workshop on phylogenomics

Český Krumlov
January 20 – February 2, 2019

objectives

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

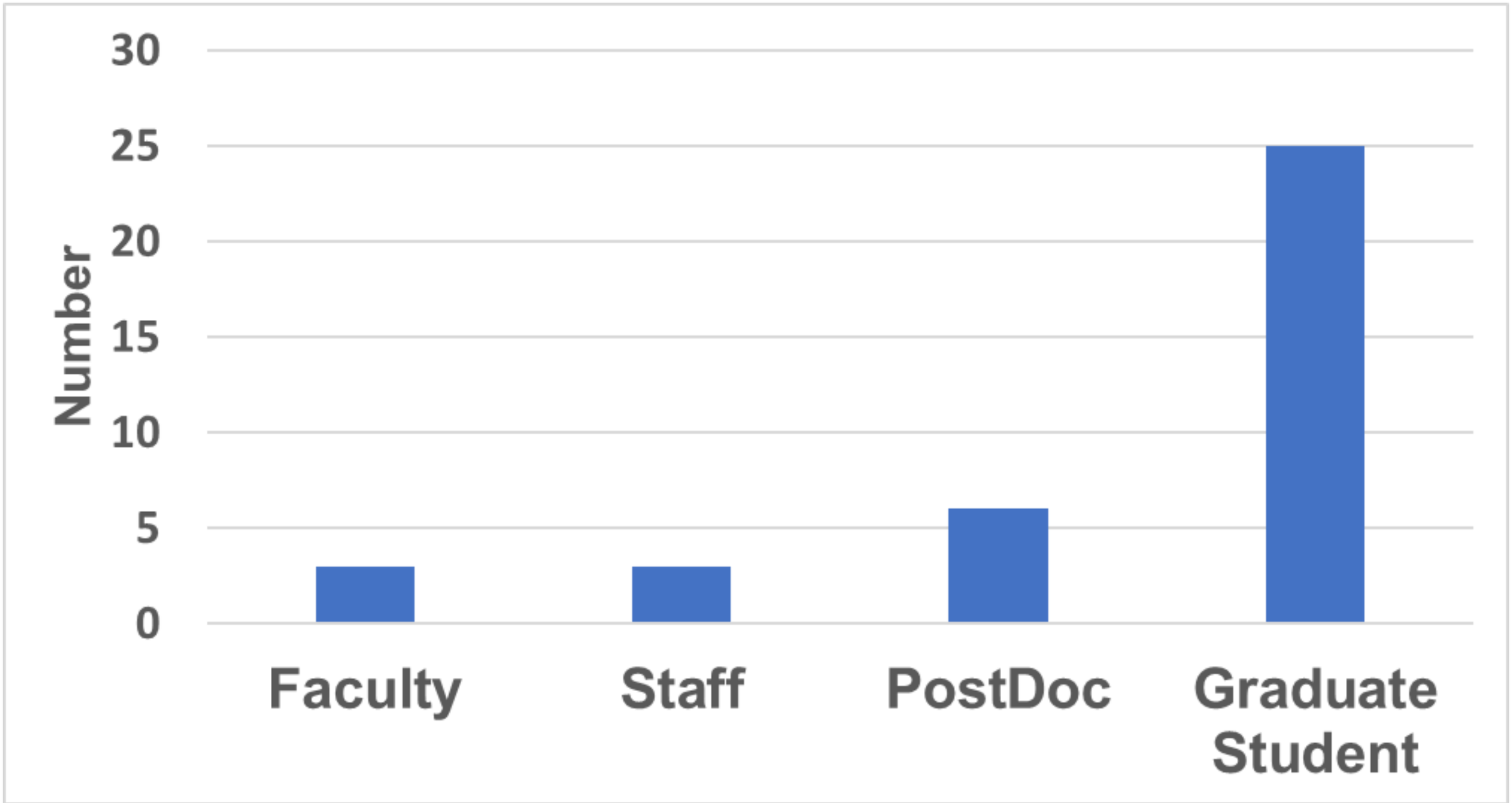
f.a.q.

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

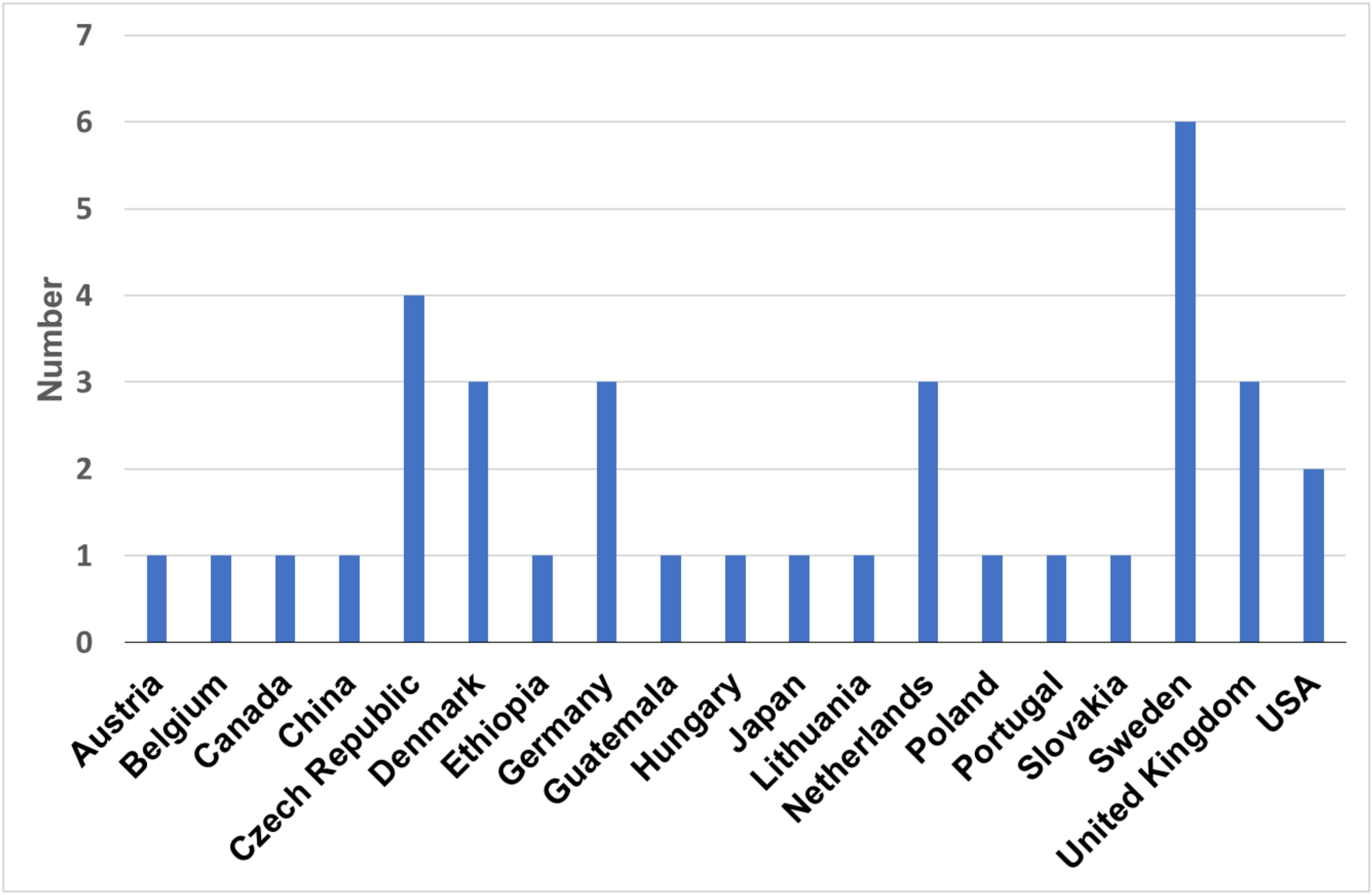
who

you

Professional Level



Regional Affiliation



us

instructors: your new best friends

Marina

Lisa

Eric

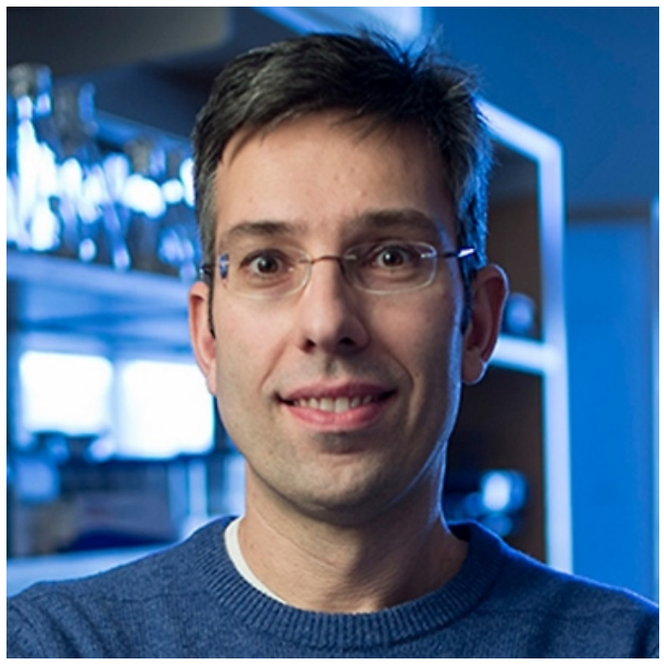
Jacob

co-directors

Toni

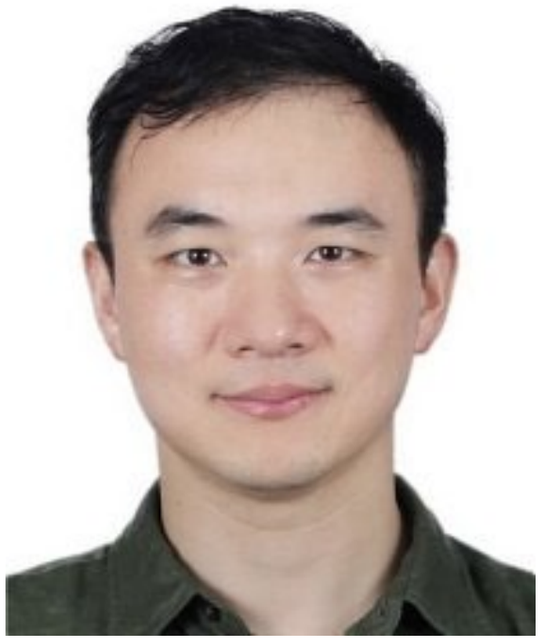
Anna

Scott



Antonis

faculty: week 1



Xiaofan Zhou

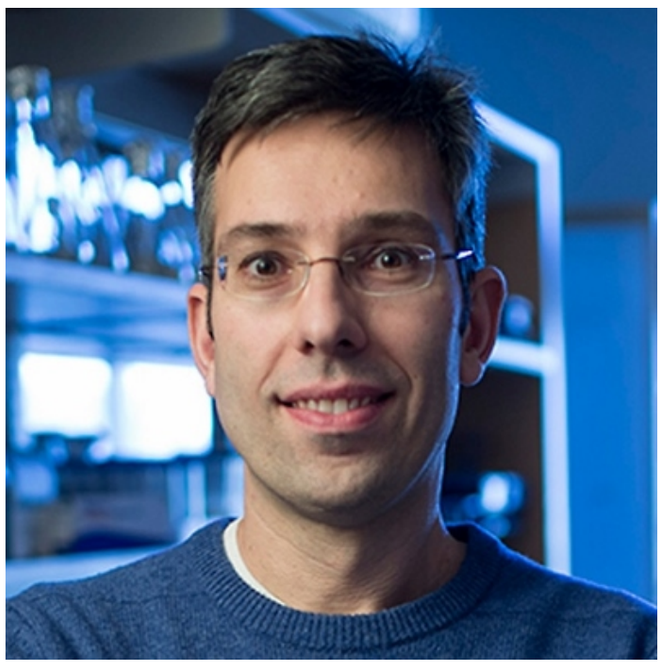
Alexey Kozlov

Stephen Crotty

Celine Scornavacca

Laura Kubatko

Toni Gabaldon



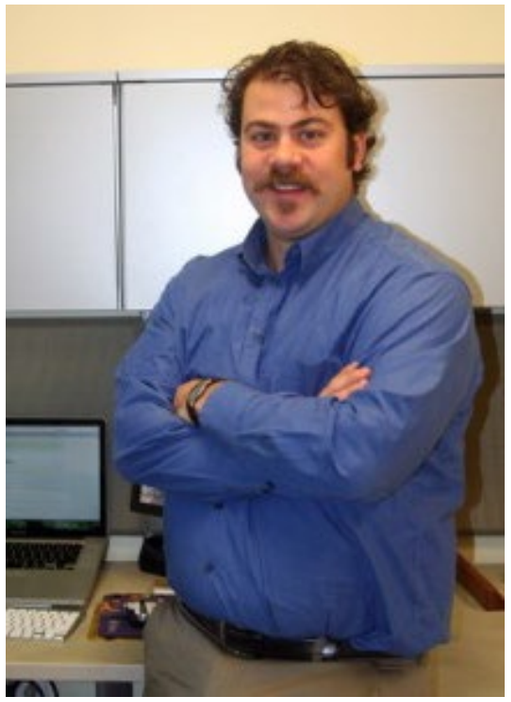
Antonis Rokas

faculty: week 2

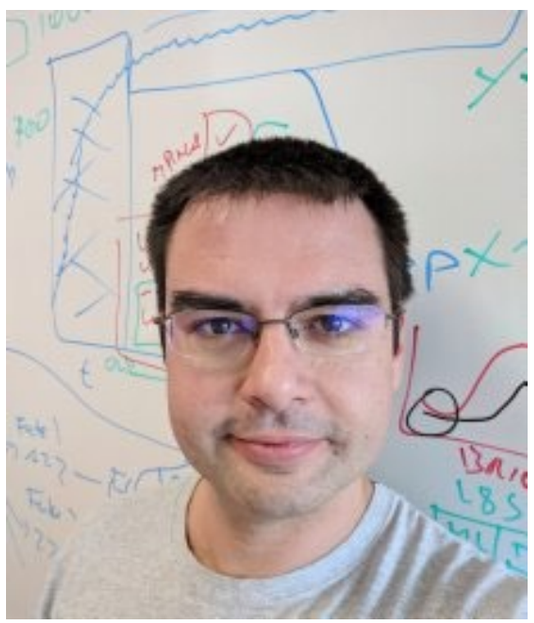
Mario dos Ries

Tracy Heath

László Garamszegi



Jason Stajich



Jordi Paps

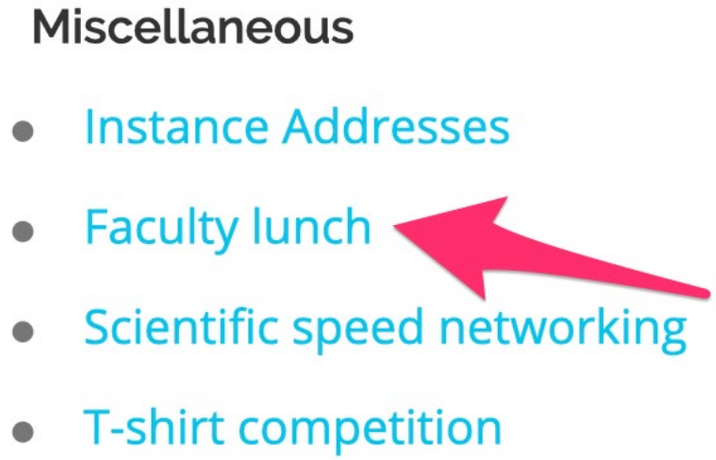
Anna Karnkowska

Martin Kolisko

Gergely J. Szöllősi

faculty lunches

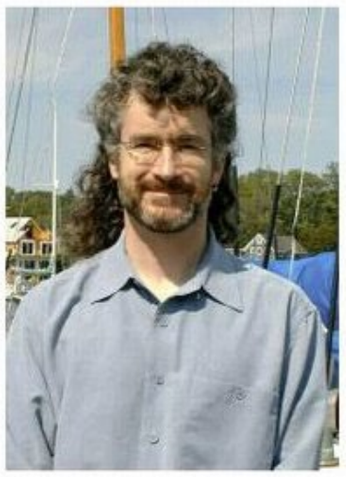
- outstanding opportunity to network with faculty
- some faculty are only here for a short period of time (you can check this at the course website), so take advantage of the lunch



what
history
concepts

history

Woods Hole Workshop on Molecular Evolution



Michael Cummings
Director

Antonis (me!) & Scott

Michael & Scott
have dinner in DC

Mitch Sogin
Director

TA

TA

1988

2000

2001

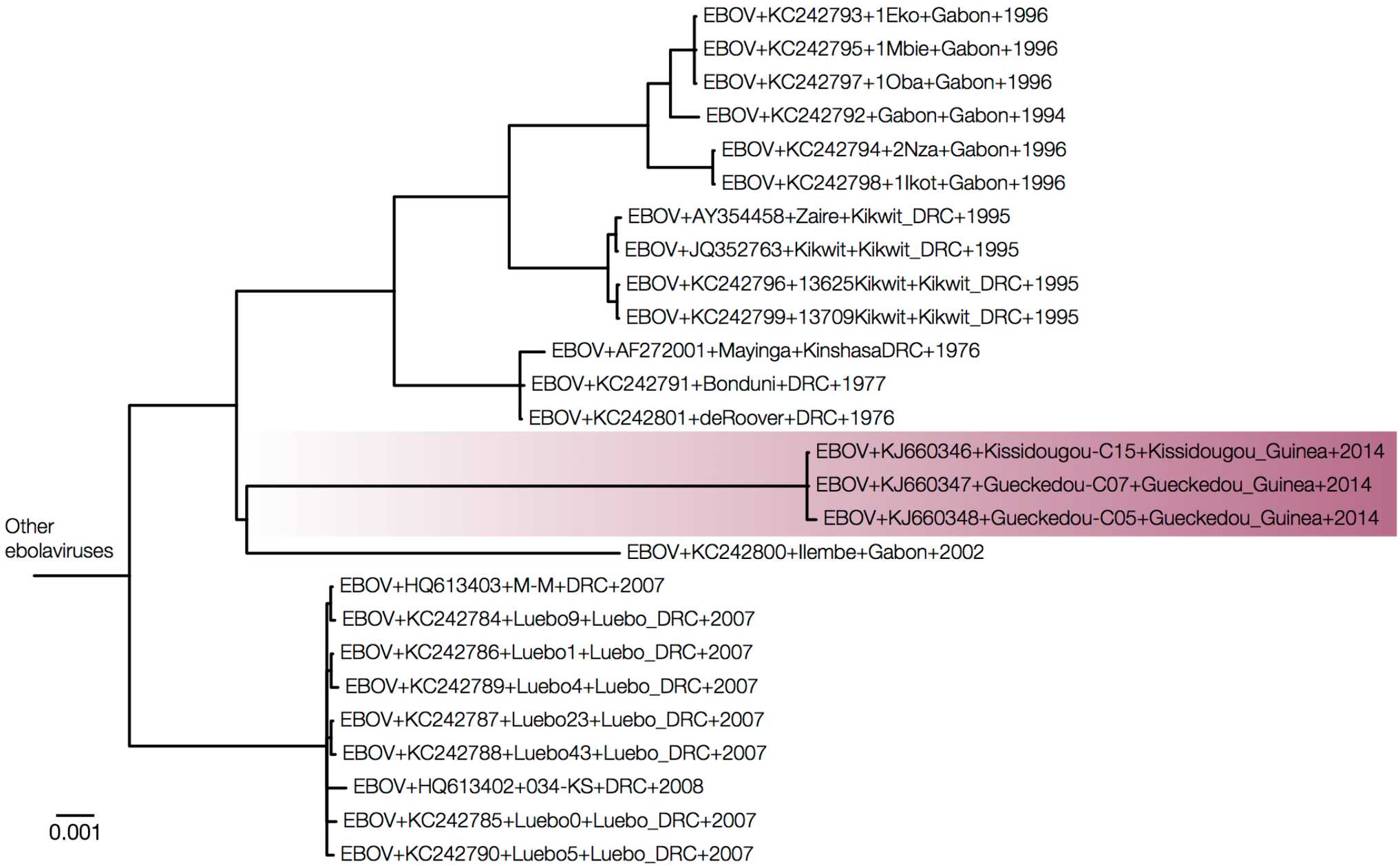
2002

2007

Walter Salzburger
Student

CDC
CENTERS FOR DISEASE
CONTROL AND PREVENTION

CDC loves trees



workshop at CDC

Michael & Scott
have dinner in DC

2007

2008

Workshop on
Molecular Evolution
CDC

Workshops go global

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
Napoli
ALBANIA
Sevilla
Bursa
Malaga
Ioannina
Larisa
Gibraltar
GREECE
Tangier
Izmir
Agrinion
Palermo
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

2008
Workshop on
Molecular Evolution
CDC

2009
Workshop on
Molecular Evolution
Český Krumlov

2011
Workshop on
Genomics
Český Krumlov

2016
Workshop on
Population and Speciation
Genomics
Český Krumlov

2017
Workshop on
Phylogenomics
Český Krumlov

concept

Week 1: Fundamentals

UNIX

Multiple Sequence Alignment

Finding Orthologs

Building Data Matrices

Visualizing Trees

Methods & Software

RAxML
IQTree
Phylobayes

Concatenation

Coalescence

Phylogenetic Networks

Week 2: Major Research Directions

Molecular Dating

Genome Evolution

Evolution of Eukaryotes

Trait Evolution and Ancestral Trait Reconstruction

Gene Family Evolution

Detecting HGT

schedule in detail

http://evomics.org/workshops/2019-workshop-on-phylogenomics-cesky-krumlov/

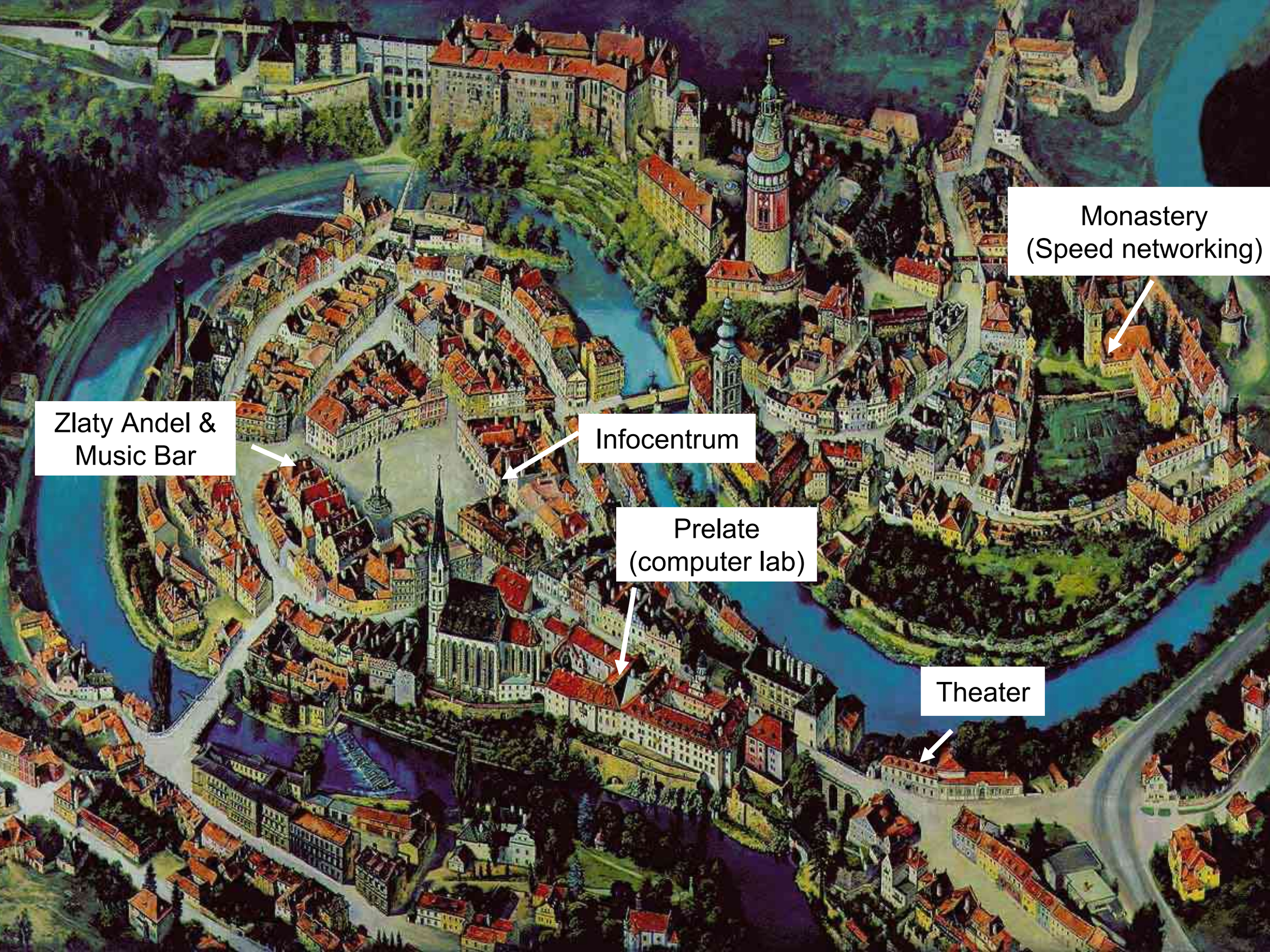
social events

- Saturday
  - meet at 18:00 in the Town Square for a group tour of Český Krumlov
  - tour will finish at Depot for dinner (on us!)
- 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: #evomics2019
- facebook: Workshop on Phylogenomics
- slack: phylogenomics2019.slack.com

key locations


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

expectations

phenomena

- exhaustion
  - watch your health
    - stay hydrated
    - 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
- You will get a certificate at the end of the course (if you need a custom form, please let Scott know after the end of the course
- have fun, make new friends and colleagues, enjoy Krumlov
- **WORK WITH YOUR NEIGHBORS**

Won’t you be my neighbor?

```
awk '{print $3 “/t’ $4}' text.txt
```

Thanks neighbor

computer lab

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

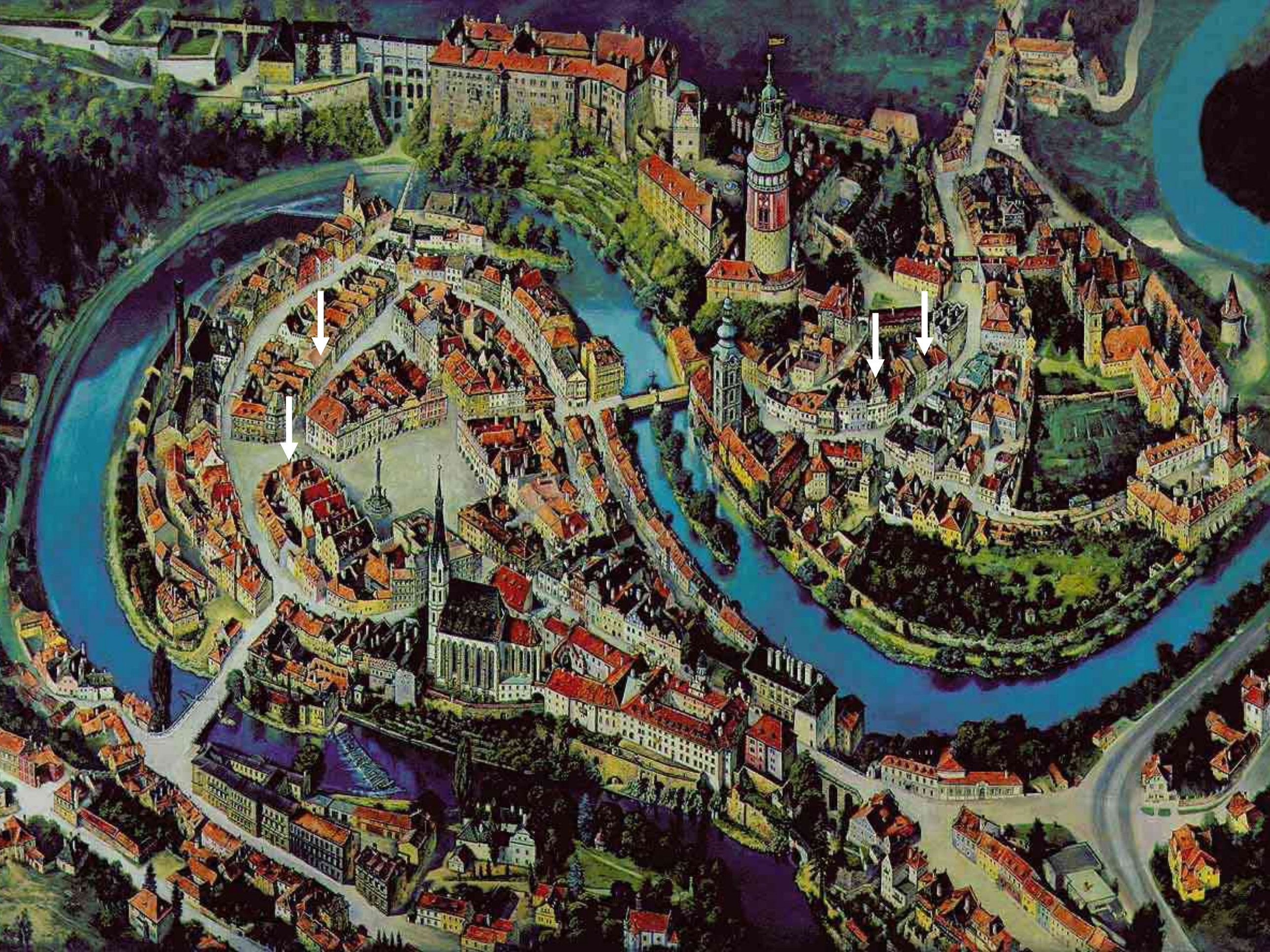
lab policy

- 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

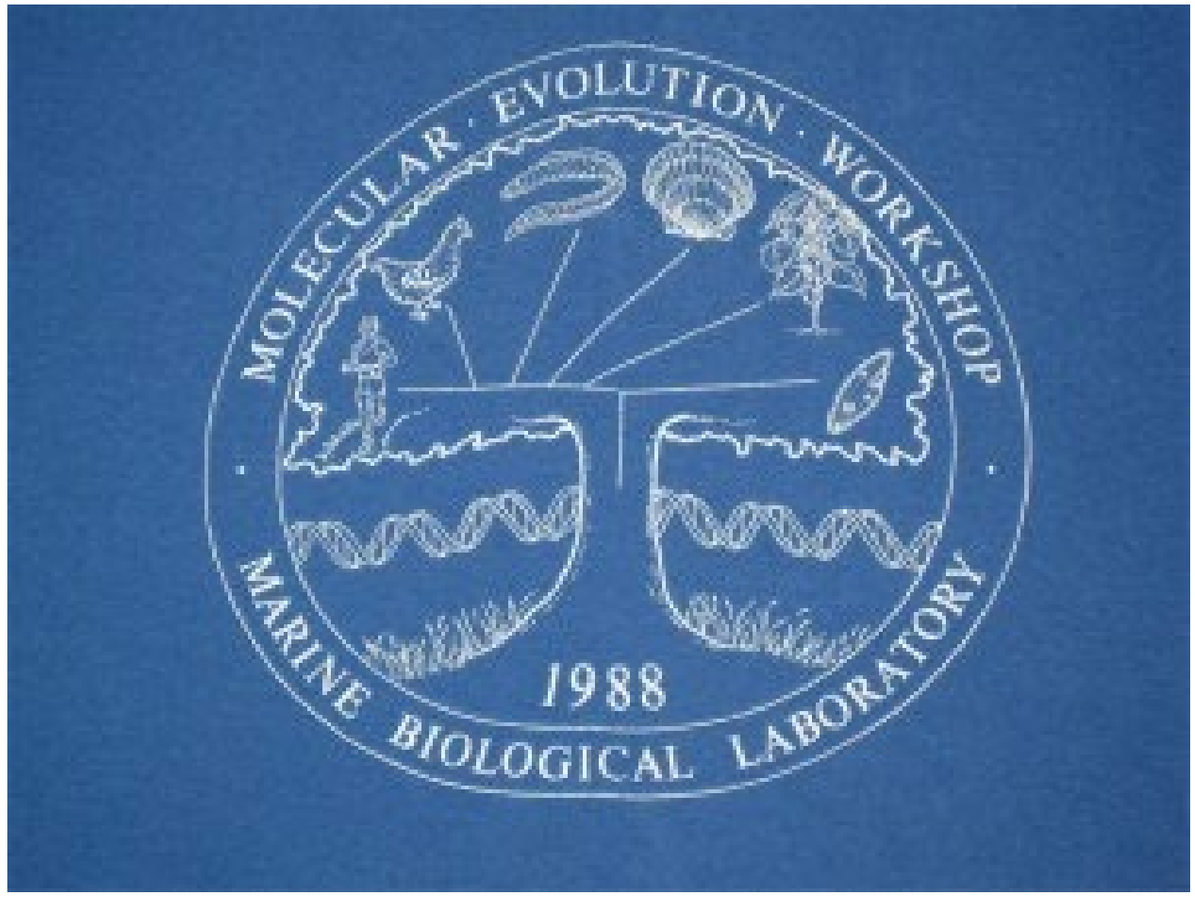
- Music bar (tonight), Festi Bar, Zappa Bar, Apotheka



miscellany

t-shirt competition

- top design (pdf please!) will be awarded with a special gift from the town
- **submit by THURSDAY, 24-January!**



Miscellaneous

- Instance Addresses
- Faculty lunch
- Scientific speed networking
- T-shirt competition

- **New this year: make your own mug**

workshop BINGO

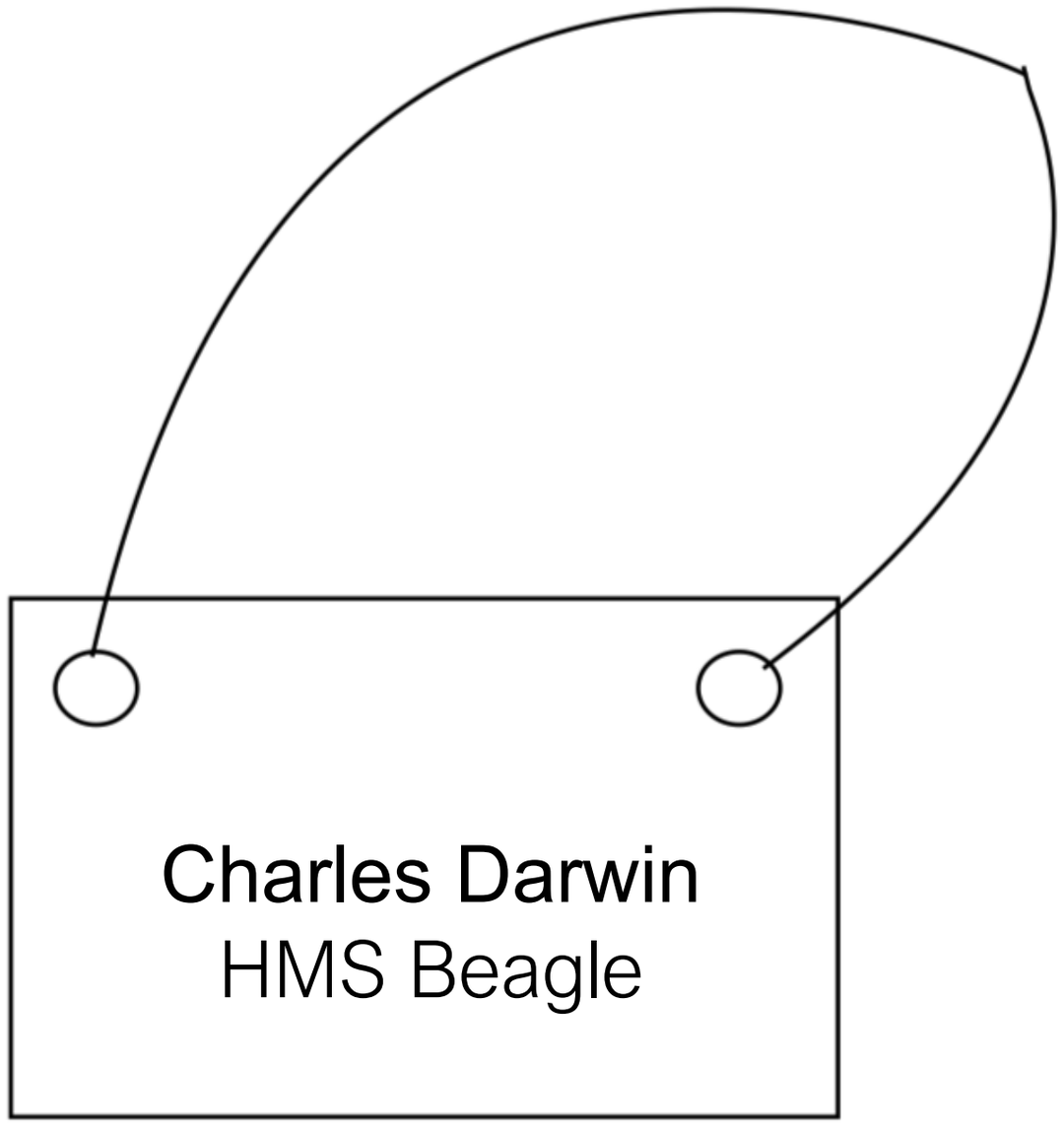
Workshop on Phylogenomics 2019 **BINGO!** #evomics2019				
Contributed to T-shirt competition	fortune | cowsay	Did Yoga or Castle Run	Had Trdelnik	Worn name tag visible every day
Tweeted using #evomics2019	Had pivo with a faculty	Asked a question to one of the talks or practicals	Found who of the course organizers has Czech ancestors	Internet went down during exercise
Ate at Meat Dungeon	Learned 5 Czech words	Registration party!	Proposed a discussion topic for Open Lab	Stayed in the pub longer than Toni
Danced with one of the TAs	Found out nationality of instructors / directors	Learned 25 people's names	Helped neighbour with exercise	Tried Becherovka or Ginger tea
Joined instructors / directors for a tea/coffee	Attended workshop dinner & party on Jan 26	Joined one of the faculty lunches	Seen someone asleep during lecture	Ate soup in a breadbowl

scientific speed networking

- tonight: Monastery (19:15 – go straight there or meet at Infocentrum at 19:00)

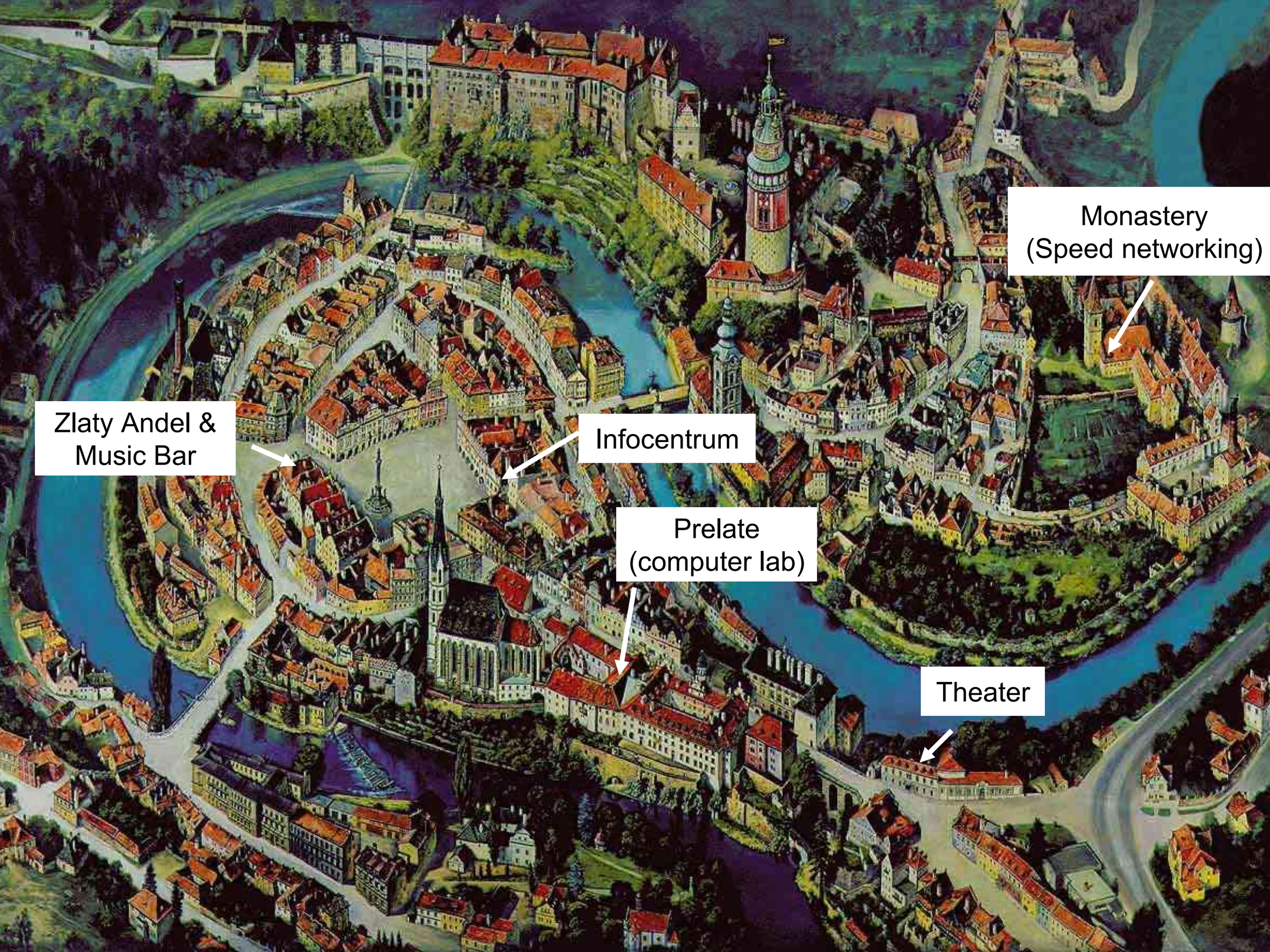
- goals:
  - get to know each other
  - identify shared interests
  - learn approaches and methods other participants work with

wear your name tag!



next

- information from Daniel Kintzl
- group photo
- walk to house of prelate
- Extended 1st day lunch break
- 14:00 (2pm) introduction to lab at Prelate
- 19:15 (7:15pm) speed networking (Monastery – or 19:00 at Infocentrum)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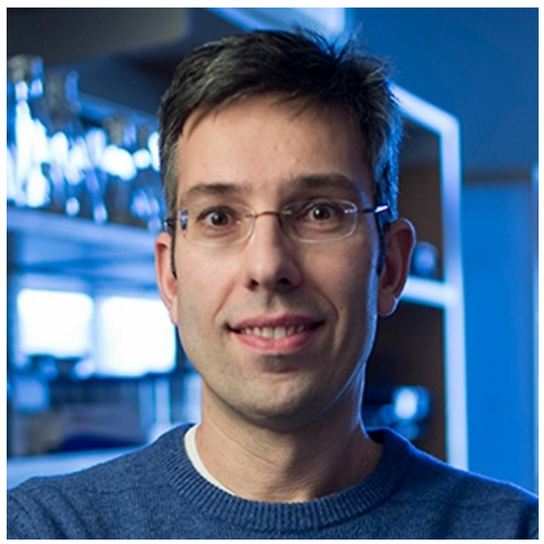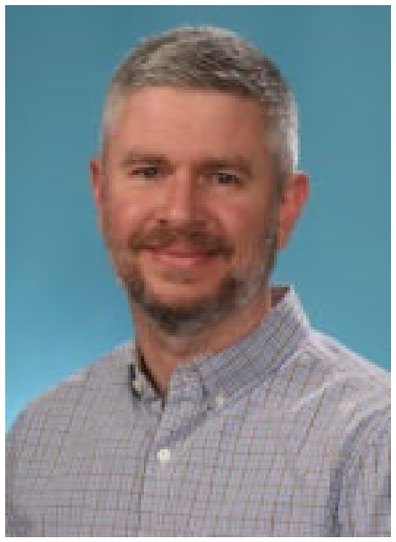
thank you and WELCOME!