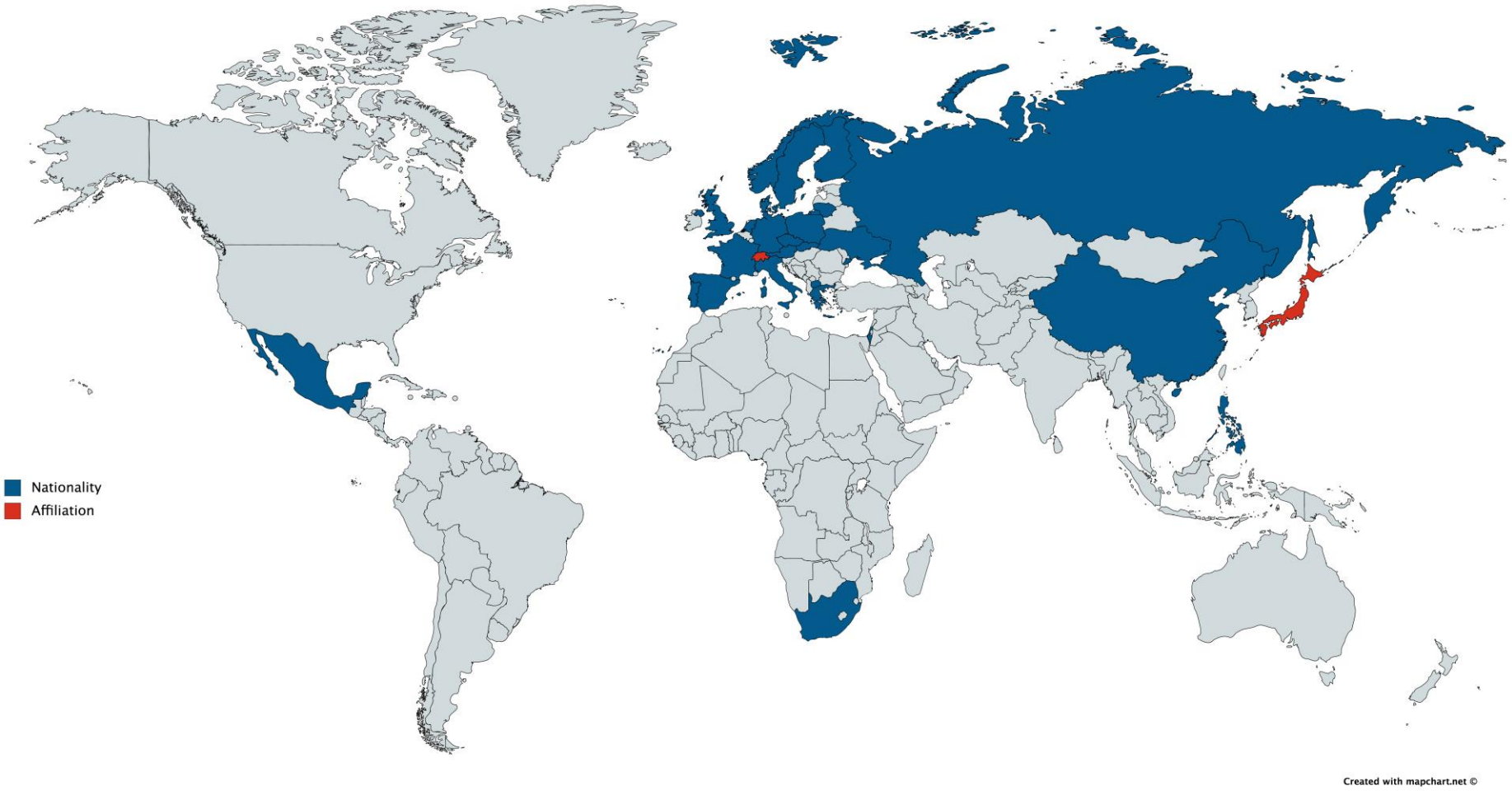
UNIVERSITY OF BIRMINGHAM
DESY
BUAP
INFN
Istituto Nazionale di Fisica Nucleare
1958
CERN
UNIVERSITÉ DE GENÈVE
ETH Zürich
GSI
GSI Helmholtzzentrum für Schwerionenforschung
AGH
AGH University of Science and Technology
cea
DE LA RECHERCHE À L'INDUSTRIE
Imperial College London
NAGOYA UNIVERSITY
UNIVERSIDAD DE OVIEDO
UNIVERSIDAD DE SEVILLA
JINR
UNI FREIBURG
technische universität dortmund
KIT
Karlsruhe Institute of Technology
UNIVERSITY OF OXFORD
LPNHE
PARIS
MPQ
Budker Institute of Nuclear Physics
Niels Bohr Institutet
JG|U
JOHANNES GUTENBERG UNIVERSITÄT MAINZ
ÖAW
Austrian Academy of Sciences
TEL AVIV UNIVERSITY
IAE
中国原子能科学研究院
CHINA INSTITUTE OF ATOMIC ENERGY
NIKHEF
HELSINKI INSTITUTE OF PHYSICS
FACULTY OF SCIENCE
Charles University
CSIR
our future through science
GEORG-AUGUST-UNIVERSITÄT GÖTTINGEN
LUND UNIVERSITY
VILNIAUS UNIVERSITETAS
1579
UNIVERSITAS VILNENSIS
TU WIEN

CSC 2018 participants

71 students invited

- 41 different institutes (universities, labs) from 21 countries
- 25 different nationalities
- 10 female students (14%)

CSC 2018 participants



It’s a small world

All top scientists knows each other very well

CSC 2017 *(Madrid, Spain)*

School rules

School rule #1

Participate

- Attendance at all lectures and exercises is mandatory
- You must sign the presence sheet
  - at beginning of the day and in the afternoon
  - it is a condition to obtain the CSC diploma
- You should attend all meals and coffee breaks
- Taking part in social and sports events is optional
  - You must let us know whether you participate or not

School rule #2

Be on time

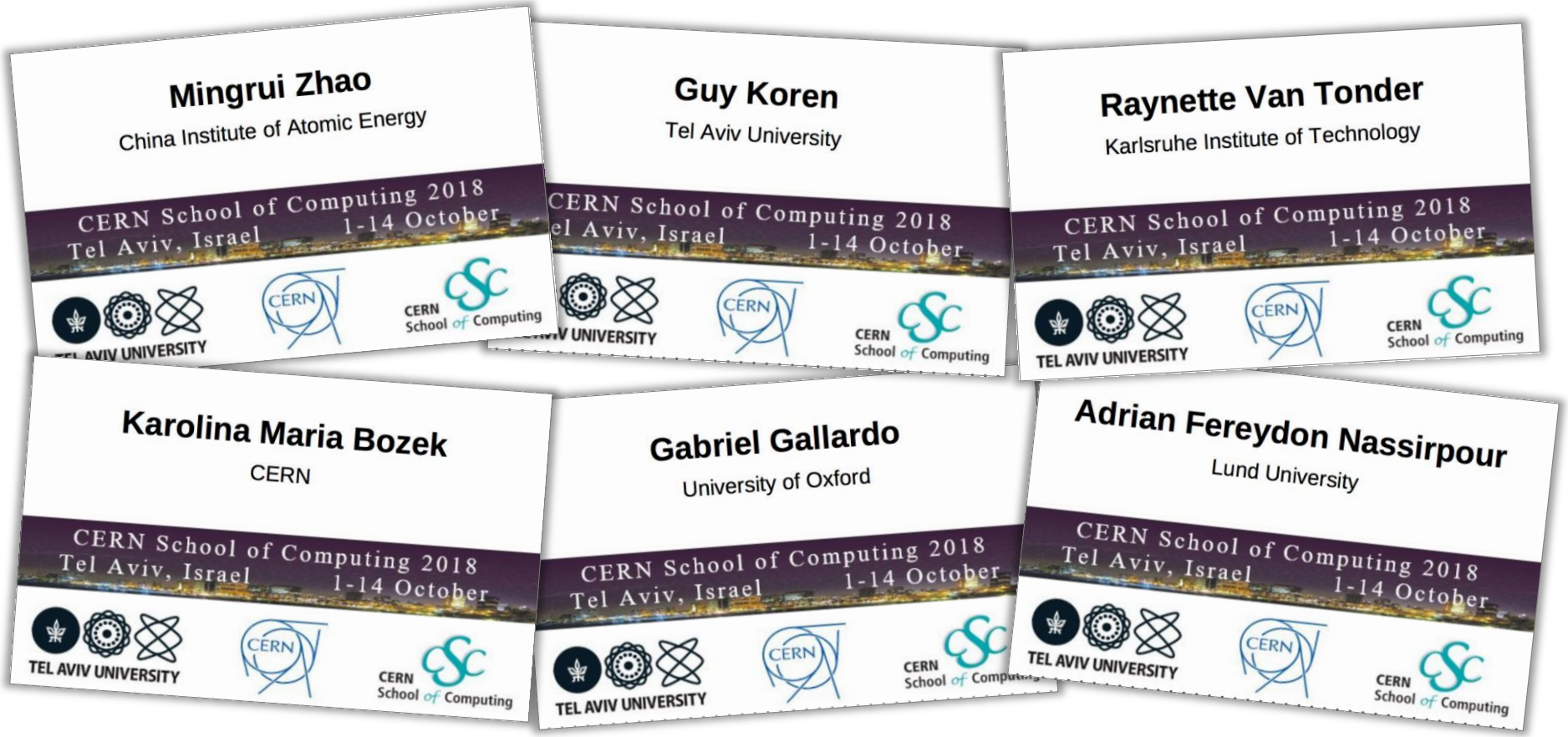
Check what the online schedule says:

- *"Lecture starts at 9:00"* → You must be in the room **before** 9:00
- *"The bus leaves at 18:00"* → It will leave at 18:00

If you're late, we won't wait

School rule #3

Wear your badge



School rule #4

ENJOY AND PROTIF
FROM THE SCHOOL!

Thank you

CERN

TEL AVIV UNIVERSITY

CERN