

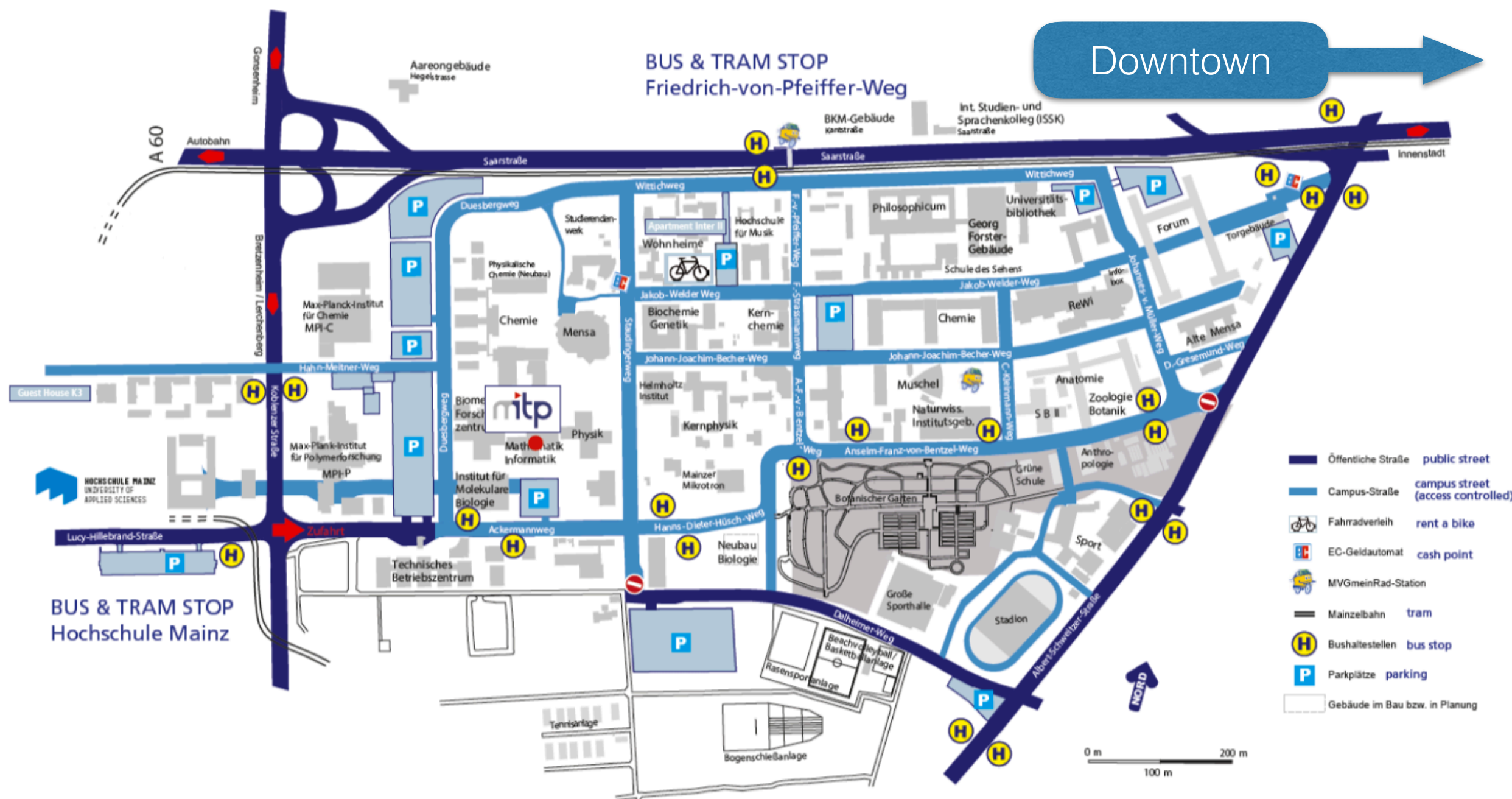
Fundamental Composite Dynamics: Opportunities for Future Colliders and Cosmology

Mainz University Campus
26/08 — 06/09, 2019

Welcome!



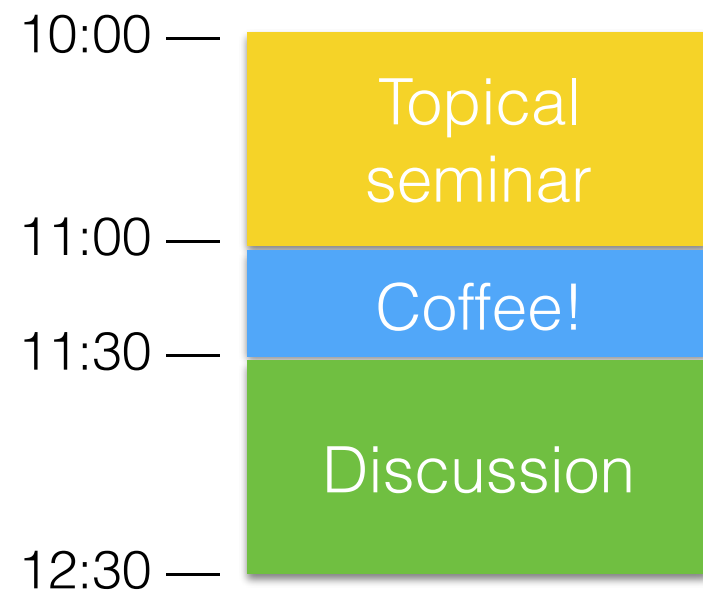
CAMPUS MAP



Practicalities

- No social events pre-organised: it's in our hands during the 2 weeks!
- Lunch: we can go together to the MENSA (upstairs cash payments allowed, downstairs you need a card - ask Heidi or Sibylle)
- Coffee break (Cakes): 15h00
- Weekly bus tickets: at the Main train station!
- For any question, ask us, Heidi or Sibylle

Physics



Introducing a topic
(informal format!)
See program on Indico

Share your ideas about the
topic!

Lunch



Participant's space:

- propose/give talks
- setting working groups
- discussion
- work done!
- visit Mainz
- enjoy local wine
- ...

Physics

10:00 —

Topic
seminar

Introducing a topic
formal f

11:00 —

11:30 —

The program will be continuously
updated!

Ask any of us to add something on the
Indico page.

14:00 —

Col

discussion

18:00 —

- VIS.
- have a
- ...

Physics

Week 2

	Speakers	Topics
Mon	Cheng-Wei Chiang	Extended scalar sectors
Tue	Suzanne Gascon & Gabriele Ferretti	Light scalars (di-photon et al)
Wed	Eric Conte & Luca Panizzi	Tools
Thu	Tirtha S. Ray	Composite EFT
Fri	Everybody	Summary and legacy

The organisers:



Giacomo Cacciapaglia (IP2I Lyon/CNRS, France)



K. Sridhar (TIFR, India)



Thomas Flacke (IBS CTPU, South Korea)



Benjamin Fuks (Sorbonne, France)

...and...

Flavor + Collider
Interplay

Signature based analysis
+ Model discrimination

VLG pheno

- measure characteristics
- finite width + NLO
- vLQ + DM, DM spin
- Tool development/extension
(XQ(AT))

UV save naturalness
w/o gravity

UV completions
of CH models w/o partial
compositeness

Cosmol. Implications
of Compositeness
- EW phase transition
+ implications + Lattice

Composite vs XO
(+Lattice)

(tools for search optimiz.)
non-minimal

Composite Pheno
Platform / MGE

Compositeness Theory \leftrightarrow Lattice
- observables?
- models?
- near-conformal models

Future Colliders

Formats for presentation
of (exotic) experimental searches
- generic
- (URCHIN/MORT)

New exotic signatures
+ Tools

underexplored extended
Higgs sectors
- model discrimination
- composite vs. elementary
- signals
(w. photons?)

VLG + extended
Scalar Sector

- new taggers
- jet substructure
- ML

Composite DM
- models + pheno
- Mon

B-anomalies
- composite solutions?