The top of the slide features a decorative background of binary code (0s and 1s) in green and white. On the left, there is a red rectangular box containing the CEA Tech logo. The logo consists of the text "FROM RESEARCH TO INDUSTRY" in small white capital letters above the word "cea tech" in a larger, white, lowercase sans-serif font. A thin green horizontal line is positioned below the "cea tech" text.

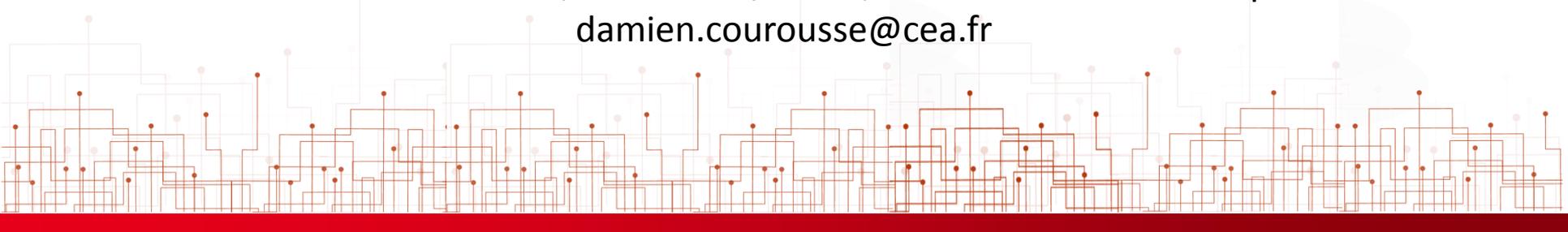
FROM RESEARCH TO INDUSTRY

cea tech

Side-Channel Attacks

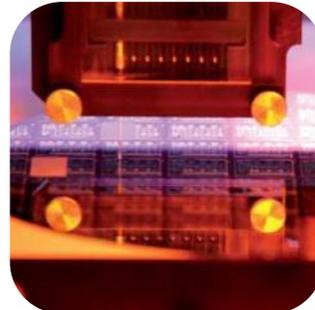
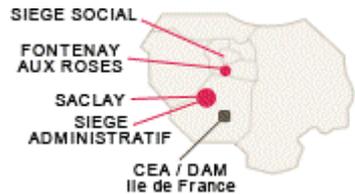
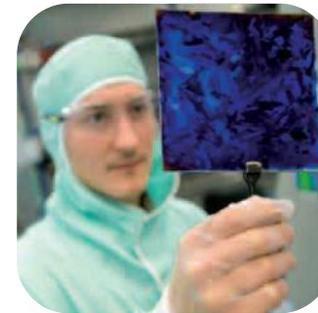
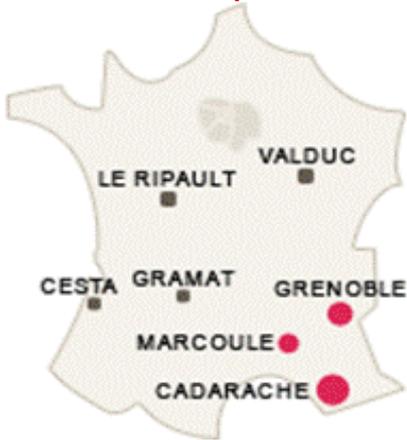
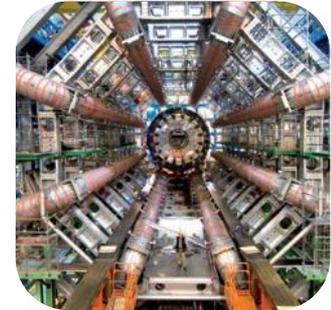
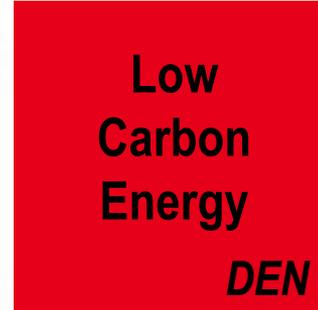
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Damien Couroussé, CEA – LIST / LIALP; Grenoble Université Alpes
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The bottom of the slide features a decorative background of a circuit board pattern in red and white, consisting of various lines, dots, and rectangular shapes representing electronic components and connections.

CEA: French Atomic & Alternative Energies Commission

- » 15 700 employees
- » 10 research centers
- » Budget of 3.9 billion €
- » 580 patents/year
- » 4000 publications/year
- » 120 startup created since 1984





leti Grenoble



list Saclay

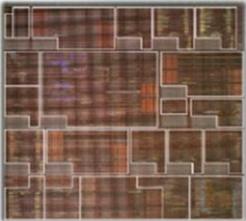
DACLE
Architectures, IC Design & Embedded Software Division

300 members
160 permanent researchers

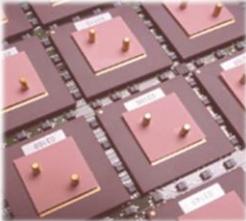
60 PhD students & postdocs

> 150 scientific papers per year

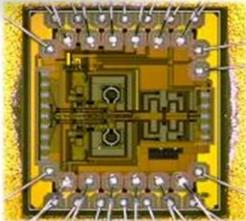
45 patents per year



Digital design



Programming



Analog & MEMS



Signal processing



Imaging



Test

PhD and post-doc offers:

<http://www-instn.cea.fr/formations/formation-par-la-recherche/doctorat/liste-des-sujets-de-these.html>

<http://www-instn.cea.fr/formations/formation-par-la-recherche/post-doctorat/liste-des-propositions-de-post-doctorat.html>

One team on **code generation for performance & cybersecurity**

- Runtime code generation

- deGoal – Code specialisation with runtime code generation
 - Code polymorphism for security in embedded components

- Compilation of countermeasures with LLVM

- Static and dynamic protections against physical attacks

	Server	Embedded	Sensor & Network (middleware)
Feedback Control		✓	✓
Code generation Tools	✓	✓	✓
SW approaches for parsimonious systems	✓	✓	✓
Demonstrators	✓	✓	✓

One team on **code generation for performance & cybersecurity**

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Thanks to many people at CEA

Charles Aracil, Thierno Barry, Nicolas Belleville, Henri-Pierre Charles, Fernando Endo, Abderrahmane Seriai, Pierre-Alain Moellic, Hassan Noura, Caroline Quéva, Bruno Robisson...

... and at other places