



## Science@ifpen

Written on 01 February 2012



15 minutes of reading



News

Fundamental Research

Climate, environment and circular economy

CO<sub>2</sub> capture, utilization and storage

Sustainable mobility

Electrified Mobility

IC powertrains

Responsible oil and gas

Fuels

Basins and reservoirs modeling and simulation



According to a recent bibliometric study, IFP Energies nouvelles (IFPEN) is now one

of the world's top ten organizations in terms of scientific publications and quotations in the fields of **engine and powertrain control**. This result reflects our excellent position on the international stage and the broad influence of our research in these fields.

This special issue of Science@ifpen is dedicated to IFPEN's research in the field of **digital sciences and technologies**. In addition to questions directly linked to **motor vehicle** issues, readers will also find information concerning the **numerical simulation of CO<sub>2</sub> storage, algorithmic geometry in geosciences, image processing for catalyst analysis**, as well as **real-time simulation** in the design of **complex physical systems**.

These few examples aim to demonstrate the full potential of numerical modeling and simulation in all the fields we operate in, including numerical chemistry, processes, engine combustion

and geosciences.

We hope that you enjoy this issue.

**Van Bui Tran**, Director, Technology, Computer Science and Applied Mathematics Division

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## Summary:

- Keeping a close watch on **batteries**
  - **CO<sub>2</sub>** simulates its own storage
  - **Simulation** and Co.
  - When **grids** become gridlocked
  - **Turbo** under control
  - Getting inside **catalysts**
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