



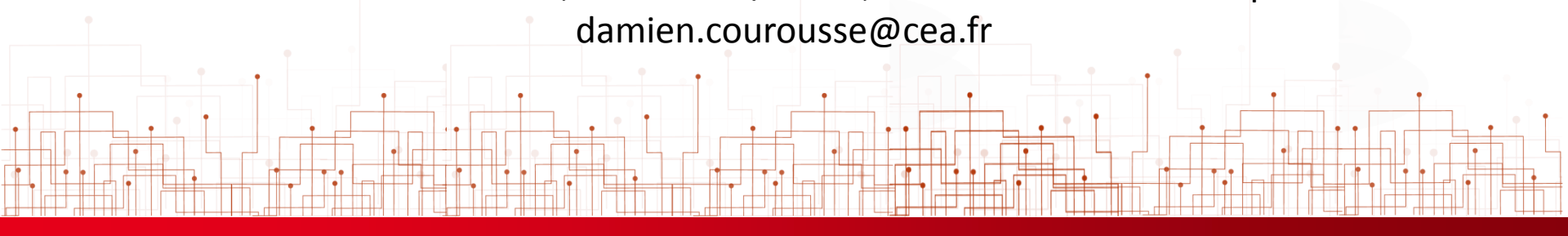
FROM RESEARCH TO INDUSTRY

cea tech

Side-Channel Attacks

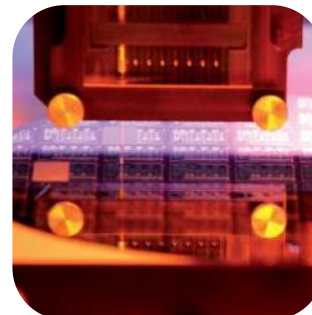
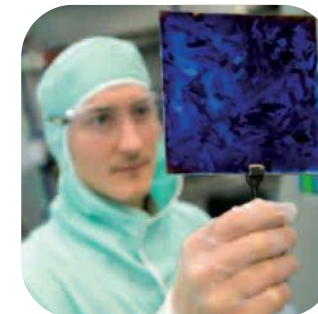
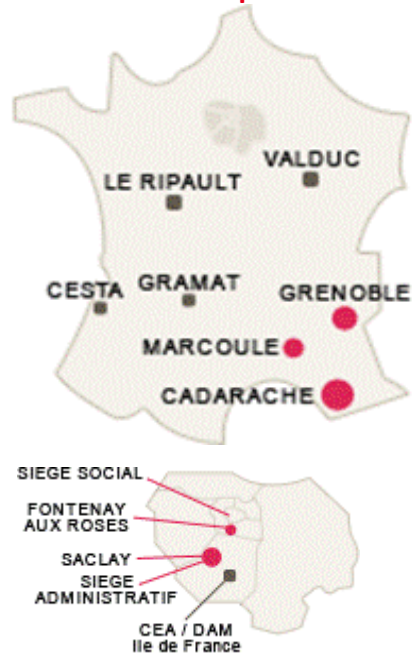
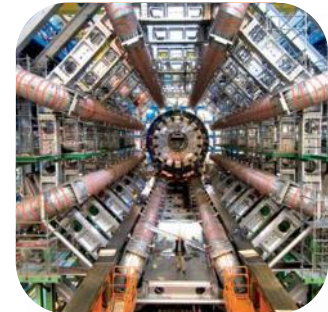
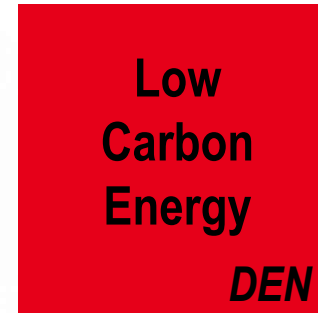
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CEA: French Atomic & Alternative Energies Commission

- » 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

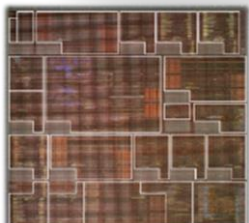


300 members
160 permanent
researchers

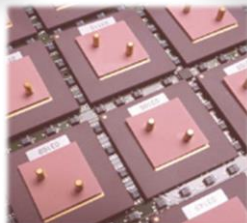
60 PhD students &
postdocs

> 150 scientific
papers per year

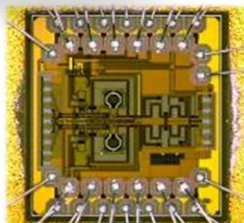
45 patents
per year



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**

- 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

Thanks to many people at CEA

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... and at other places