workshop on genomics

Český Krumlov
5-18 January, 2020

objectives

- information about settings and logistics
- introductions
- workshop background and history
- establishing expectations
- miscellany

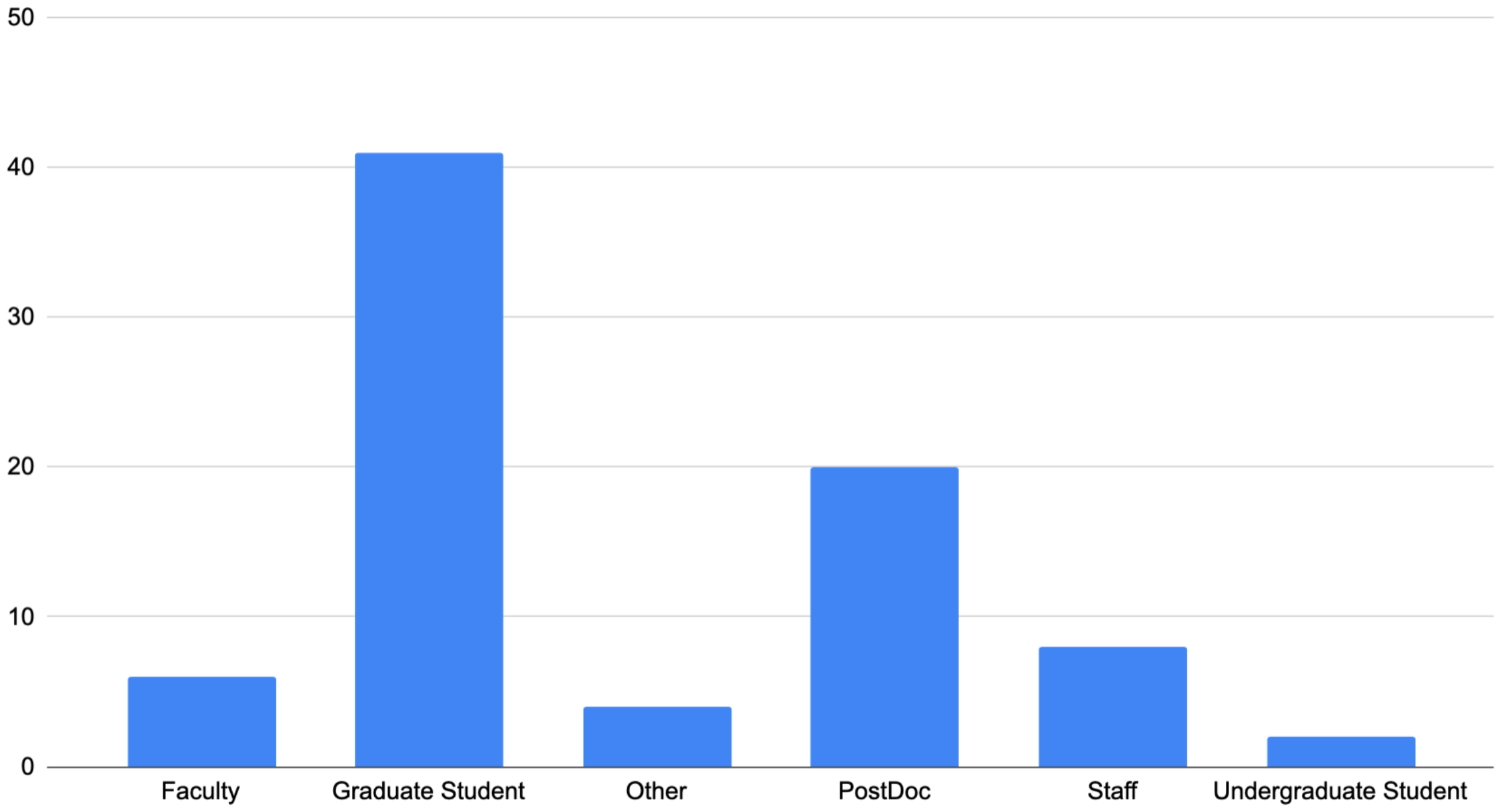
f.a.q.

- where are the restrooms?
- coffee breaks?
    - approx. 10:00 in the Theatre Cafe
        - functional coffee and tea only. No half-calf-decaf-double-mocha-pour-over
    - anytime in House of Prelate (Computer Lab)
- where and when to eat?
    - workshop map on the main schedule page
    - information from Daniel Kintzl
    - ask the team
    - times: 12-14, 17-19
    - late night dining options are limited

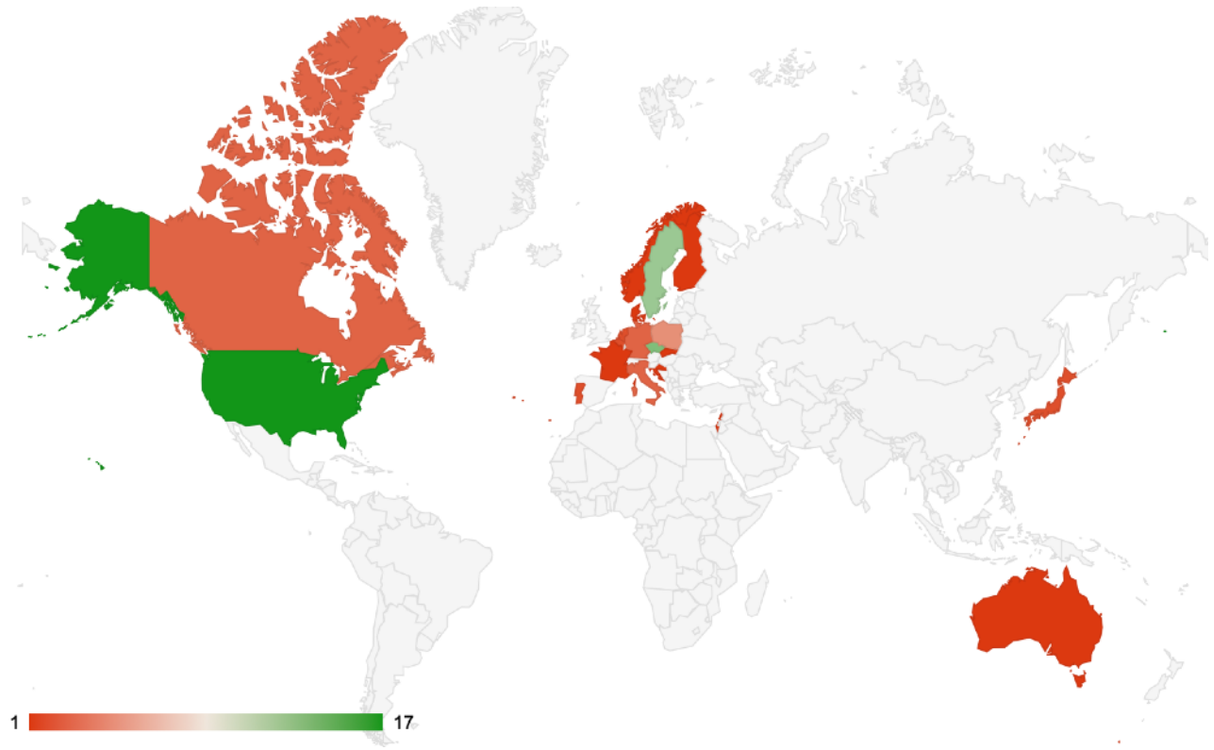
who

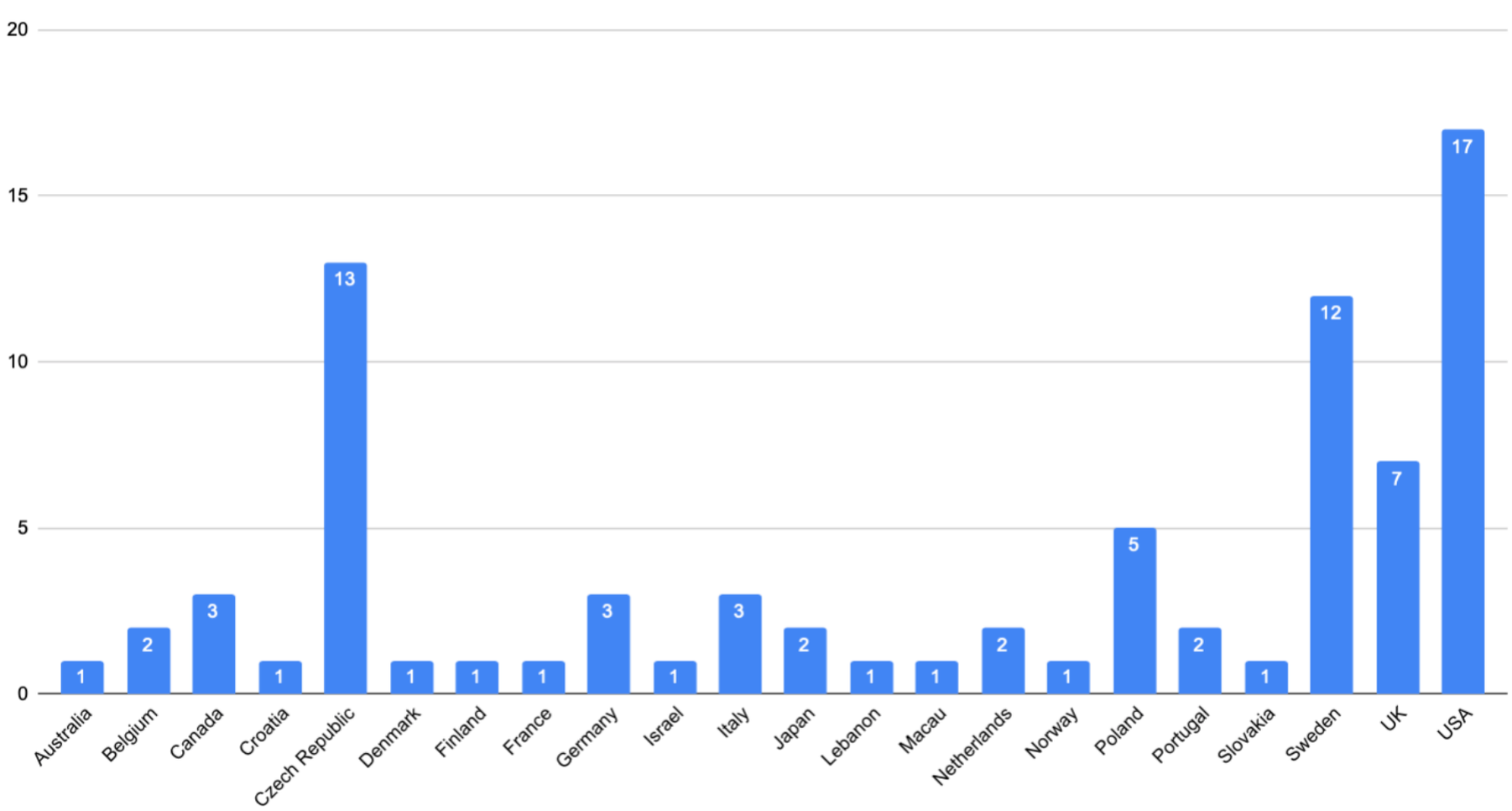
you

Professional Level

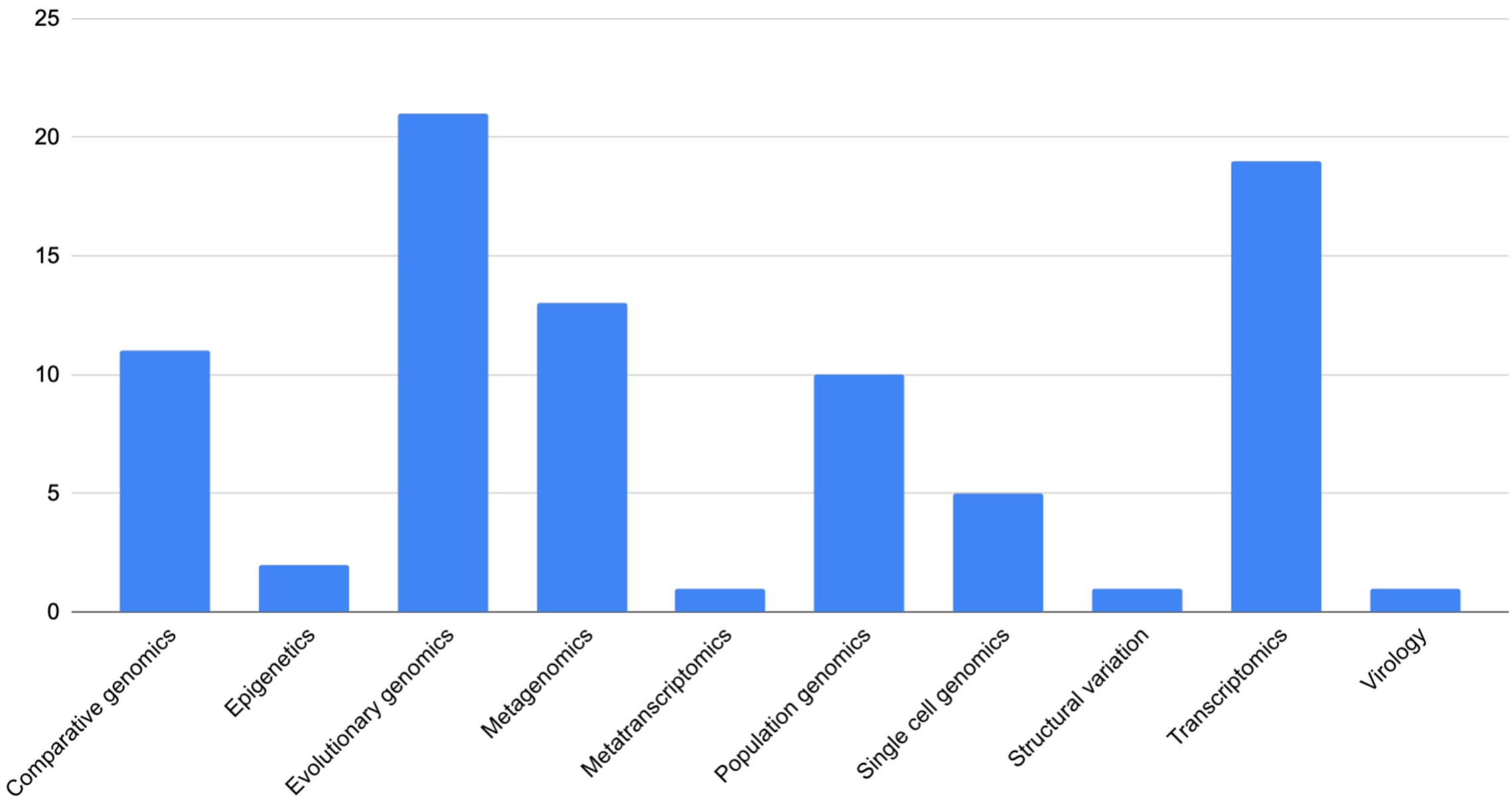


Regional Affiliation





Research Interest



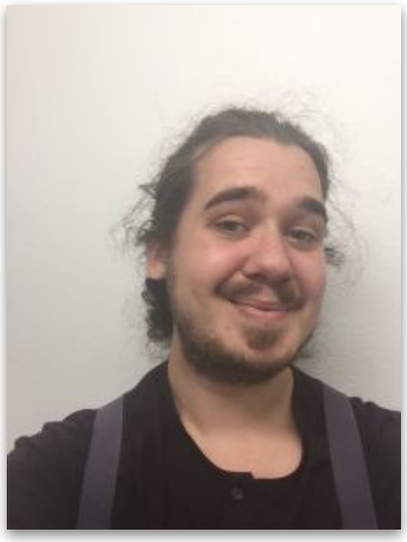
us

instructors: your new best friends

Madee

Joan

Karin



Nikos

Kalle

co-directors

Dag

Sophie

Josie

Sonya

Scott

Guy

Rayan

Previous Co-directors

Karin

Konrad

faculty: week 1

Sonya Dyhrman

Mike Zody

Camille Marchet

Antoine Limasset

Sergey Nurk

Malachi Griffith

Evan Eichler

faculty: week 2

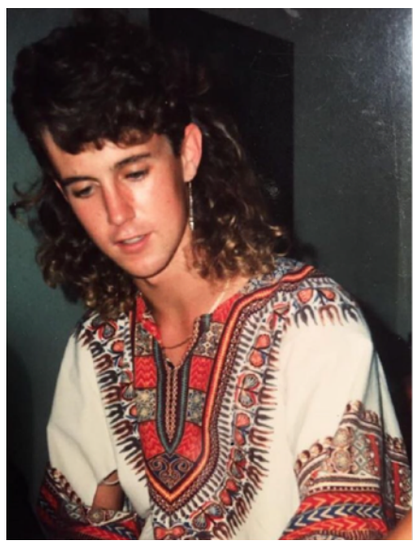
Brian Haas

Kelly Wrighton

Emiliano Trucci

Christa Schleper

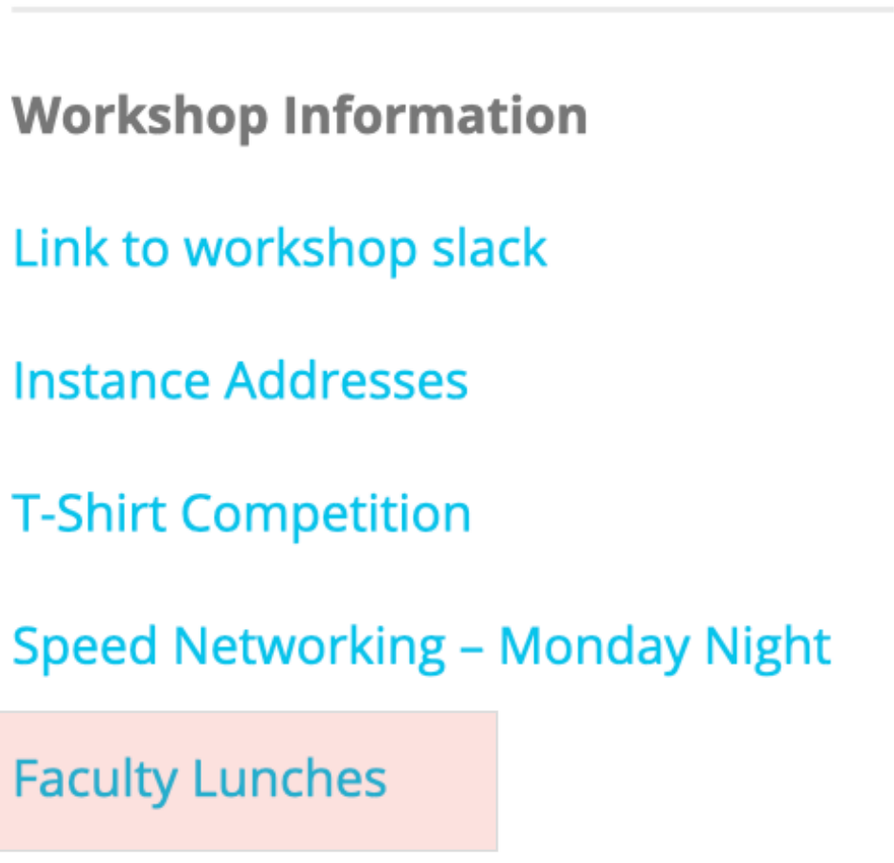
Kirk Gosik



Chris Wheat

faculty lunches

- outstanding opportunity to network with faculty
- some faculty are only here for a short period of time, so take advantage of the lunch



partners

Graduate Research School in Genomic Ecology

LUND UNIVERSITY, SWEDEN

GENECO

Vetenskapsrådet

- Interdisciplinary graduate school for PhD students in Genomic Ecology
- Genomic Ecology - interface between ecology & evolution, molecular biology and genomics
- GENECO was funded by the Swedish Research Council, from 2013 by the Faculty of Science, Lund University

GENECO program

PhD students & content

- Universities in Sweden, Norway, and Finland
- Activities: Annual Winter & Summer Meetings, PhD courses, Mentor programs, travel grants

Courses

- Understanding population genetics
- Using Phylogenetic Trees to Study Trait Evolution
- High-Dimensional Data Analysis in Ecology and Evolutionary Biology Using R
- Quantitative PCR

see www.biology.lu.se/geneco

Sponsor of Workshop on Genomics

National Bioinformatics Infrastructure Sweden

Short term support: (300+ projects)
Long term support: 500 hours (20+ projects)
Bioinformatics compute and storage (UPPNEX) specifically for NGS data

NBIS provides infrastructure and tools for:

- Bioinformatics analyses
- Bioinformatics training and workshops
- Advisory Programme for PhD students

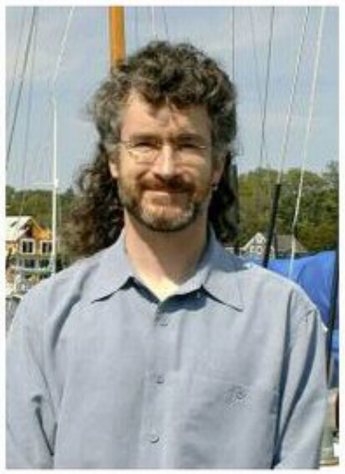
Nodes at each of the 6 large Swedish university cities

see www.nbis.se

what
history
concepts

history

Woods Hole Workshop on Molecular Evolution



Michael Cummings
Director

Scott (me!)

Michael & Scott
have dinner in DC

Mitch Sogin
Director

TA

TA

1988

2000

2001

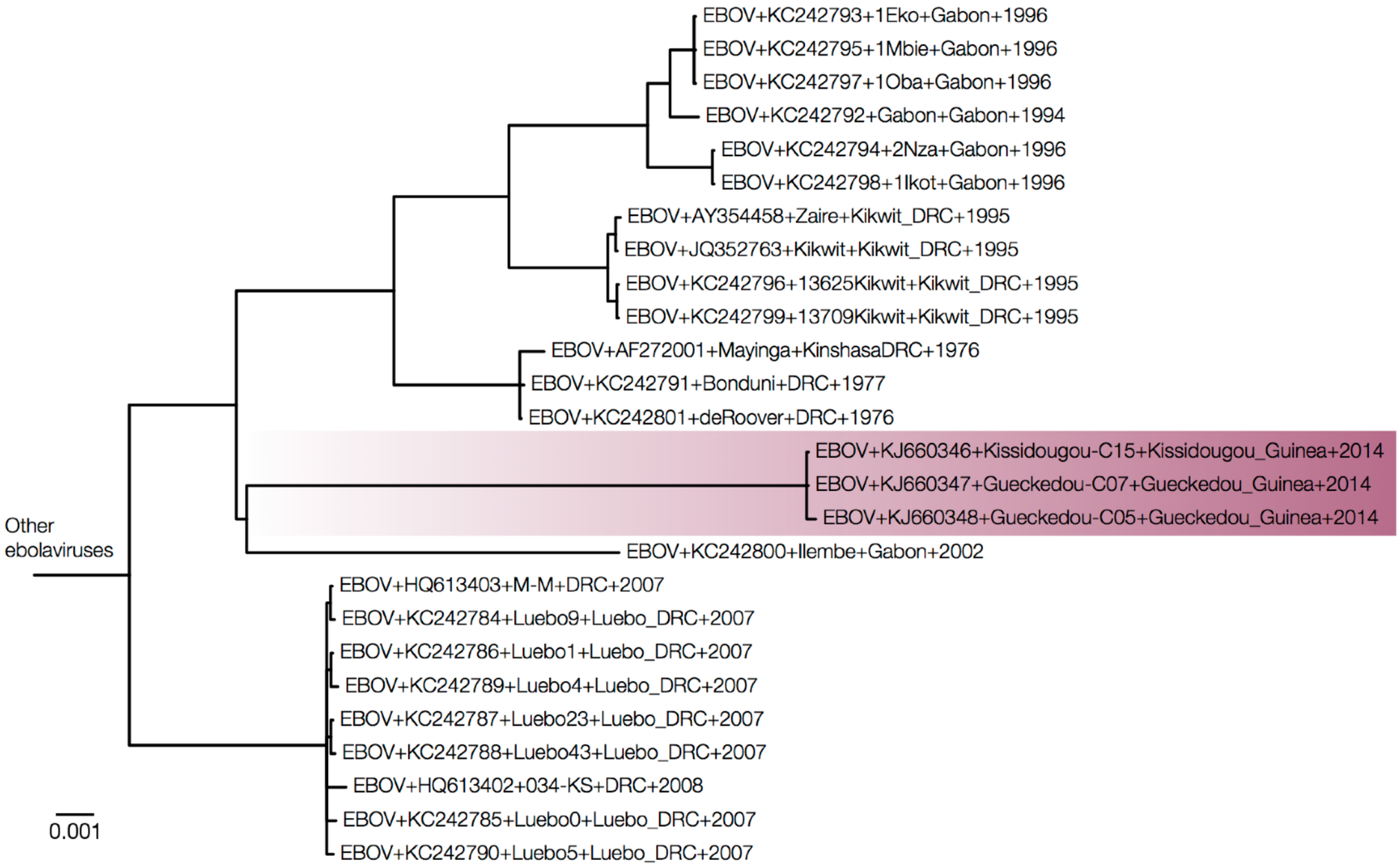
2002

2007

Walter Salzburger
Student

CDC
CENTERS FOR DISEASE
CONTROL AND PREVENTION

CDC loves trees



why Český Krumlov?

Lerwick
Bergen
NORWAY
SWEDEN
Baltic Sea
Tampere
Helsinki
Oslo
Gavle
Uppsala
Tallinn
St. Petersburg
Inverness
U. K.
North Sea
Stockholm
Novgorod
Tartu
Glasgow
Edinburgh
Goteborg
Parnu
Pskov
IRELAND
Belfast
DENMARK
Riga
Dublin
Sunderland
Liepaja
Limerick
Vejle
Copenhagen
Daugavpils
Leeds
Klaipeda
Vitebsk
Smolensk
Liverpool
Manchester
Kaunas
Cork
Waterford
Leicester
Mogilev
Birmingham
Gdansk
Olsztyn
Lida
Minsk
The Hague
Amsterdam
Hamburg
London
Berlin
POLAND
Bydgoszcz
Gomel
NETH.
Warsaw
BELARUS
Plymouth
Rotterdam
GERMANY
Poznan
Dnieper
Brussels
Leipzig
Lubin
Lodz
Bonn
Le Havre
BELGIUM
Wroclaw Breslau
Kiev
Luxembourg
LUX.
Frankfurt a. M.
Lutsk
Krakow
Paris
Nuernberg
Prague
UKRA
Karlsruhe
Ostrava
Lviv
Vinnitsa
Nantes
Strasbourg
Stuttgart
Brno
FRANCE
Muenchen
Krivoy Rog
Rhine
Vienna
Bratislava
Zurich
Botosani
Bern
Miskolc
Chisinau
Clermont-Ferrand
Innsbruck
Gyor
Budapest
La Coruna
SWITZERLAND
AUSTRIA
Graz
Cluj
Odessa
Geneva
HUNGARY
MOLDOVA
Bordeaux
Lyon
Milano
Ljubljana
Pecs
Arad
ROMANIA
Bayonne
Venezia
Timisoara
Braga
Bilbao
Turin
Zagreb
Braila
Porto
Genova
Rijeka
Belgrade
Bucharest
Valladolid
Toulouse
Monaco
Coimbra
Bologna
Sarajevo
Constanta
Salamanca
Zaragoza
Marseille
Danube
Covilha
Firenze
Split
Varna
Madrid
Sofia
Burgas
Barcelona
BULGARIA
SPAIN
Skopje
Valencia
Rome
Tirane
Istanbul
Cordoba
Palma
ITALY
Xanthi
Bari
Thessaloniki
Sevilla
Napoli
ALBANIA
Bursa
Malaga
Ioannina
Larisa
Gibraltar
Tangier
GREECE
Izmir
Palermo
Agrinion
Algiers
Patrai
Oran
Annaba

what is a Cheskie Kroomlav?

CZECH REPUBLIC

why Český Krumlov?

- reasonably priced
- relatively close to major airports
- three I’s
    - Isolated
    - Idyllic
    - Infrastructure
- support from the local community

workshops go global

Michael & Scott
have dinner in DC

2007

Workshop on
Molecular Evolution
CDC

2008

Workshop on
Molecular Evolution
Český Krumlov

2009

Workshop on
Genomics
Český Krumlov

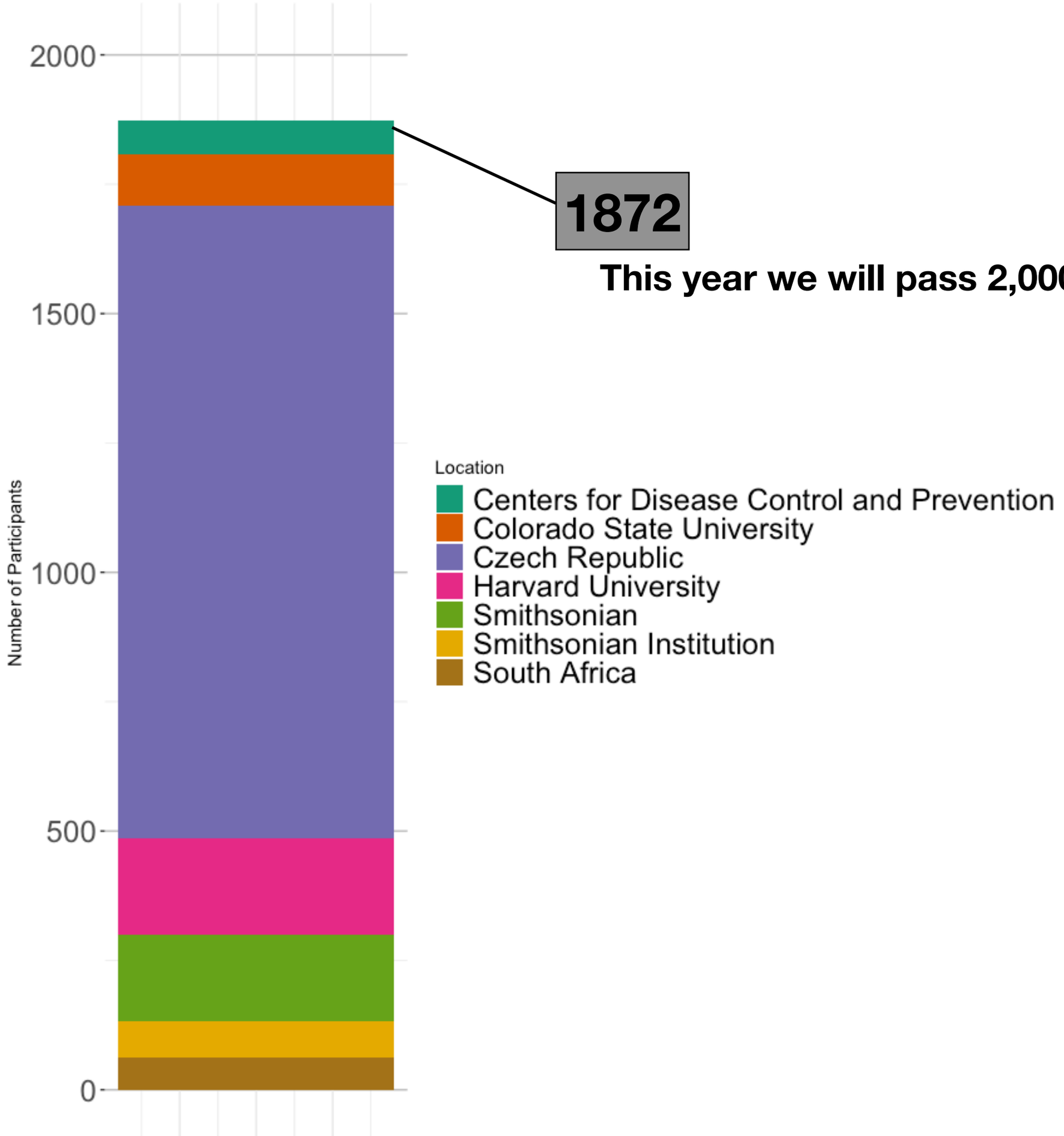
2011

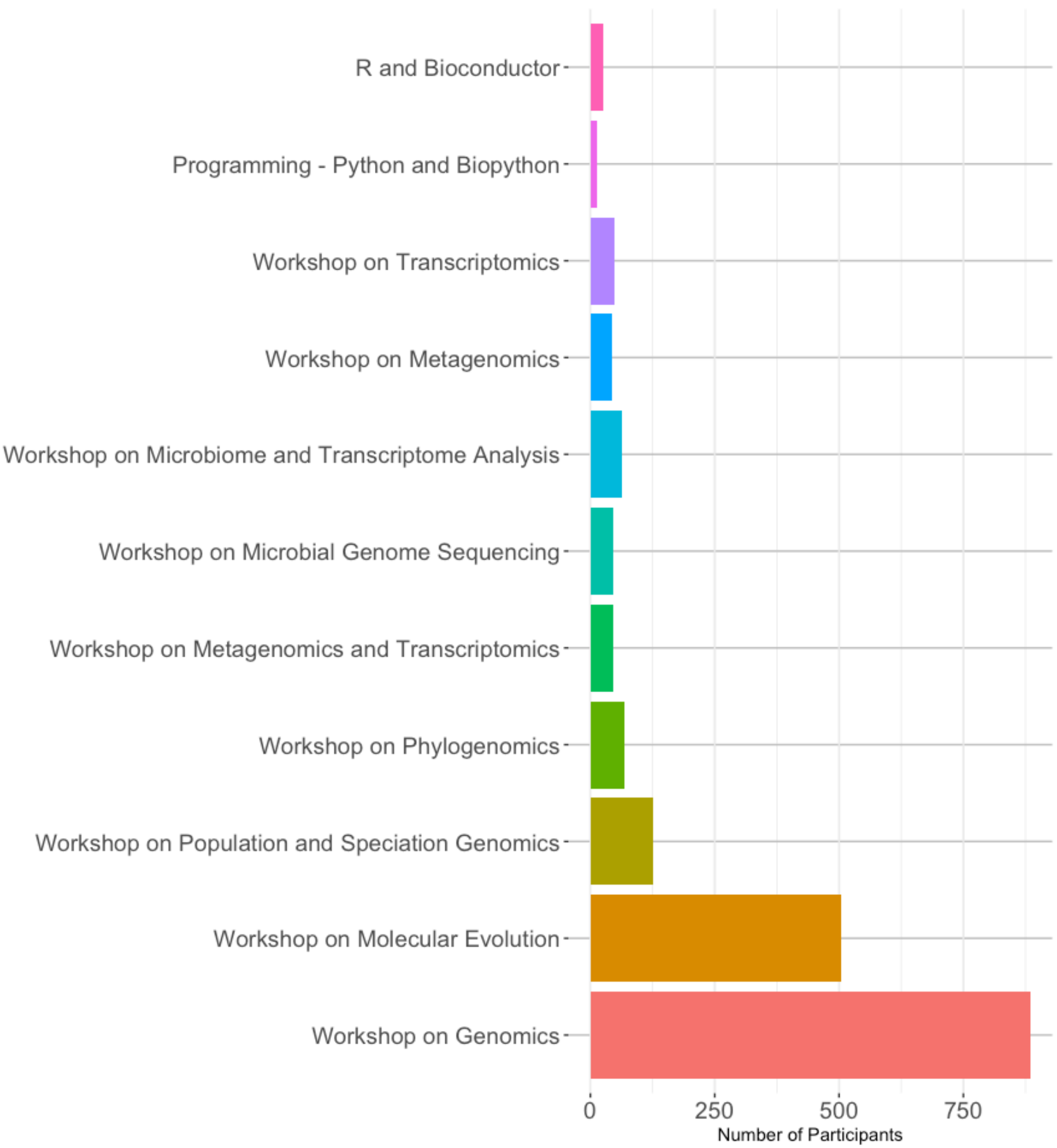
Workshop on
Population and Speciation
Genomics
Český Krumlov

2016

Workshop on
Phylogenomics
Český Krumlov

2017


2000
1500
1000
500
0
Number of Participants
1872
This year we will pass 2,000 students
Location
Centers for Disease Control and Prevention
Colorado State University
Czech Republic
Harvard University
Smithsonian
Smithsonian Institution
South Africa


R and Bioconductor
Programming - Python and Biopython
Workshop on Transcriptomics
Workshop on Metagenomics
Workshop on Microbiome and Transcriptome Analysis
Workshop on Microbial Genome Sequencing
Workshop on Metagenomics and Transcriptomics
Workshop on Phylogenomics
Workshop on Population and Speciation Genomics
Workshop on Molecular Evolution
Workshop on Genomics
0
250
500
750
Number of Participants

concept

Week 1: Fundamentals

Study Design

UNIX

Assembly

Structural Variation

Alignment

Data QA / QC

Topical

Visualization

R

Week 2: Subject Specific

Transcriptomics

Population Genomics

Evolutionary Genomics

Study Design

Microbiome

Phylogenomics

Single-Cell Transcritpomics

schedule in detail

http://evomics.org/workshops/workshop-on-genomics/2020-workshop-on-genomics-cesky-krumlov//

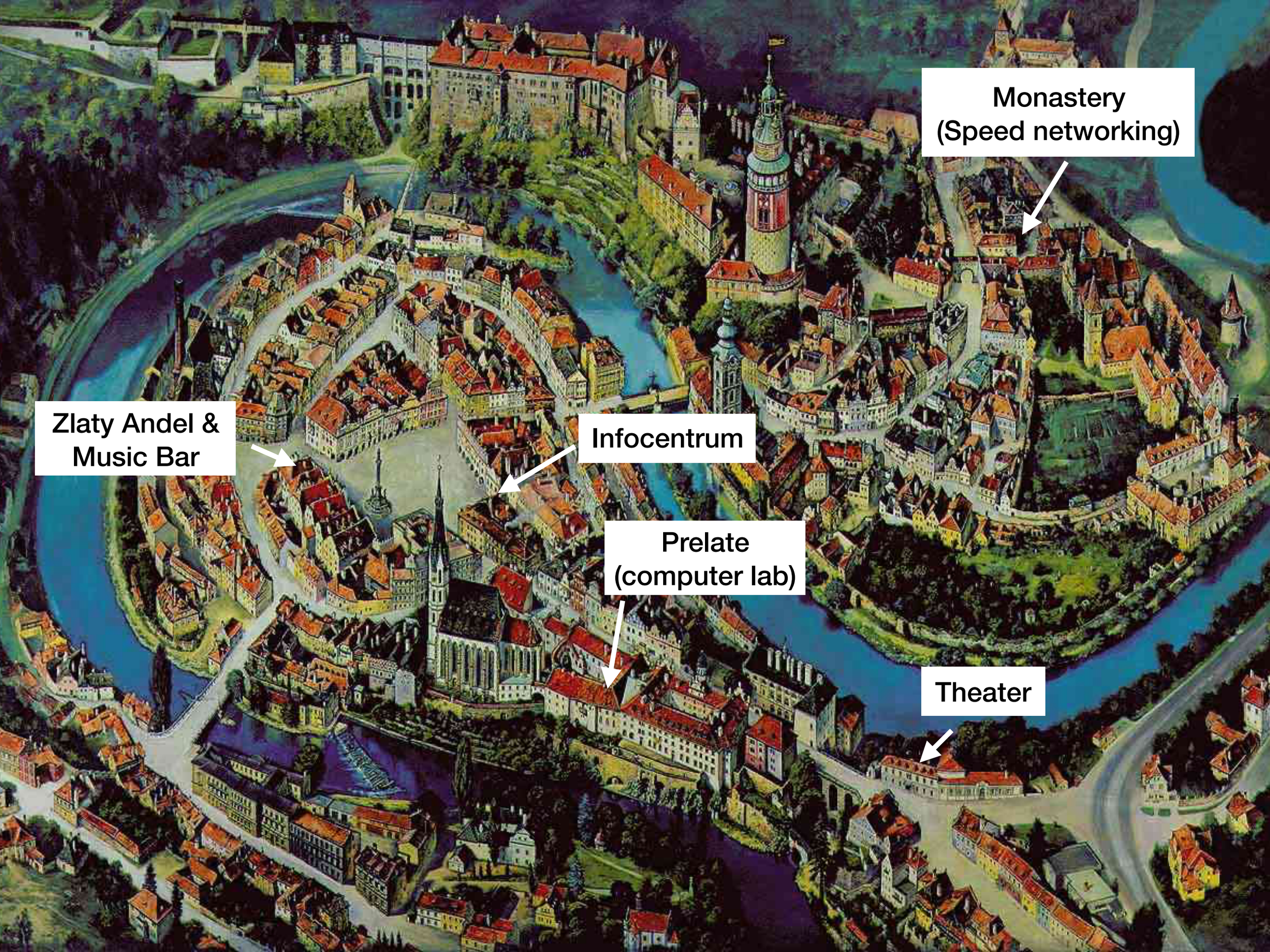
social events

- Saturday
  - meet at 18:00 in the Town Square for a group tour of Český Krumlov
  - tour will finish at Depot for dinner
- Sunday
  - free day. More information from Daniel Kintzl shortly
- Friday
  - you plan end-of-workshop dinner / party

communication during the workshop

- website: http://evomics.org
- twitter: #evomics2020
- facebook: Workshop on Genomics
- slack: evomics2020.slack.com

key locations


Monastery
(Speed networking)
Zlaty Andel &
Music Bar
Infocentrum
Prelate
(computer lab)
Theater

expectations

phenomena

- exhaustion
    - watch your health
        - stay hydrated (ask a staff member about the magical powers of fizzy water)
        - let a staff member know if you are not feeling well
- frustrations
    - you will likely not finish every step of every exercise
    - application bugs, connectivity issues
- you will not become an expert in 2 weeks

approach and attitude

- patience!
  - we have 2 weeks together!
- sleep
- ask questions (Slack)
- everything will be available on the web after the course is over
- have fun, make new friends and colleagues, enjoy Krumlov
- **WORK WITH YOUR NEIGHBORS**

Won’t you be my neighbor?

awk ‘{pirnt $3 “/t’ $4)’ text.txt

Thanks neighbor

code of conduct

All attendees, instructors and faculty at our workshops are required to agree with the Evomics Workshops code of conduct. Organisers will enforce this code throughout the event. We expect cooperation from all participants to help ensure a safe environment for everybody. Those found to be in violation of this code of conduct will be subject to expulsion from all Workshop activities at the request of the workshop organisers.

Our Code of Conduct

Our workshops are dedicated to providing a supportive and harassment-free environment for everyone, regardless of gender, gender identity and expression, age, sexual orientation, disability, physical appearance, body size, race, ethnicity, religion (or lack thereof), or technology choices. We do not tolerate harassment of conference participants, instructors or faculty in any form.

Harassment includes offensive verbal comments, sexual images in public spaces, deliberate intimidation, stalking, following, harassing photography or recording, sustained disruption of talks or other events, inappropriate physical contact, deliberate behaviour to exclude, intimidate, or cause discomfort, and unwelcome sexual attention. This applies to any workshop venue, including talks, workshops, social events, parties, slack, Facebook, Twitter and other online media, and any other non-official events or activities taking place over the duration of the workshop.

If anyone engages in harassing behaviour, the organisers may take any action they deem appropriate, ranging from warning the offender or expulsion from the workshop without a refund. This includes the storage of personal information pertinent to the incident.

If you are being harassed, notice that someone else is being harassed, or have any other related concerns, please contact a member of the organising team immediately. A point of contact dedicated to dealing with these issues will be highlighted during the welcome talk, but please know that you can discuss issues with the Workshop directors.

computer lab

- dates back to the 2nd half of the 14th century
- one of the oldest buildings in Krumlov (Gothic period)
- has housed several breweries between the 1596 - 1865
- important for us:
  - fully wired and wireless internet
  - power distribution

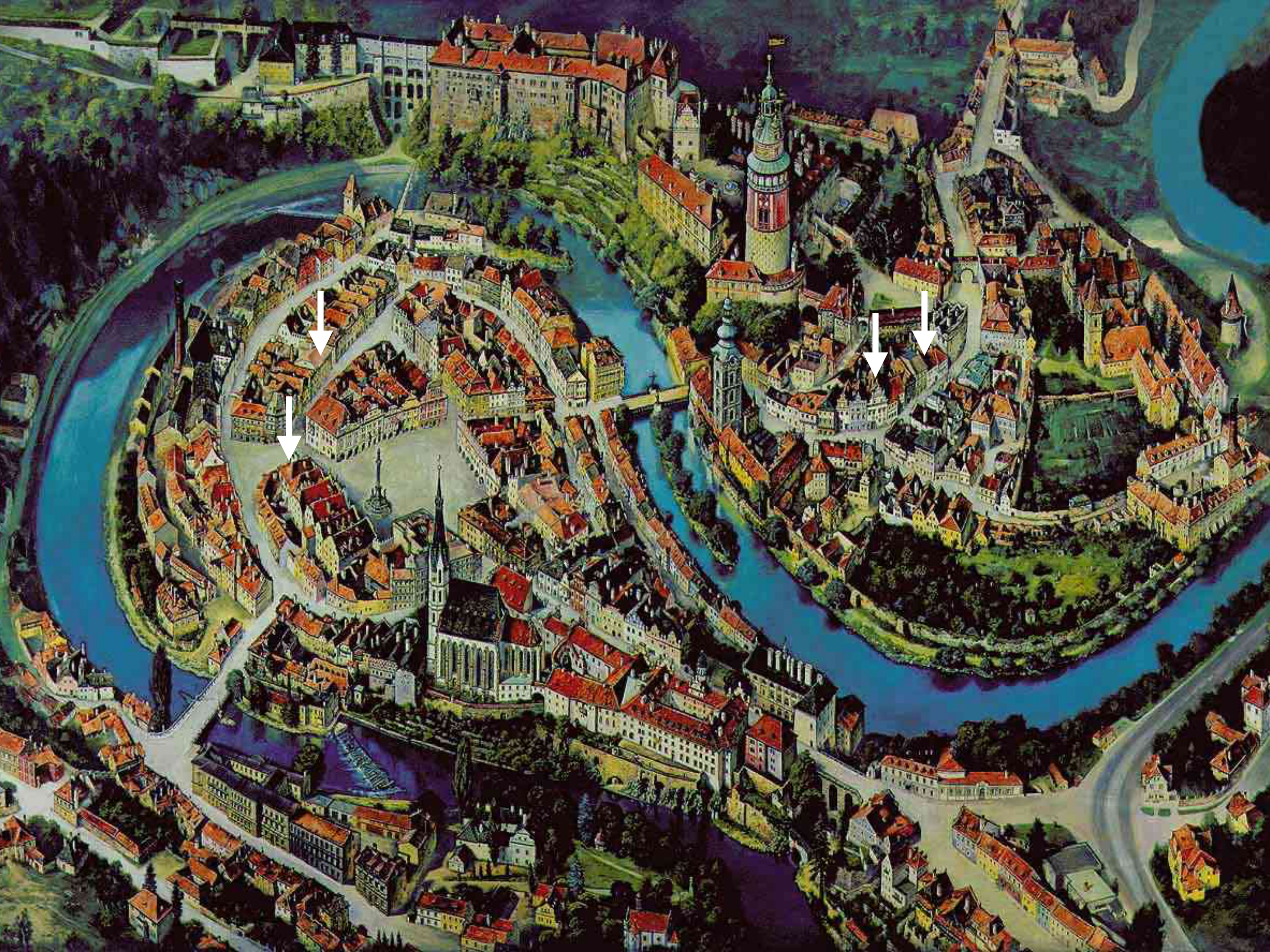
lab policy

- no food or drink inside the computer hall
- wipe feet before entering
- coats in the coatroom
- do not touch the walls (frescoes) - painter died in 1791
- strict arrival and departure times
- wash your own coffee mugs

post lab discussions

- important feature of the Workshop

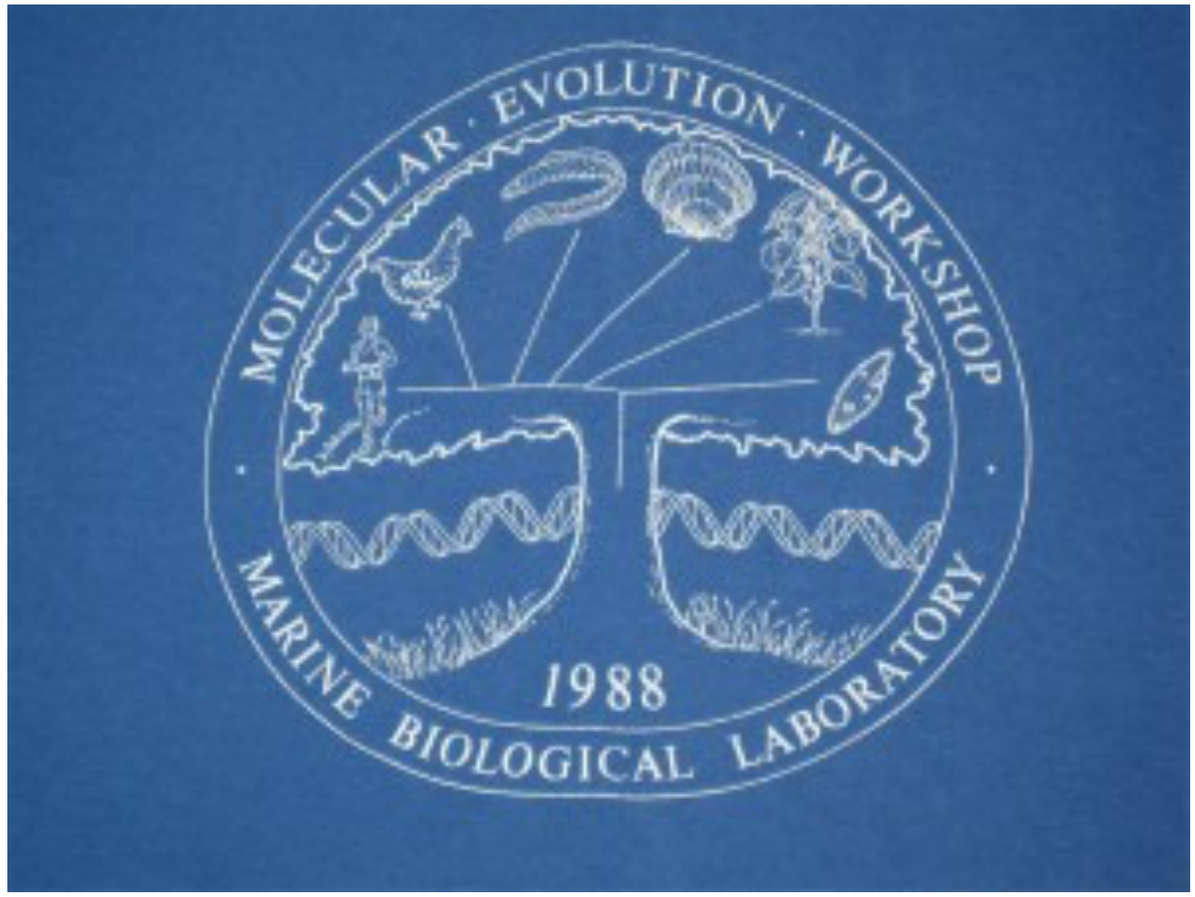
- Music bar (tonight), Festi Bar, Zappa Bar, Apotheka



miscellany

t-shirt competition

- top design will be awarded with a special gift from the town
- **submit by THURSDAY, 9-January (this week!)**



Workshop Information

Link to workshop slack

Instance Addresses

T-Shirt Competition

Speed Networking – Monday Night

Faculty Lunches

workshop BINGO

Genomics 2020 bingo sheet 1

Gone to Festi bar	Walk around the castle	Tell a pun to Karin	Sing along to dancing queen	Joined a faculty lunch
Asked a question after a lecture	Seen the bears	Tried Becherovka	Gone to Zappa bar	Take flaming shots
Drank ginger tea	Eat at the meat dungeon	**Free Space**	Yoga/Castle run	Drink the flaming rum barrel
Tried Tredelnik	Command failed because you're in the wrong directory	Gone to Music bar	Learned 5 Czech expressions	cowsay hello | lolcat
Seen the feet by the river	Gone to Egon Schiele Café	Typo in command	Started a dance floor	Helped a neighbor

Workshop Information

Link to workshop slack

Instance Addresses

T-Shirt Competition

Speed Networking – Monday Night

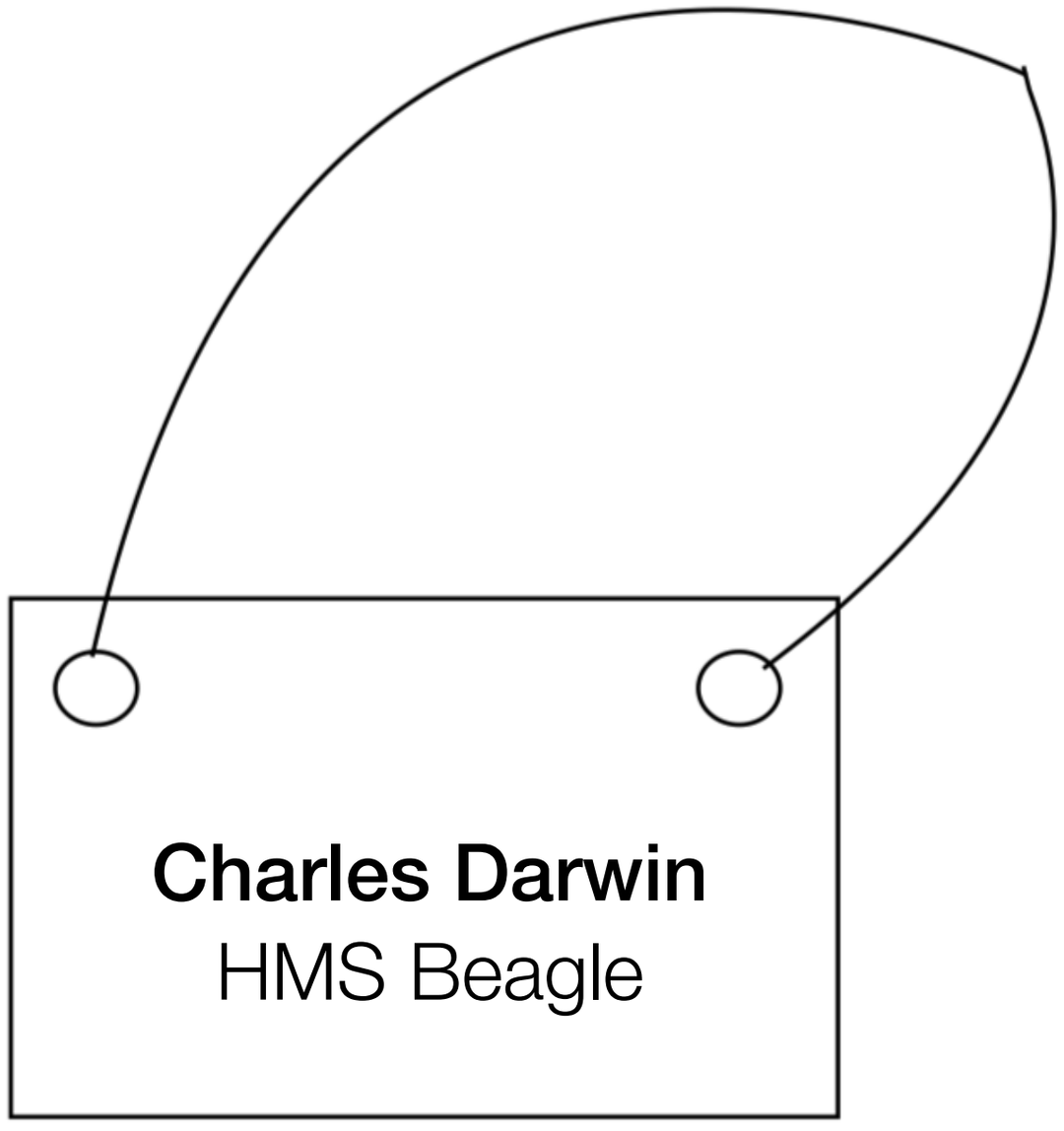
Faculty Lunches

Bingo Sheets

scientific speed networking

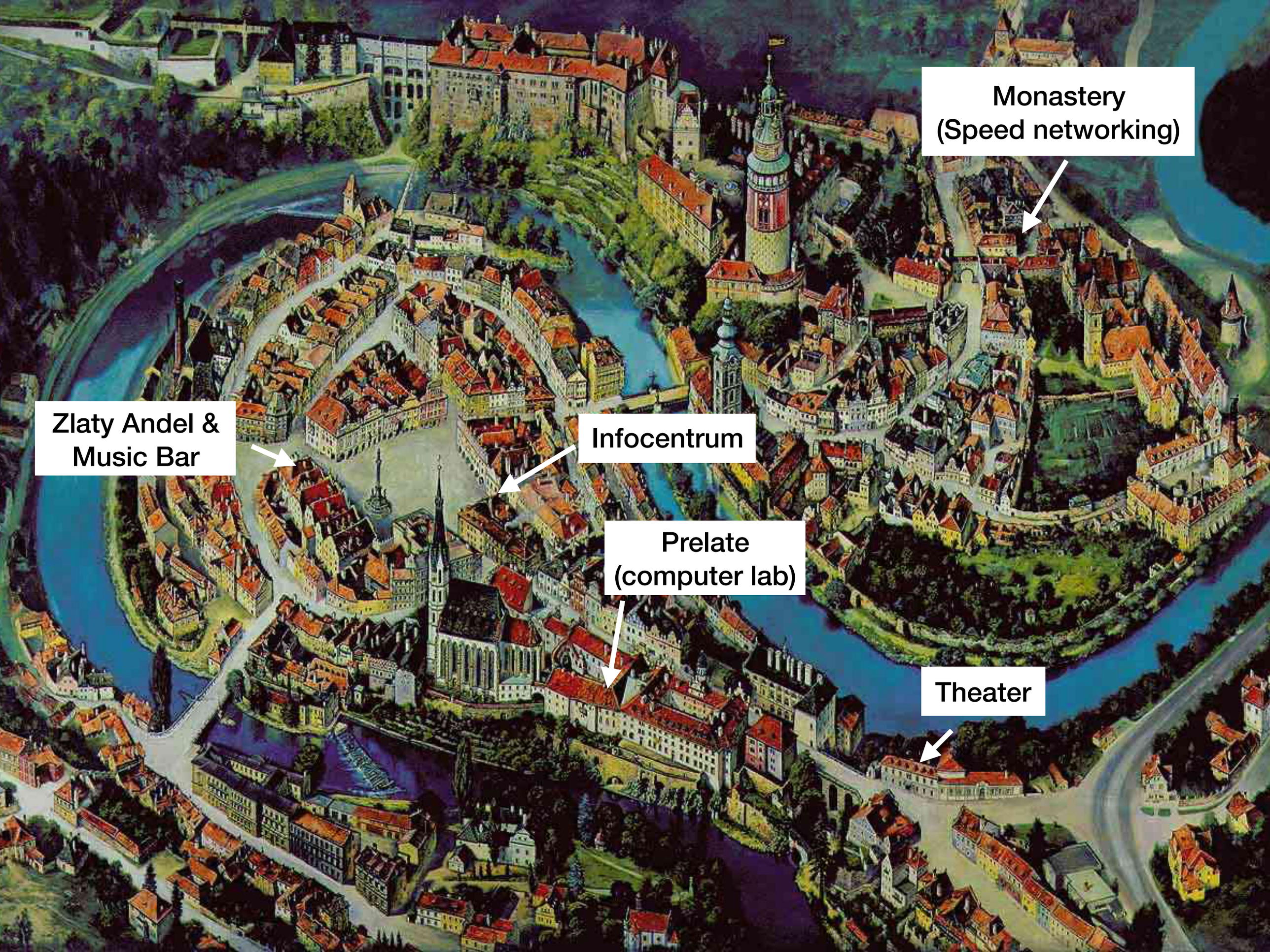
- tonight: Monastery (19:30)
- goals:
  - get to know each other
  - identify shared interests
  - learn approaches and methods other participants work with

wear your name tag!



next

- information from Daniel Kintzl
- group photo
- walk to house of prelate
- Extended 1st day lunch break
- 14:00 (2pm) lecture from Sonya (here)
- 19:30 (7:30pm) speed networking (Monastery)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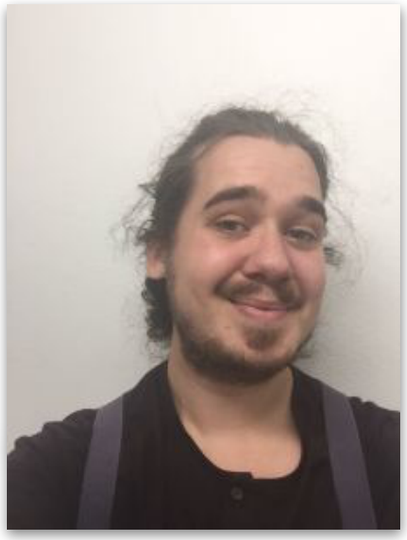

thank you and WELCOME!