Technology programme, http://tek.hip.fi

Summer 2009

HIP & CERN
the European Organization for Nuclear Research

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Background – What is HIP?

- Helsinki Institute of Physics (HIP)
  - is responsible for the Finnish research collaboration with CERN.
  - is jointly operated by
    - University of Helsinki,
    - Helsinki University of Technology,
    - University of Jyväskylä,
    - Lappeenranta University of Technology, and
    - Tampere University of Technology.
  - ~120 researchers (in 2008, ~ 92 FTE total, 24 FTE at CERN)
  - Five research programs
  - Budget ~4,5 M€
Structure of HIPin 2009

Scientific Advisory Board
- Jos Engelen
- Mats Larsson
- Heinrich Leutwyler
- Wolf-Dieter Schlatter
- Heikki Sipilä
- Johanna Stachel

Board
- Johanna Björkroth
- Kalevi Ekman
- Kati Hauto
- Kauno Julen
- Kimmo Kaski
- Juhani Keinonen
- Antti Kupiainen
- Matti Leino
- Ilkka Pöyhönen
- Ulla Ruotsalainen

Steering Group
- DOR, KE, HS, JT, JÄ, AH, MS, TS

Director
- Dan-Olof Riska

Administrative Manager
- Mikko Sainio

Theory
- Kari Enqvist

String Theory
- Esko Keski-Vakkuri

LHC Phenomenology
- Kimmo Kainulainen

Cosmophsics
- Kamo Kainulainen

Low-dim. Quantum
- Ari Hanju

Systems
- Risto Onley

Rad. dam. acc.
- Kai Nordlund

High Energy Physics
- Heimo Saarikko

Linear Collider Research
- Kenneth Osterberg

LHC-Forward
- Risto Onley

CMS
- Jorma Tuomniemi

Physics Analysis
- Veikko Kannikka

CMS Tracker
- Paula Eerola

Nuclear Matter
- Juha Äystö

ALICE
- Jan Rak

ISOLDE
- Ari Johannes

FAIR
- Julia Äystö

Technology
- Ari-Pekka Hameri

Data Grid
- Miia Turska

Grid Cluster
- Antti Piirinen

PLANCK
- Hannu Kurki-Suonio

CLOUD experiment
- Markku Kuhmal
What is CERN

- The world's largest particle physics laboratory
- Was founded in 1954, today 20 member states
  - ~ 2500 own staff,
  - ~ 8000 visiting scientists - they represent 850 universities and 85 nationalities
- Currently fixing the most powerful machine ever, Large Hardron Collider (LHC)
  - Energy 7 + 7 TeV,
  - Installed in 27 km long tunnel about 100m underground
  - The question is: Does the Higgs boson exists?
    - We will get the answer in 2010(?).
Large Hadron Collider

- 600 000 000 events per sec → One event ~ 1MB
- After filtering from 100 to 1000 interesting events per second
- Total ~15PB of data in a year.
Large Hadron Collider
Where is CERN?
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CERN
Quick check list – part I

- In Finland
  1. Agree arrival and departure dates with your supervisor
  2. Ask the secretary of Suomi-toimisto to arrange the flight tickets
  3. Check that your passport is valid (maybe also your driving licence)
  4. Take the insurance
  5. Other personal arrangement
Quick check list – part II

- At CERN
  1. Visit Suomi-toimisto and sign in
  2. Visit CERN's user office and sign in
  3. Visit UBS and open a bank account
  4. Apply other accounts (IT accounts, access cards, etc.)
  5. Start actively looking for the accommodation
  6. Start the actual work...
Paper work in Finland

- Check the validity
  - Passport / Identity Card
  - Driving licence

- Take personal insurance
  - State treasure's (Valtiokonttori) insurance is valid only at work
  - Notice limitations in personal insurances (3000m, climbing, etc.)
  - Make sure you have the receipt (or equal) with you!

- Apply European Health Insurance Card from KELA
Paper work in Finland

- Take care of your mail
  - Change the delivery address or interrupt the delivery

- Take care of your bills during the summer
  - Direct debit for example

- Recommended to take some credit card with you
  - Both Visa and Master are OK
  - VisaElectron also works pretty well
Paper work in Finland

- Keep or hire out your accommodation in Finland?
  - One way to save some money but check what does your landlord think about this.

- Optionally inform Ministry for Foreign Affairs of Finland
  - They have also some other good information

- Take photo copies of all important documents, just in case
  - A copy of passport etc. in email?
Health care

- You are regard equal to a traveller
  - Some good practices from Terveyden ja hyvinvoinnin laitos
    - http://www.ktl.fi/portal/suomi/julkaisut/oppaat_ja_kirjat/matkailijan_terveysopas/
  - Notice that you are “travelling” three months, it is “easier” to get medication from Finland
    - Allergies,
    - Other special medications
Accommodation

- Hostel for the beginning?
  - Ask Suomi-toimisto

- Different places where to find:
  - CERN housing service:
    - http://housing-service.web.cern.ch/housing-service/
  - University of Geneva:
    - http://www.asso-etud.unige.ch/cite-uni/
  - Glocals at Geneva:
    - http://www.glocals.com/MarketPlace/HousingBoard/
Accommodation

- Rents from 500€/month (studio) upwards...
- Notice: usually one must pay 2 months deposit
- Study local village names...
- Might be good idea to collect a group and rent an apartment together
Transportation

- One can (try to) borrow a bike from CERN
  - 100 CHF deposit, returned when the bike is returned.
  - Or take your own bike with

- Public transport works in Geneva, also a bit at French side
  - http://www.unireso.com
  - Tickets from bus stops with coins (or with prepaid card)
Travelling

- By car – car rentals:
- By train:
- By airplane:
Other things

- Phone: one can buy pre-paid cards
- Shopping: Thursday afternoons and Saturdays
- Internet: works at CERN, in houses... maybe. Probably not.
- Summer is warm. I mean WARM. And probably there is no air conditioner...
- Working languages are English and French. However, give an attempt to learn French before hand...
- Dress code is very casual.
Other things

- CERN is closed 21\textsuperscript{st} May and 1\textsuperscript{st} June, 2009
- Tuija Karppinen is on vacation from 6\textsuperscript{th} April to 17\textsuperscript{th} April,
  - During this period contact Taina.Onnela(at)cern.ch
Other “nice to have” things:

- Consider having these with you:
  - Fire alarm + flashlight
  - Maps (Google maps does not work without internet!)
  - MacGyver knife and duct tape: you can fix everything!
  - Dictionaries: English & French
  - First aid kit + thermometer (Burana, condoms, etc.)
  - ...
In case of emergency

- **Contact Suomi-toimisto**
  
  CERN/PH – Tuija Karppinen & Taina Onnela  
  CH-1211 Geneva 23  
  tel. +41-22-76 73027  
  fax/EP +41-22-76 73600

- **Finland's Honorary Consulate, Geneva (Switzerland)**
  
  Dominique de Weck, Honorary Consul  
  rue des Cordiers 14  
  1207 Genève  
  Tel: +41-22-786 42 66  
  E-mail: deweck@deweckperren.ch
Maybe interesting links

- http://www.geneva.info/
- http://user.web.cern.ch/user/Welcome.asp
CERN – not only work but...

- New hobbies...
- New friends...
- New locations...
- New experiences...
Summary

- Be active, do things, and enjoy your summer!