

**KU LEUVEN**

TECHNOLOGIECAMPUS GEEL



# KU Leuven ADVISE

Hydron project



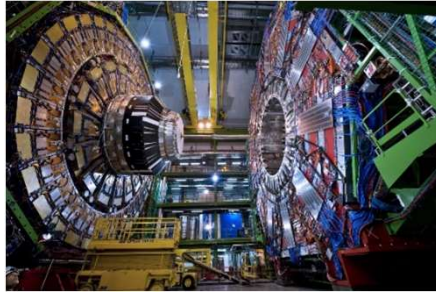
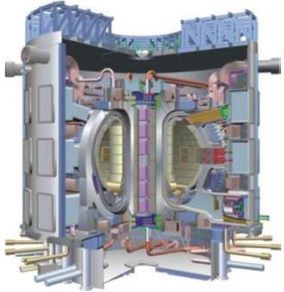


Advanced Integrated Sensing

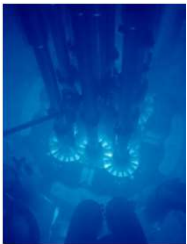


# Harsh radiation environment electronics

## Application fields



ITER: Nuclear fusion    CERN: CMS experiment

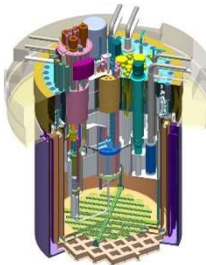


Reactor safety

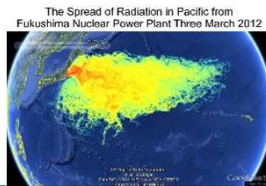


Space missions

SCK-CEN:  
MYRRHA



Robotic decommissioning

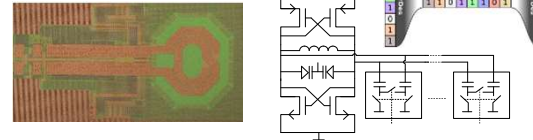


The Spread of Radiation in Pacific from Fukushima Nuclear Power Plant Three March 2012

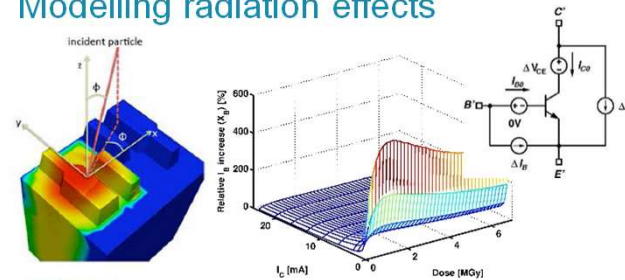
Accident intervention

## Expertise

- RF, analog and mixed-signal radhard IC design



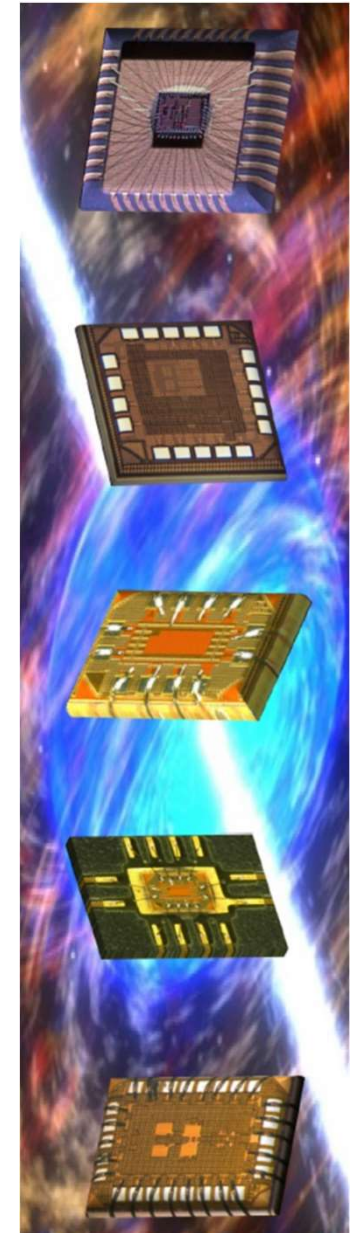
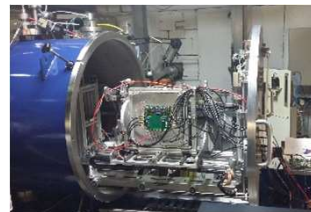
- Modelling radiation effects



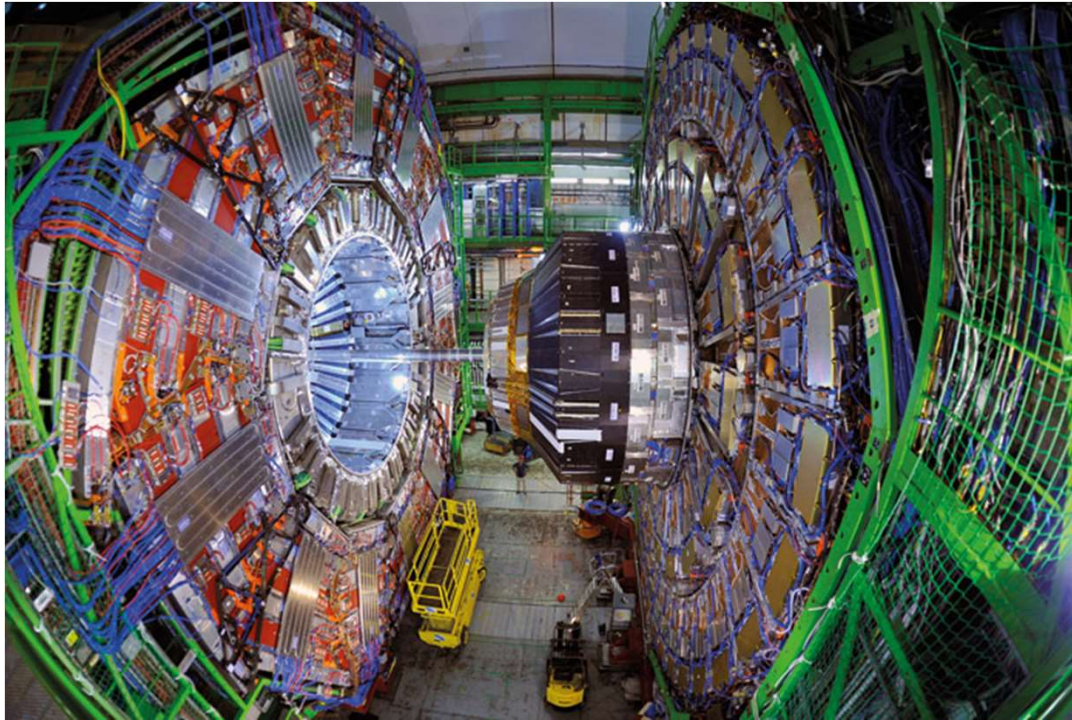
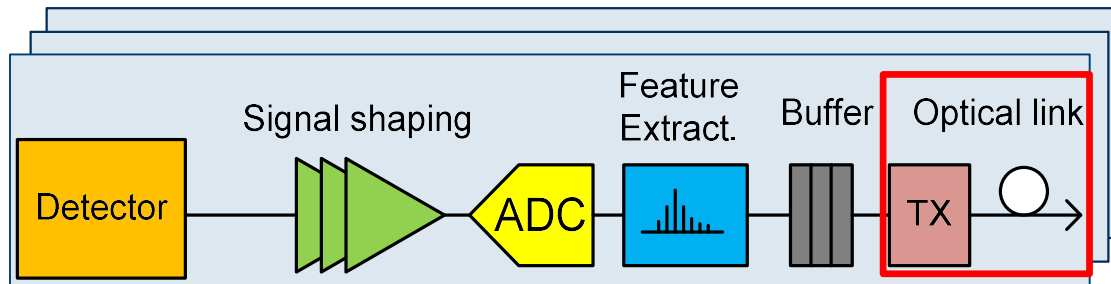
- FPGA and board level prototyping



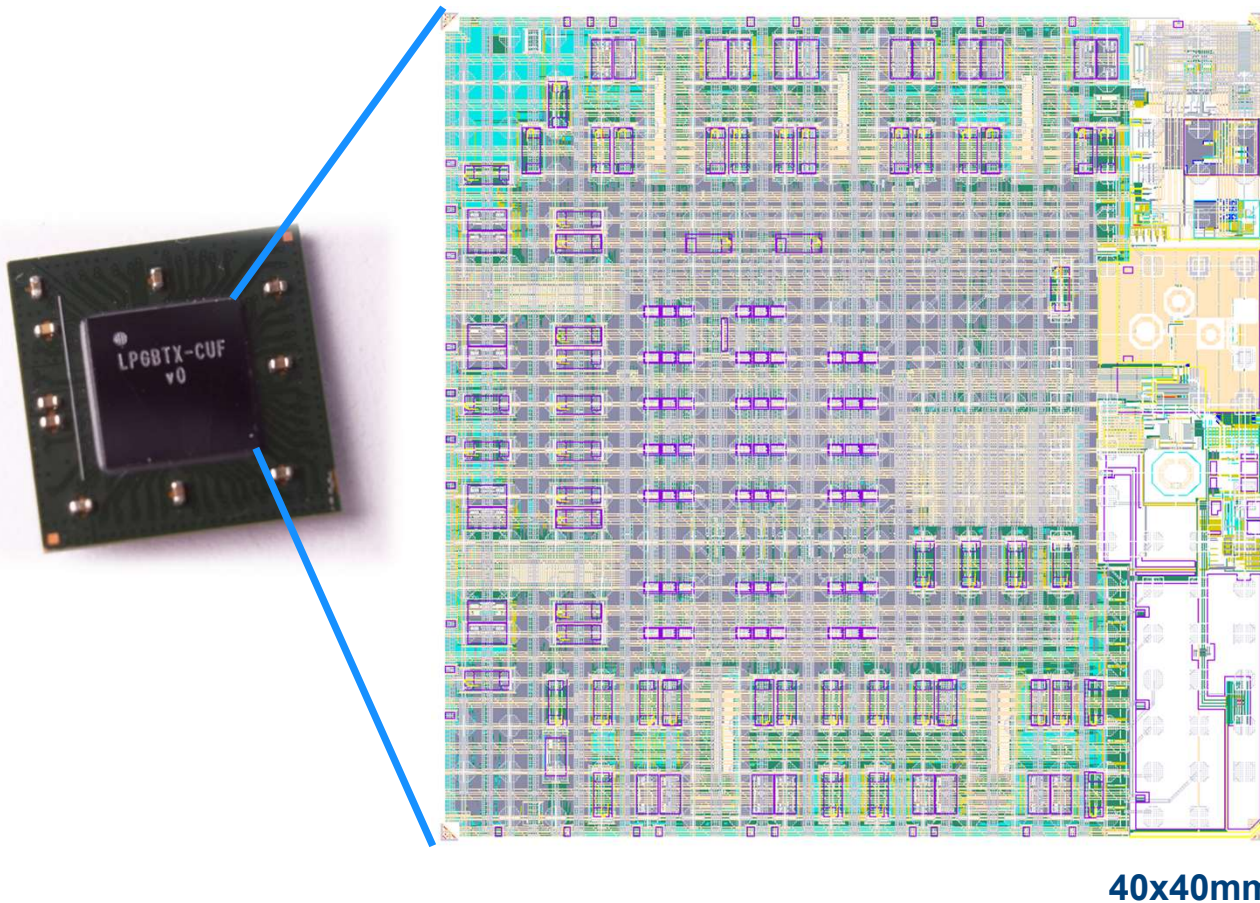
- Testing



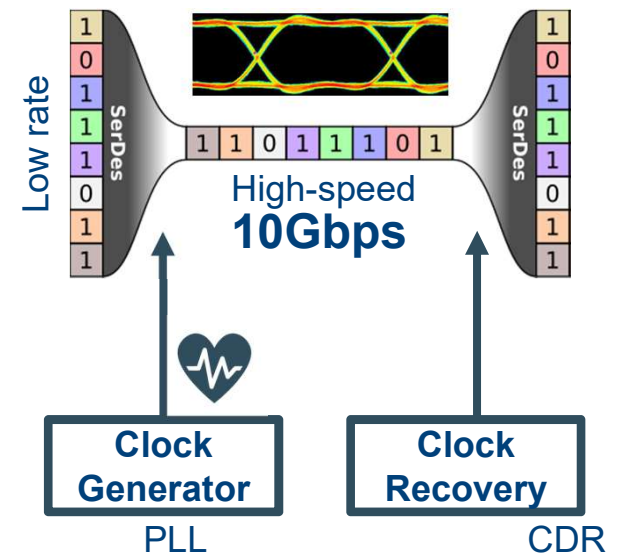
# Radhard optical links



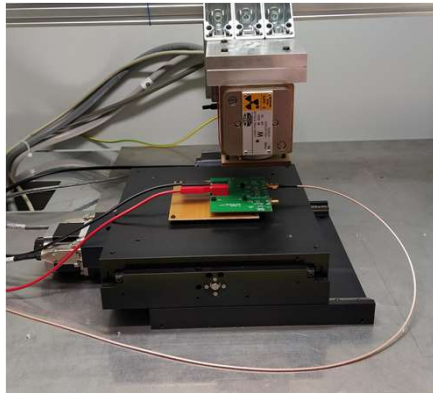
# Radhard optical links



Currently, 56 Gbps in development



# KU Leuven ADVISE RELY LAB facilities



X-ray total dose testing



Climate chamber

Laser radiation test system



# KU Leuven ADVISE partner facilities

GSI  
(Germany)

KVI-CART  
(Netherlands)

GANIL  
(France)

RADEF  
(Finland)

UCLouvain  
(Belgium)

SCK-CEN  
(Belgium)

CERN  
(Switzerland)

PSI  
(Switzerland)

CNA (Spain)

FNG (Italy)

CNRS/LPSC  
(France)

ESRF  
(France)

CLPU (Spain)



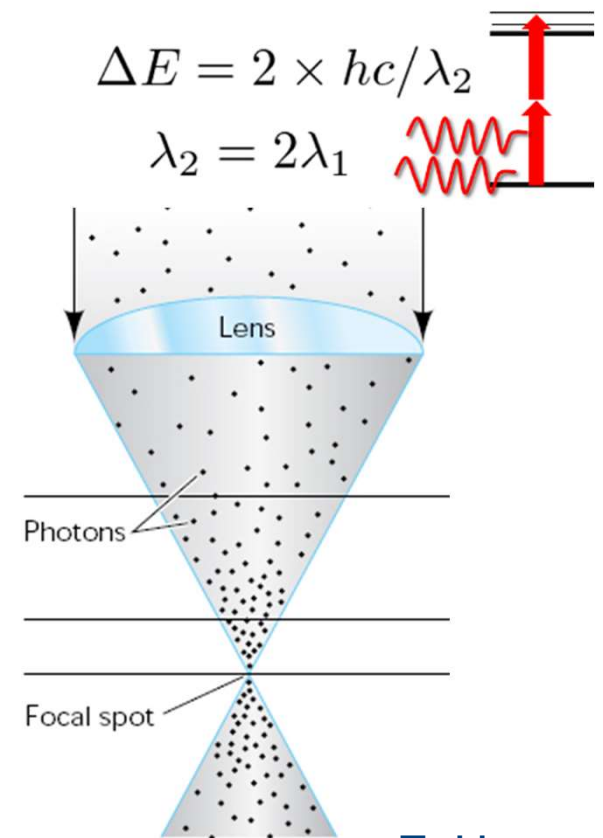
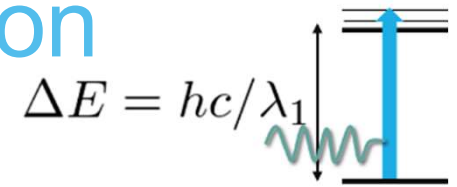
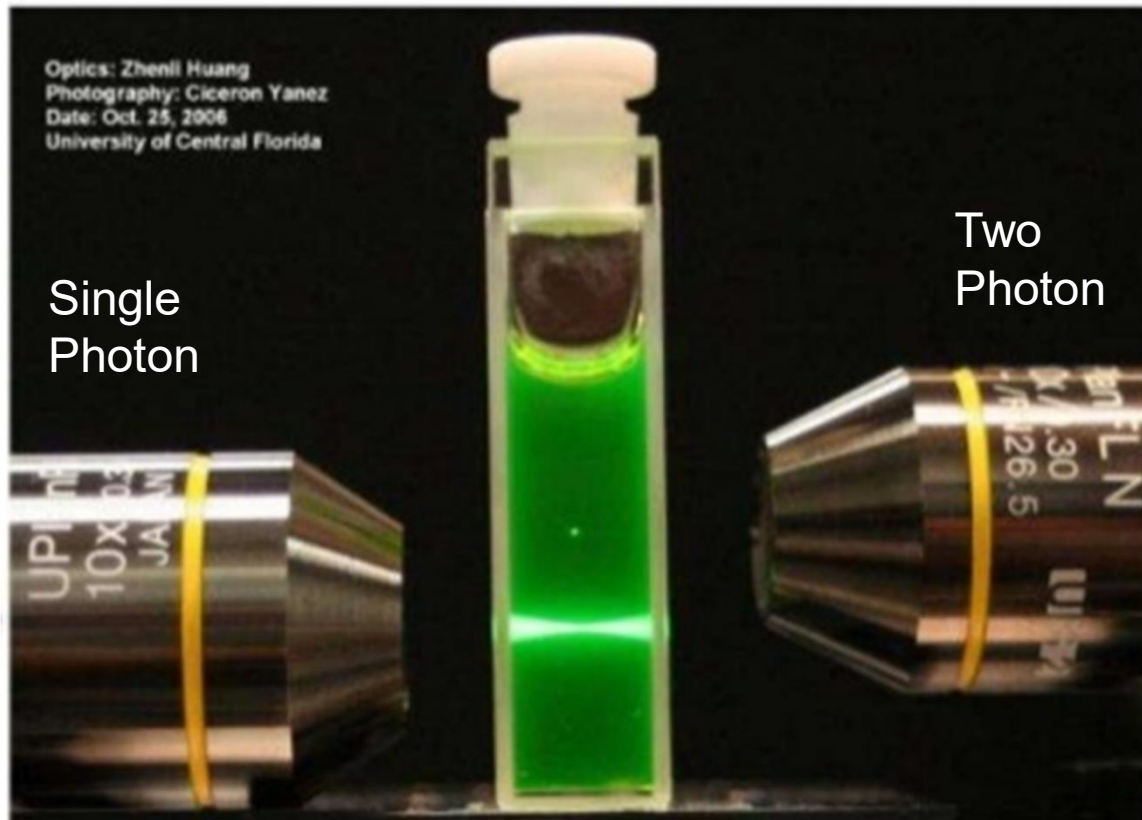
# Thank you

Jeffrey Prinzie



# Single vs. two photon absorption

## Two-Photon Laser experiments



Z. Huang