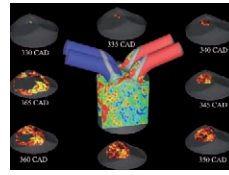
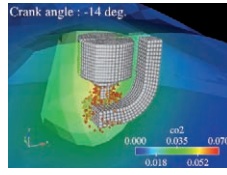
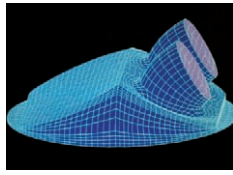
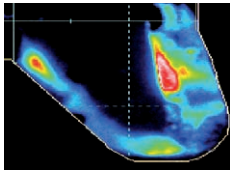


IFP positions in the field of Powertrain Engineering

IC Engine Research Engineer



Supported by its dual expertise in engines and fuels, IFP is able to provide industry with concrete solutions to meet the technological challenges of the automotive transport sector, developing advanced research in the field of hybrid vehicles and biofuels. Its approach is based on both world-class skills and high-performance technical resources (supercomputer, test bench, etc.).

Combustion control is a key research theme at IFP, with a focus on the combustion of thermal, gasoline and diesel engines, in particular.



Responsibilities

An IC engine research engineer works within multidisciplinary teams on the engines and fuels of tomorrow, in liaison with car manufacturers, parts suppliers and oil industry players.

Responsible for R&D studies, he/she:

- analyzes and understands how internal combustion systems work;
- develops and uses calculation codes for engine and vehicle modeling and simulation;
- designs and develops innovative combustion systems;
- communicates with respect to his/her work both internally and externally (clients and the scientific community).

As part of his/her job, an IC engine research engineer may be required to participate in on-site technical projects for clients, especially major European car manufacturers.

Required expertise

- engineering graduate or equivalent (Écoles centrales, IFP School, INSA, ENSMA, ENSEEITH, etc.). A thesis on fluid mechanics, thermodynamics, combustion physics or internal combustion engines would be an asset in your application for certain positions;
- expertise in optical diagnostic techniques, development of simulation codes, mastery of engine optimization (air/EGR loop, injection, distribution, etc.);
- discipline, scientific curiosity, analytical skills and global approach;
- team player;
- fluent English.

Career development opportunities

An IC engine research engineer develops very high-level technical expertise, which he/she can put to good use within the context of multiple projects and partnerships. There are therefore numerous career development opportunities: scientific and technical expertise (IFP professor), project manager, team manager, marketing engineer, working within IFP or for our partners, in France (D2T) or abroad.

IFP is a world-class public-sector research and training center, aimed at developing the technologies and materials of the future in the fields of energy, transport and the environment.

Personal experiences

Patricia Anselmi
Engineer in the Energy
Applications Techniques Division



After her mechanical engineering studies in Venezuela, Patricia trained at the IFP School in France (IC Engines cycle).

Why did you choose IFP?

After a year in industrial development at AVL List GMBH in Austria, I wanted to join a research center. IFP was an entirely logical choice after my time spent at the IFP School.

What does your job consist of?

My job has evolved considerably since I first joined IFP. In practical terms, my job today consists of intelligence and bibliography work in order to define combustion test and study programs in cooperation with the project manager. For this purpose, engine bench tests are conducted.

What do you like about your job?

Every day, my job leads me to ask new questions about highly topical problems, for example, how to save energy in engines and how to reduce CO₂ emissions. As a result, my work is very varied and highly rewarding since a good proportion of projects can lead to an automobile application.

How do you see your career developing?

I'd like to continue working on fundamental research within the Energy Applications Techniques Division. I'm right at the very start of my career, and there's still so much to learn and discover!

Benoist Thirouard
Engineer – Engine System Analysis
Department Head



Benoist is a graduate of ESEM (École Supérieure de l'Énergie et des Matériaux), the IFP School (IC Engines cycle) and holds a PhD awarded by the MIT (Massachusetts Institute of Technology) in oil transport modeling in thermal engines.

Why did you choose IFP?

After my PhD (equivalent to a doctoral thesis) at the MIT, I came back to France. I wanted to work in applied engine research and IFP offered – and still does – the country's best expertise in this field. That's why I applied for a position within IFP's Energy Applications Techniques Division.

What does your job consist of?

In February 2007, I became Head of the Engine System Analysis Department, which works on the experimental analysis of piston engine combustion systems. The work carried out within the department contributes to the development of clean, fuel-efficient engines.

My new job consists of three main roles:

- maintaining and developing IFP expertise in the field of combustion system analysis;
- ensuring that this expertise and knowledge is capitalized upon and disseminated;
- motivating and fostering innovation.

What do you like about your job?

My job consists of guiding highly skilled men and women, making sure that they are motivated and ensuring that their various roles complement one another. And when a team works well, the result is always rewarding.

How do you see your career developing?

At present, I'm simply enjoying my work without projecting too far into the future. What I will learn and achieve here in this new position will help me to be more involved in decisions implementing the R&D projects in which my division takes part. This process will doubtless help me define my goals in terms of career development.

To apply for a position: <http://recruitment.ifp.com>

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