
Shell secondment



HiggsTools First Annual Meeting,
Freiburg

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Shell

- ◆ Location: Shell Technology center, Rijswijk (near the Hague)
- ◆ Supports “Open Innovation strategy”
 - ▶ i.e. exchange of ideas with world outside Shell
- ◆ Interested in promoting talent
- ◆ Known for thinking long-term
- ◆ Many particle physicists went to Shell before



Head of group: Fons ten Kroode
PhD in mathematical physics

More about Shell

- The Shell Technology Centres (STC) focus on innovation, the development of new technologies and the improvement of existing ones.
- The STC in Rijswijk is concerned with exploration and production, involving e.g. the physics of wave propagation in the earth, geomechanical simulation, state-of-the-art multi-cell simulation techniques, finite difference waveform modelling and seismic inversion, microseismic monitoring and 3-D geomechanical modelling of subsurface reservoirs.
- Rijswijk also houses a virtual reality centre that provides three-dimensional visualisations of rock strata, hydrocarbon distributions, drill holes, etc.
- The STC in Amsterdam supports the Chemicals business with process and product development. The STC in Houston has particular expertise in technology to mitigate the growth in energy demand and the increase in CO₂ emissions.

Shell Technology Center, Rijswijk



- ◆ Very nice new building
- ◆ Impressive computational power
 - ▶ Exascale computer facilities, virtual reality center of subsurface

Type of projects

- ◆ Design of seismic imaging algorithms
- ◆ Implementation of these on Exascale computer hardware
- ◆ Simulated wave propagation in earth and exploration of subsurface
- ◆ Supervision by experienced R&D staff, work on active projects (not toy studies)
- ◆ Skills required:
 - ▶ good mathematical physics skills
 - ▶ good scientific software engineering
- ◆ Preference for 3 month secondments (or more...)
 - ▶ (I guess) grouped as much as possible
- ◆ Get in touch with me (EL) if you're interested, I can then link to Shell