

SAFIR 2014

SAFIR2014 Final Seminar

Hanasaari 19.-20.3.2015

Jari Hämäläinen

SAFIR2014 Programme director 2014
(as successor to Kaisa Simola 2011-2013)

SAFIR2014 – The Finnish Research Programme on Nuclear Power Plant Safety 2011-2014

[Research based on Nuclear Energy Act](#)



[Final seminar practicalities](#)

[SAFIR2014 research areas](#)

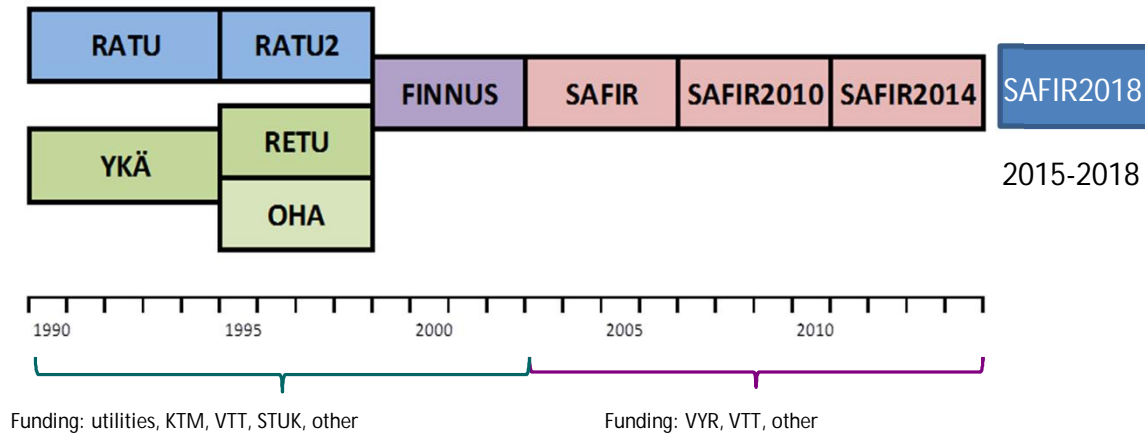
[SAFIR2014 statistics](#)

[International co-operation](#)

SAFIR2014 was evaluated in 2014

[End](#)

Finnish Nuclear Power Plant Safety Research

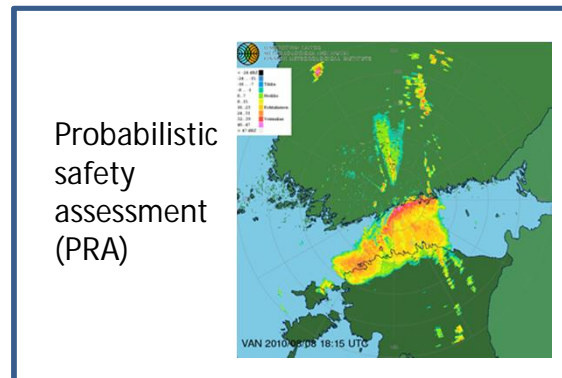
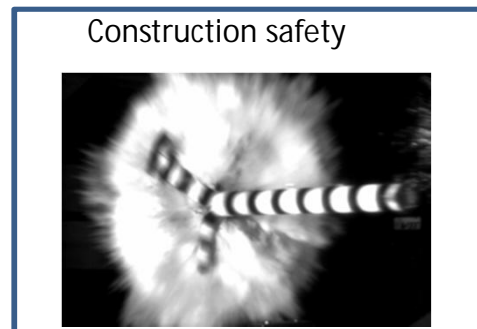
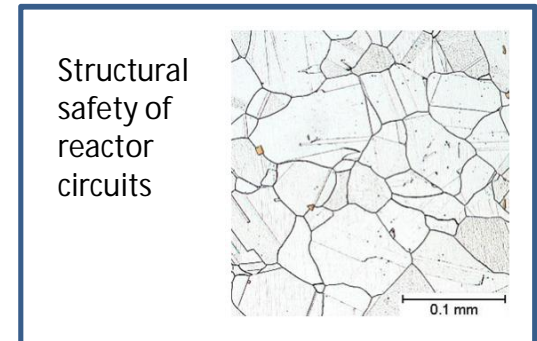
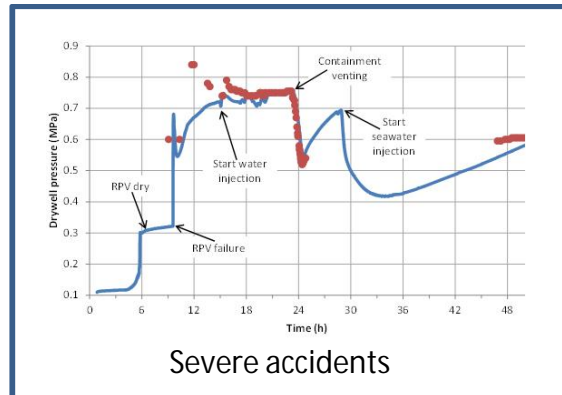
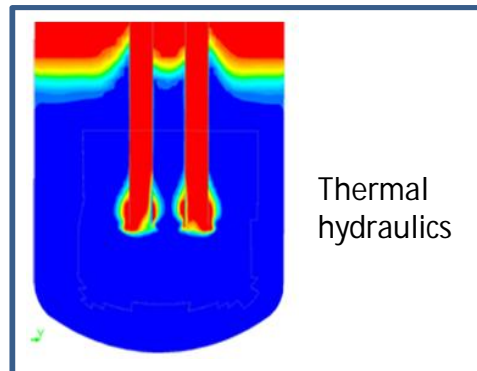
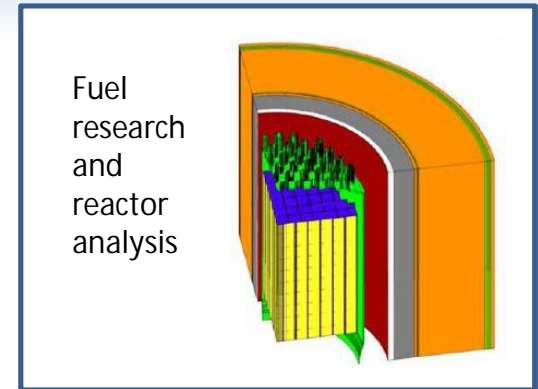
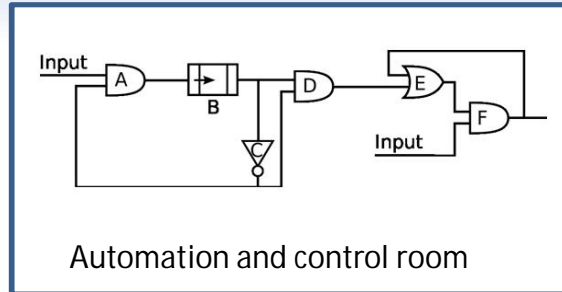


The nuclear facility operator shall be obliged to participate in financing research aimed at ensuring that, should such new factors concerning safe operation of nuclear facilities emerge that could not be foreseen, the authorities have such sufficient and comprehensive nuclear engineering expertise and other facilities at their disposal that can be used, when necessary, to analyse without delay the significance of such factors. (Nuclear Energy Act Chapter 7a, Section 53a)

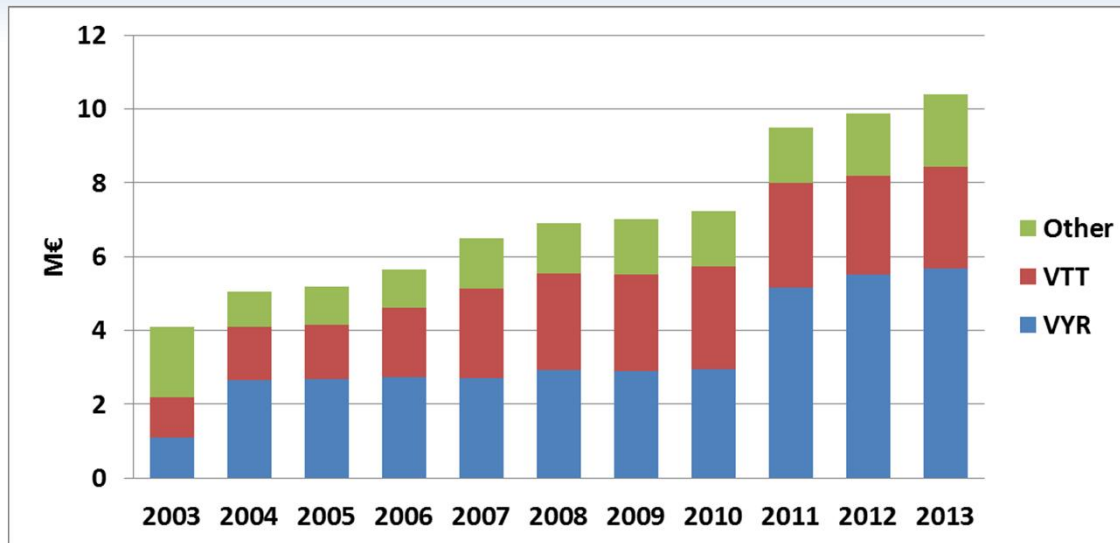
- According to the Nuclear Energy Act the authorities shall have sufficient expertise and other facilities at their disposal, which has been ensured by national research programmes since 1990.
- The nuclear facility operators are obliged to participate in financing and they fulfil the obligation by paying an annual fee into the Finnish State Nuclear Waste Management Fund (VYR).
- VYR finances research projects each year by the funds that are available.
- The research projects shall be of a high scientific standard and their results shall be published.

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SAFIR2014 Research Areas



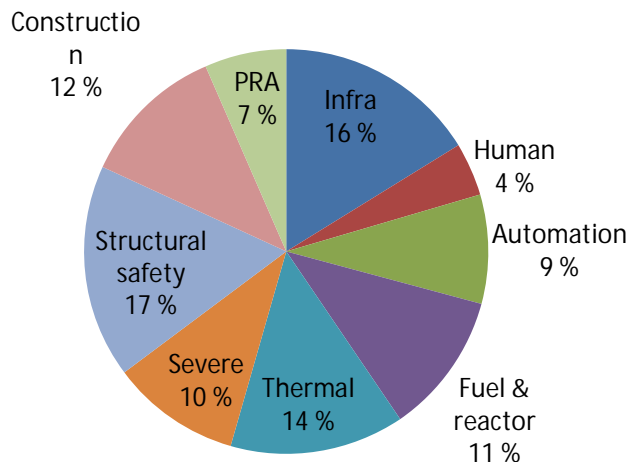
SAFIR2014 - The Finnish Research Programme on Nuclear Power Plant Safety 2011-2014



Development of the funding of SAFIR-programmes

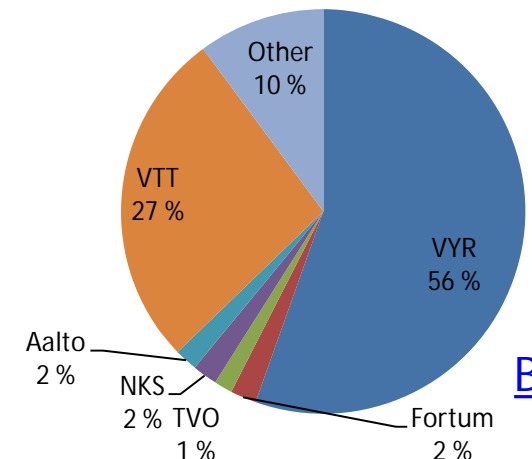
Remarkable increase in VYR funding 2010 ⇒ 2011 due to the Government decisions in principle, confirmed by the Parliament on 1.7.2010.

SAFIR2014 in 2014: ca 10 M€ and 70 person years in 45 research projects



Funding structure

- National Nuclear Waste Management Fund (VYR) **5.4 M€**
- Research institutions ≤ 67 % VYR funding for projects ⇒ VTT **2.8 M€**
- Other sources **1.7 M€**



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SAFIR2014 Results Statistics

During 2011-2014 SAFIR2014 has produced 1244 publications consisting of:

- 175 scientific articles
- 288 conference papers
- 574 research reports (SAFIR2014 research organisations)
- 207 other publications (theses, reports of other organisations, other etc)

27 academic degrees were obtained in projects:

- 12 doctors
- 2 licentiates
- 27 master's degrees

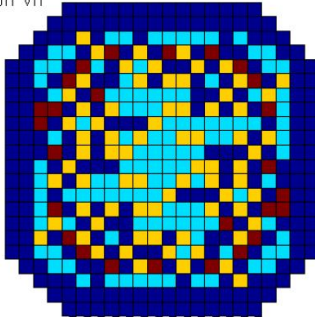
International Co-operation in SAFIR2014

Almost all projects have international contacts:

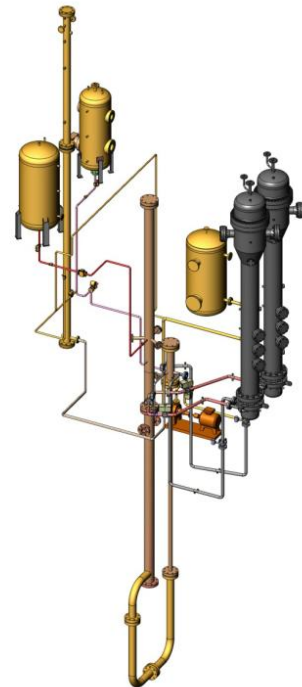
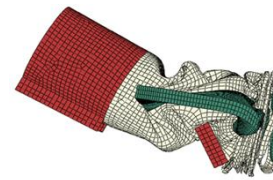
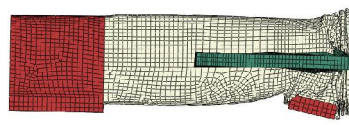
- OECD/NEA experimental projects and database projects, NEA working groups, Halden project co-operation
- EU networks and projects, NUGENIA
- Co-operation with universities and research institutes
- Co-operation with nuclear industry and safety authorities abroad
- Nordic co-operation: NKS, NORTHNET, Swedish regulatory body (SSM)

SAFIR2014 was evaluated in 2014 by an international expert group lead by prof. Mike Weightman. The evaluation report can be found on SAFIR2014 website.

NEA O2 STABILITY EVENT BENCHMARK, TRAB3D VTT
10:58 24.11.2011 VTT



Fuel types: 1 (Svea-64, dark blue), 2&3 (3x9, light blue, yellow), 4 (10x10, red)



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Seminar practicalities

Coffee is served in congress hall *Aleksis* (1st floor, left from the lobby).

Lunch is served upstairs.

Oral presentations - please keep the time allocated and leave 3-5 min for questions.

Posters are in *Aleksis* during the poster sessions that are combined with the coffee breaks. The presenters of the named session posters will be present.

Discussions after each area oral and poster presentations are facilitated by the SAFIR2014 reference group chairs.

Proceedings book is distributed at the registration desk. An electronic version will be available on SAFIR2014 website.

WLAN is available (Hanasaari, open).

Everyone is invited to the seminar dinner today

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Enjoy the SAFIR2014 Final Seminar!



<http://safir2014.vtt.fi>