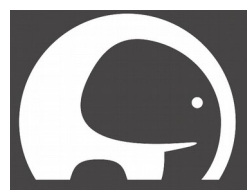




oliscience

open logic interconnects science

Andrea Borga (Digital Design Engineer / co-founder)



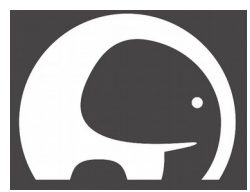
Oliscience

- Young and passionate startup of committed professionals
- Originating from the CERN@Nikhef BIC (Business Incubator Centre)



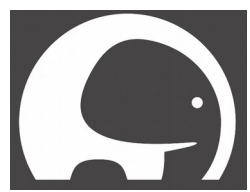
- Coached by the Amsterdam Centre for Entrepreneurship
- Based at the Startup Village (Science Park)





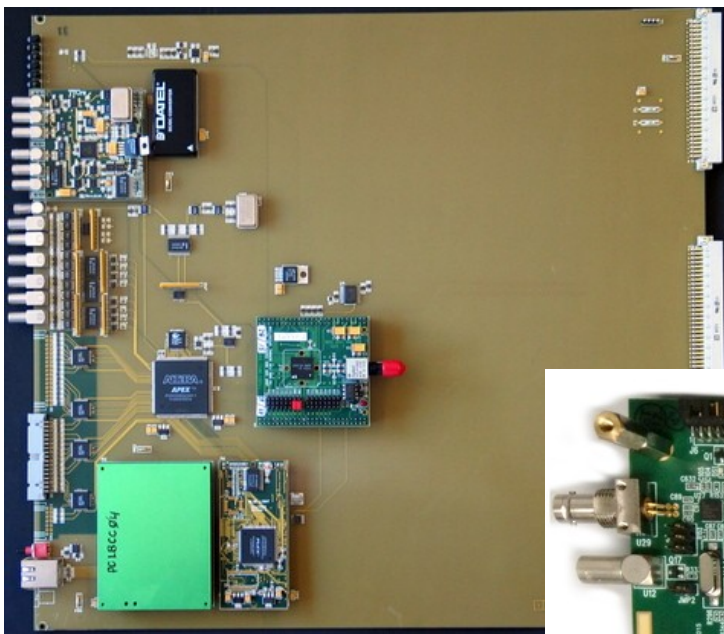
Oliscience team



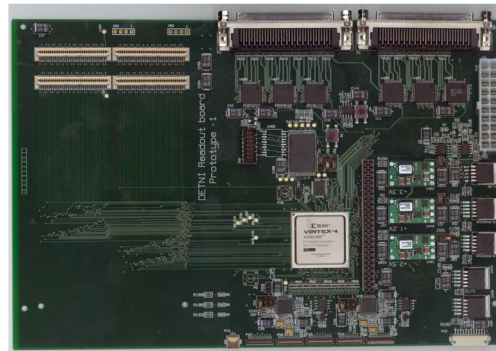


Who am I

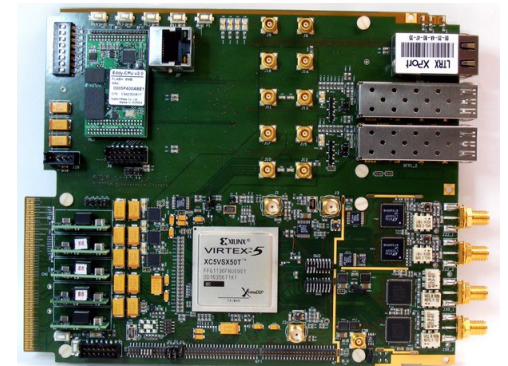
- In the engineering world most commonly known as a “Digital Designer” or... “the FPGA guy”



CERN – LHCb (2004)



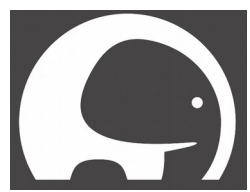
FZ-Juelich – DETNI (2007)



Elettra – FERMI@Elettra (2011)

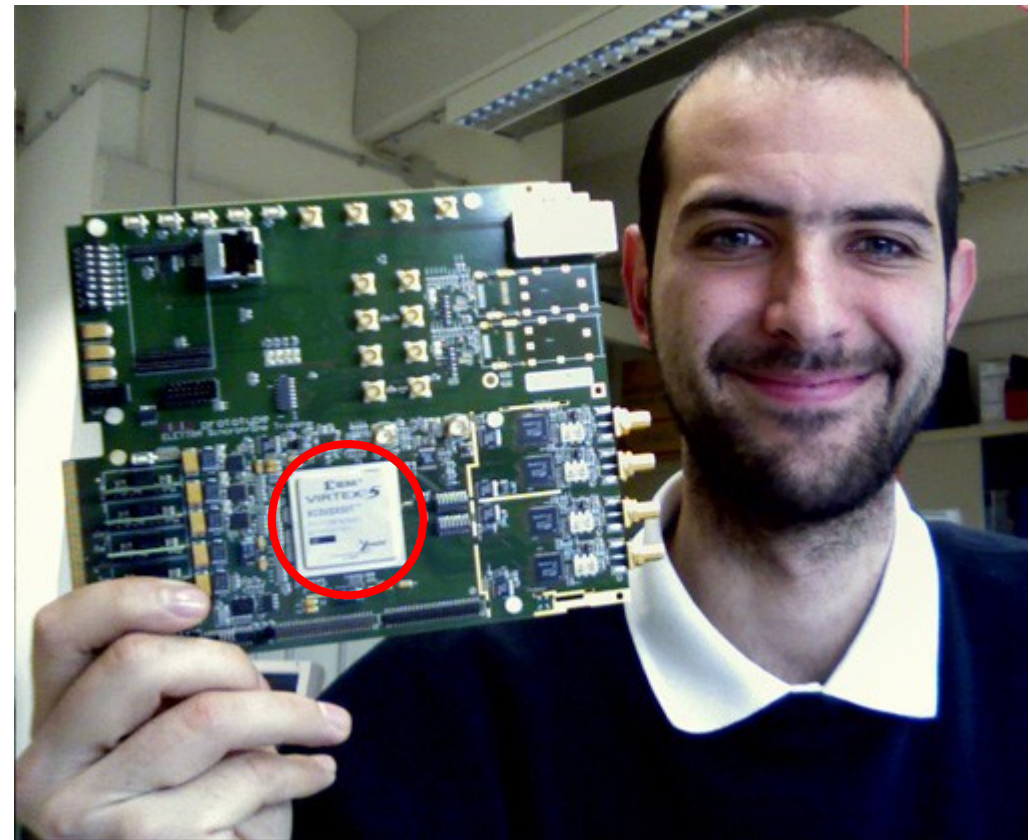
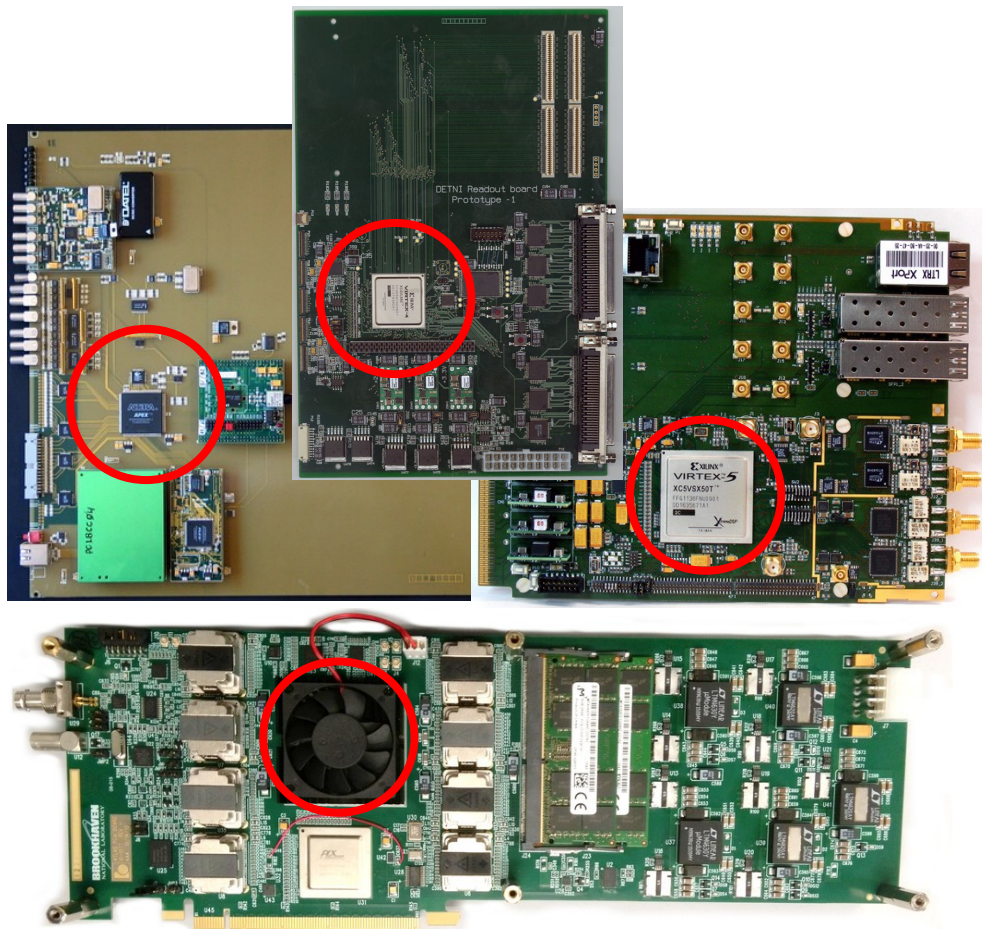


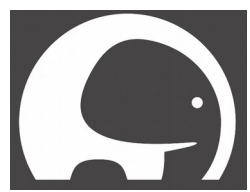
Nikhef – ATLAS (today)



FPGAs

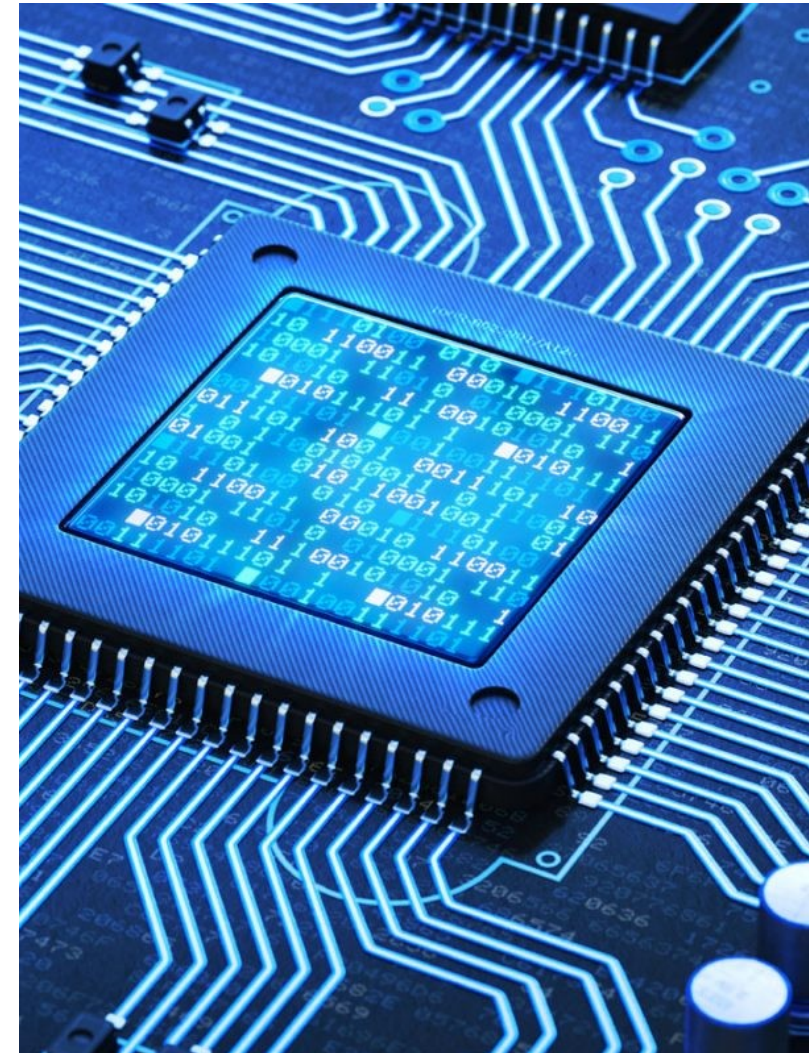
Field Programmable Gate Arrays
key components widely used in
high-end technology markets

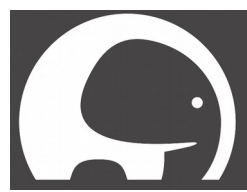




Gateway

“Intelligence” inside the FPGA





Empower experts

The screenshot shows the OpenCores website homepage. The browser window title is "Home :: OpenCores - Chromium". The address bar shows "https://opencores.org". The page features a navigation menu on the left with links for PROJECTS, FORUMS, ABOUT, HowTo/FAQ, MEDIA, LICENSING, COMMERCE, PARTNERS, MAINTAINERS, and CONTACT US. A login/register section is also present. The main content area includes a "What is OpenCores?" section, a "Registered OpenCores users" section showing 284381 users, a "Last updated projects" section with a list of projects, and a "Most popular projects" section with a list of projects. There are also sections for "Projects", "Forum", and "WebShop". A "Professional support" section is at the bottom, featuring the Oliscience logo and contact information.

OpenCores
www.opencores.org

Username:
Password:
 Remember me
[Login](#)
[Register](#)

Language: 部分翻译

What is OpenCores?
The reference community for Free and Open Source gateway IP cores
Since 1999, OpenCores is the most prominent online community for the development of gateway IP (Intellectual Properties) Cores. It is the place where such cores are shared and promoted in the spirit of Free and Open Source collaboration.
The OpenCores portal hosts the source code for different digital gateway projects and supports the users' community providing a platform for listing, presenting, and managing such projects; together with version control systems for sources management.
OpenCores is also the place where digital designers meet to showcase, promote, and talk about their passion and work. They do this through forums, news collectors, and much more!
Please join us!

Registered OpenCores users
 284381
[OpenCores statistics](#)

Last updated projects

- [Register Oriented Instruction Sets](#)
- [LEM1_9](#)
- [USB 1.1 Function IP Core](#)
- [2's compliment adder subtractor](#)
- [SpaceWireSystemC](#)
- [ODESS Multicore Project](#)
- [Video Stream Scaler](#)
- [Amber ARM-compatible core](#)

Most popular projects

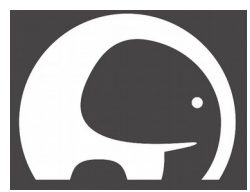
- [CF Reconfigurable Computing Array](#)
- [I2C controller core](#)
- [Hilbert Transformer](#)
- [SPI Master/Slave Interface](#)
- [Raggedstone PCI Spartan-3 board](#)
- [SPI Verilog Master & Slave modules](#)
- [double_fpu_verilog](#)
- [I2C master/slave Core](#)

Projects
 Browse all Projects (Cores)

Forum
 Communicate in the forums

WebShop
 Visit our Webshop

Professional support
 oliscience
open logic interconnects science
We are the developers and maintainers of this website and community, but not only!
If you plan to use IP Cores from OpenCores in your next design and need support, or if you require professional advise on your next challenging IP Core development, don't hesitate to contact us.
We are experts in gateway design and engineering based on the OpenCores technology, and have extensive experience in all parts of FPGA development.
Please visit [Oliscience](#) for further information and enquiries.

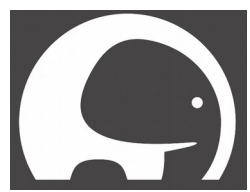


Join forces

**we develop, drive and promote
the large OpenCores community**

- Research institutions
- Universities
- High-tech corporates

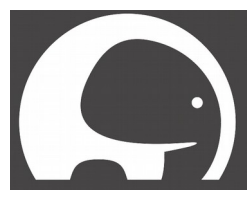
**engage them on our portal
and foster common practices**



Provide expert services

we want to help the next big innovators in the detector / imaging sector to make the right technological decisions

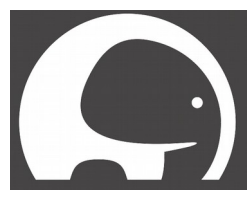
- Avail from a pool of professionals
- Access to the reference forum
- Strong partnership with Nikhef



Examples of FPGA territories

- Science (accelerators / detectors)

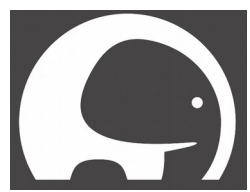




Examples of FPGA territories

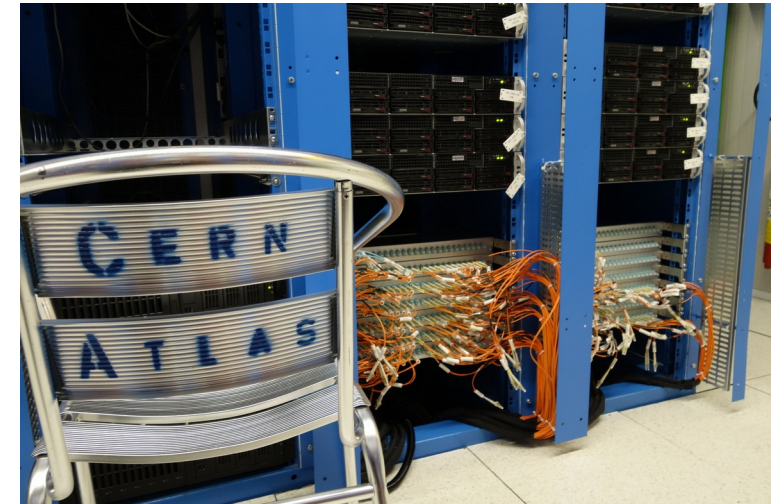
- Science (accelerators / detectors)

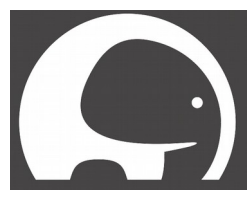




Examples of FPGA territories

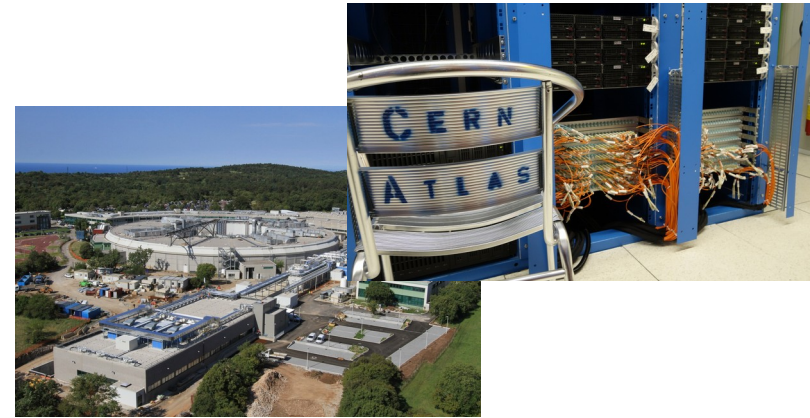
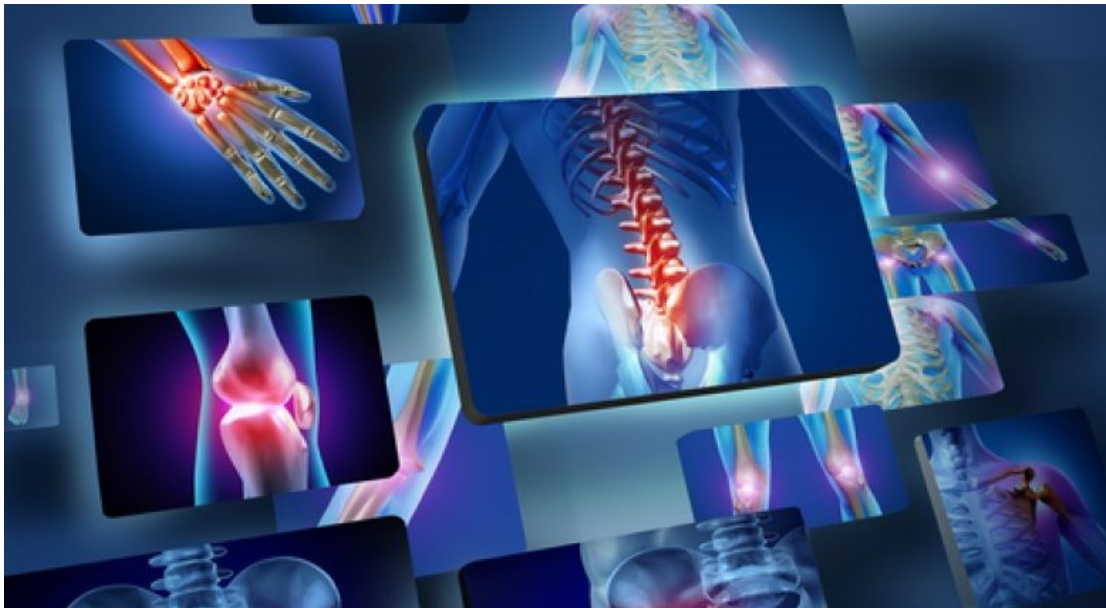
- Science (accelerators / detectors)
- Big data (co-processing)

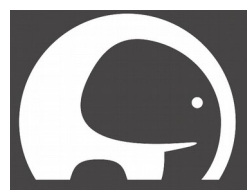




Examples of FPGA territories

- Science (detectors / accelerators)
- Big data (co-processing)
- Medical imaging (real time processing / DAQ)

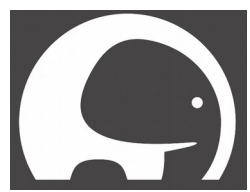




The big ambition

- 2018 will be an exciting year for FPGA fanatics
- FPGAs are getting everywhere (more than ever)
 - Intel bought Altera [end 2015]
 - Xilinx is in the cloud (AWS) with IBM [2017]
- Market is clearly rocketing
- There is a evident wave approaching us
 - that will also hit the frontiers of detector and imaging technologies

Oliscience is ready to catch it first



The big vision

- Already exploring partnerships
 - CERN [in the DAQ area]
 - UMC Utrecht [in the co-processing area]
 - Politecnico di Torino [for the methodology and tools]
- **with a horizon of 5+ years, focus on:**
 - explore the tools, techniques, methods to merge and cross-contaminate sectors using FPGAs
 - lead the effort to define architectures and methodologies applicable to high-end markets

**early introduction of best practices for our partners
may shape the way of doing
FPGA development in the future.**