SOI - Swiss Olympiad in Informatics

Daniel Graf

SOI-Workshop, October 5, 2012, ETH D-INFK CAB

SOI Workshop 2013 - ETH Zurich

- 9.45 - 10.45 Data Structures / Graph Theory
- 11.00 - 12.00 Dynamic Programming / Backtracking
- 12.00 - 12.15 Questions about SOI Tasks of the first round?
- Lunch - Pizza!
- 13.00 - 16.00 Programming Training

CAB ETH Zurich - Where are we?

SOI - About

Swiss Olympiad in Informatics - SOI

- programming contest for students under 20
- algorithmic puzzles and programming challenges
- 3 national contest rounds
- selection of the Swiss delegation for the IOI

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Sample Task: Euro Crisis

- Given: some products and their prices
- Task: distribute the goods to a family of three persons, such that no one imports goods with more than 300 € of value

SOI - Contest

or How to Travel the World for Free

Workshops

- quick start for beginners
- introduction to algorithms and programming

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First Round (1. October - 30. November 2013)

- 6 tasks to solve at home

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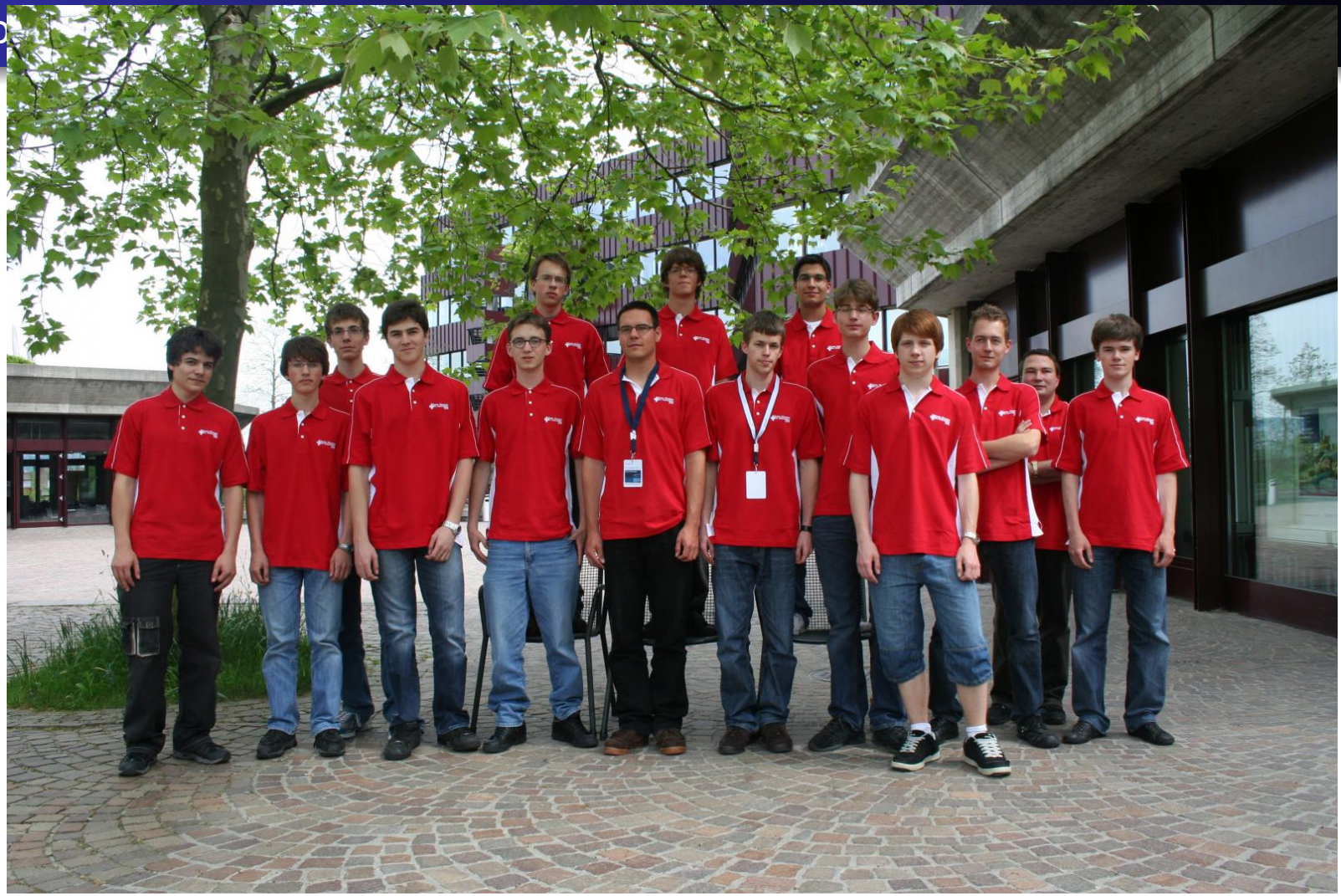
Second Round (March 2014)

- theoretical tasks at ETH with pen and paper (4 hours)
- practical tasks at home with coding (5 hours)

SOI - Contest

or How to



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Finals (May 2014)

- 4 days in Zurich (CS/IBM) (each 5 hours)

SOI - Contest

or How to Tr

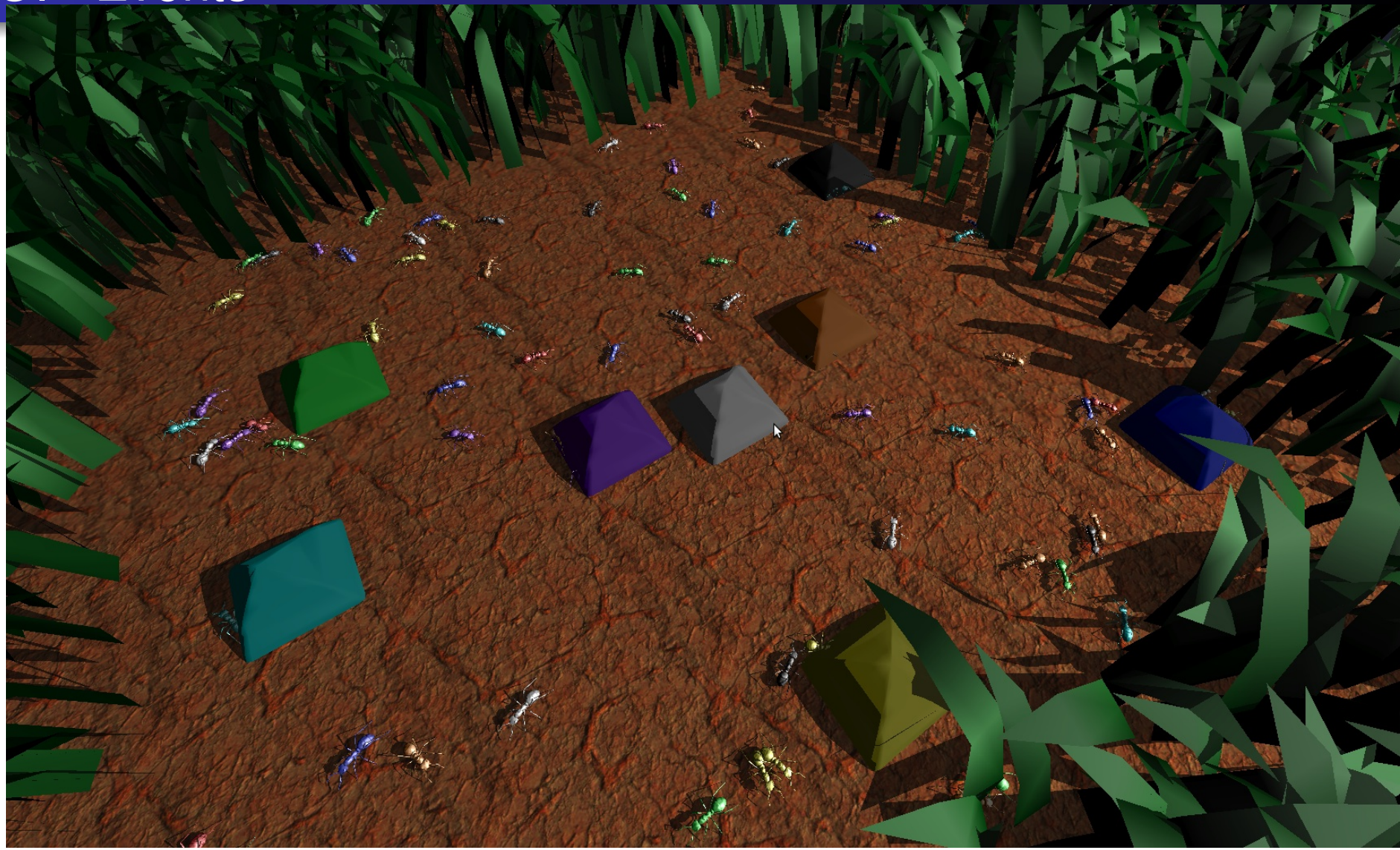
SOI - Events

SOI-Day (11th January 2014)

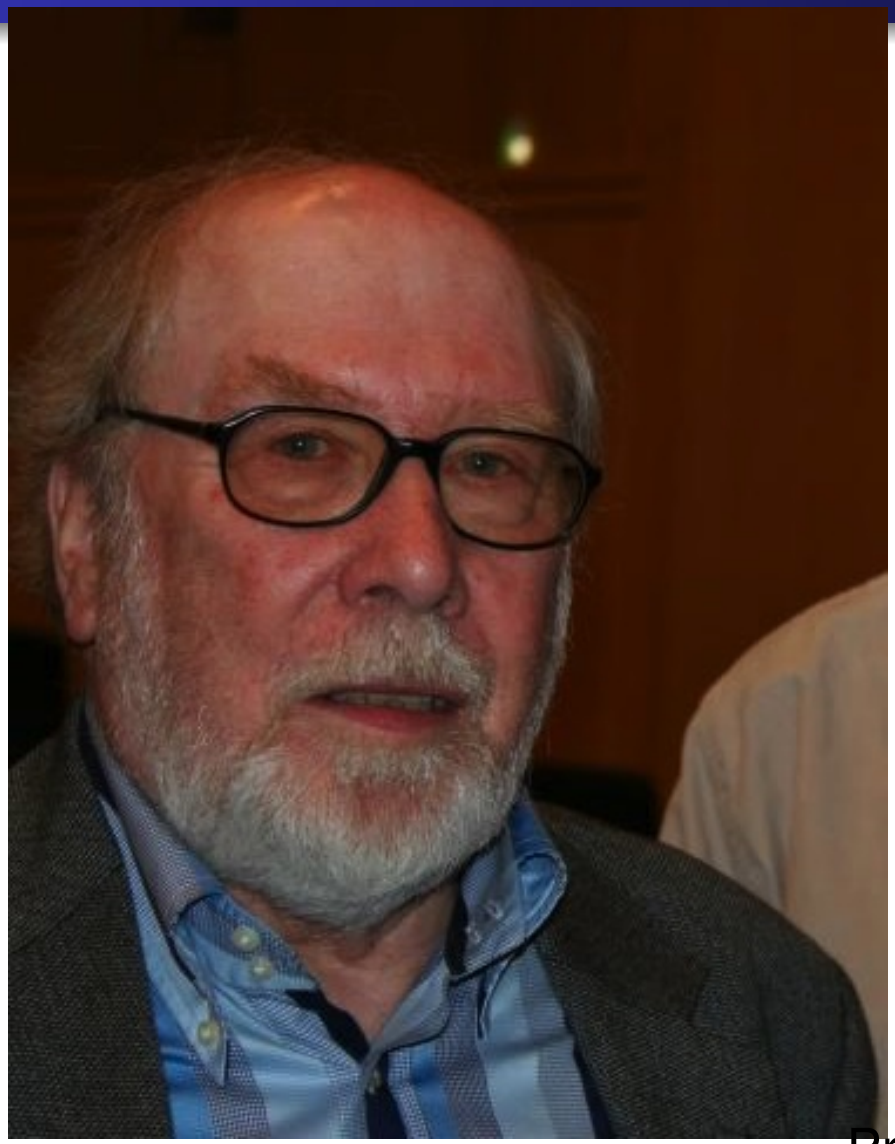
- results and prizes
- live tournament
- lectures, famous speakers

SOI Tag
2010

SOI - Events



SOI - Events



Prof. Dr. Niklaus Wirth, SOI-Day 2008

SOI - Events

Prof. Dr. Donald Knuth, SOI-Day 2011

SOI - Events

SOI-Day (11th January 2014)

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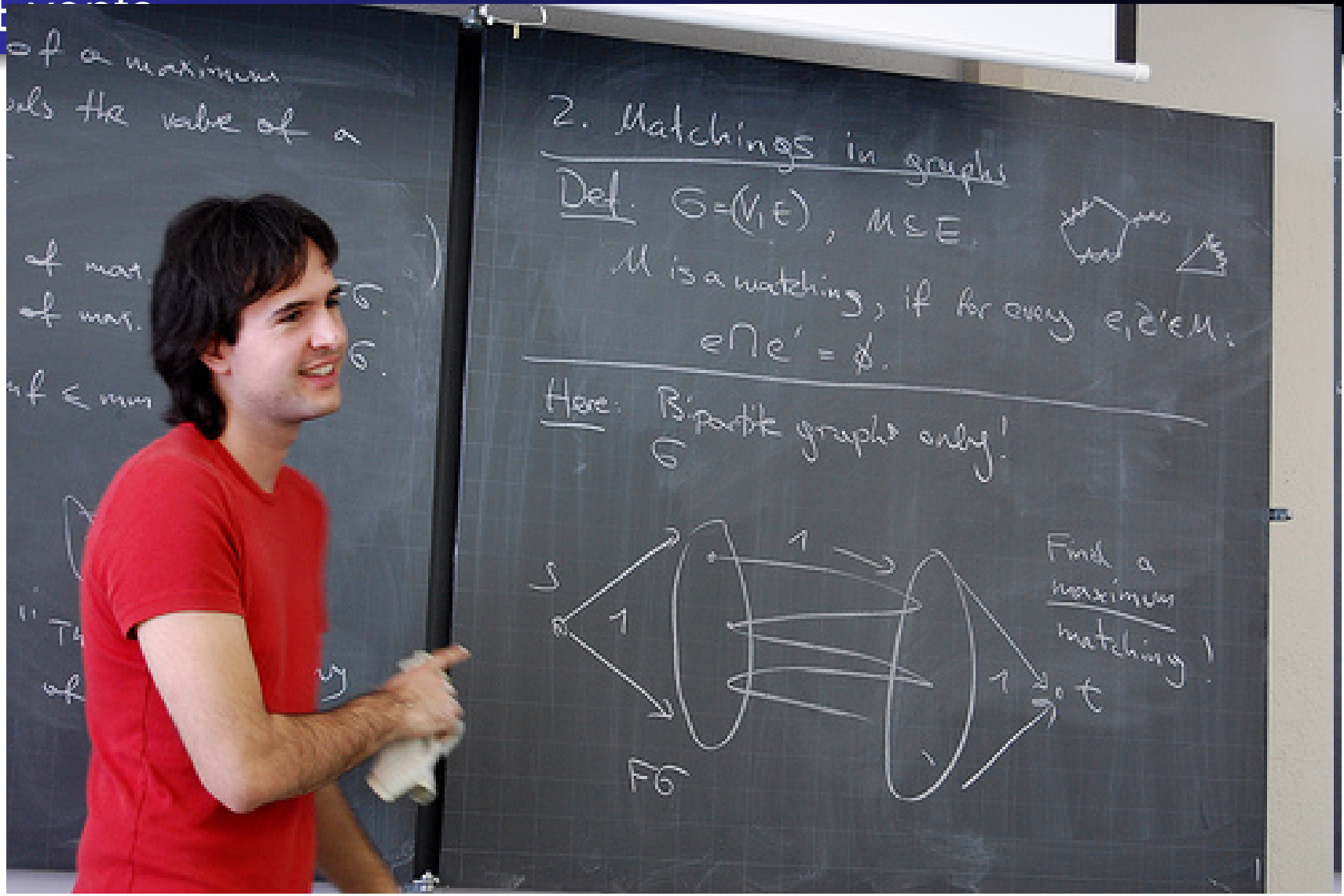
- live tournament
- lectures, famous speakers

Davos-Camp (February 2014)

- one week training in Davos
- lectures, contests and skiing
- all expenses paid
- international guests


2. Matchings in graphs
Def: G=(V,E), M⊆E.
M is a matching, if for every e,e'∈M:
e∩e' = ∅.
Here: Bipartite graphs only!
G
Find a maximum matching!
FG

SOI - Events

International Events

CEOI/BOI/RMMS

- international regional contests
- delegations of 3-5 students

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IOI (Summer 2014, Taiwan)

- the big thing - International Olympiad in Informatics
- 4 contestants from $\sim$ 80 countries

International Events

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First Round until November 30, 2013

www.soi.ch

SOI - After the Workshop

Resources

- List of Algorithms and C++ Tutorial on soi.ch/train
- Read books, ask questions in the forum
- Train online: SPOJ, USACO, topcoder
- Next workshop on October 26 in Bern