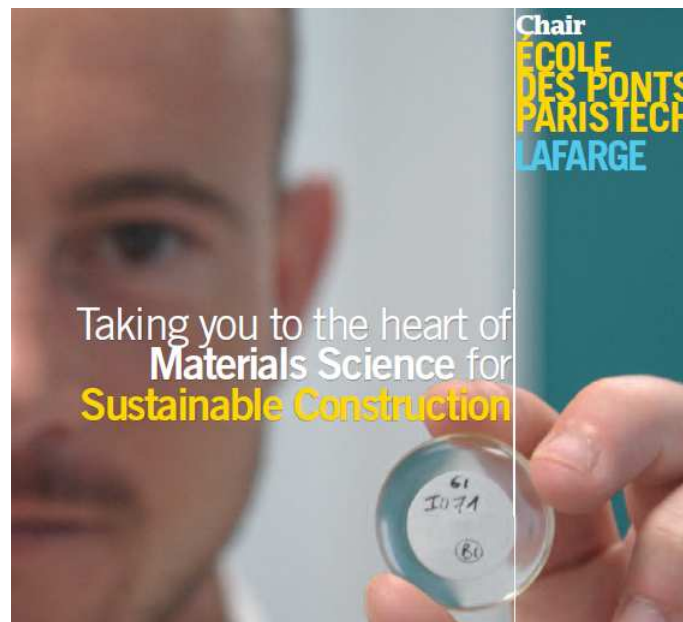


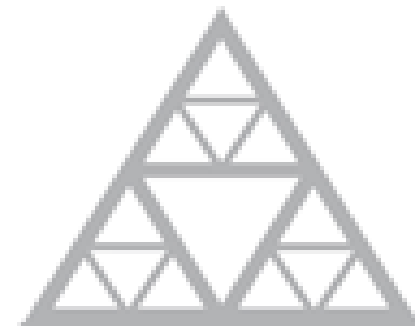
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# WORKSHOP

## Recycling concrete into concrete: a scientific and industrial perspective

July 8, 2014  
École des Ponts ParisTech





École des Ponts  
ParisTech

# INTRODUCTION

François de Larrard, Lafarge LCR  
Adélaïde Feraille, Ecole des Ponts  
*for the Lafarge-ENPC Chair*

# The Lafarge-Ecole des Ponts ParisTech Chair

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- **‘Material Science for Sustainable Construction’**
- **To teach engineers with a high scientific level, able to develop and to make the best use of building materials for building better cities**
- **Linked with three Master programs:**
  - SMCD (Material Science for sustainable construction)
  - MMS (Mechanics of materials and structures)
  - MSROE (Mechanics of soils, rocks and structures in their environment)
- **Main actions of the Chair**
  - To influence the content of the related Master programs
  - To provide tuition fees for some selected students during their Master studies (including students from Tongji University, China)
  - To favour internships of students at Lafarge LCR (Central Research Center in Lyon)
  - To sponsor research internships of students at Laboratoire Navier (Ecole des Ponts)
  - To organise and to sponsor scientific events (including this one)

# Recycling concrete into concrete

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- **Not a new process**
- **Partial recycling customary in some countries (Switzerland, Northern Europe...)**
- **In many countries, construction and demolition materials go into road platforms and embankments**
- **However, in the future**
  - More and more demolition
  - Less and less opening of new quarries (at least in mature countries)
  - Need to decrease the transportation distances
- **Recycling concrete into concrete can only grow**
- **Need**
  - To display the state-of-the-art
  - To fill the gaps of knowledge and technology through R&D
  - To disseminate the good practice
  - To create business models so that recycling can be performed industrially and economically

# Agenda

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**10:00**      **Introduction** (François de Larrard, Adélaïde Feraille, ENPC/Lafarge Chair)

**10:10**      **International state-of-the-art and recent results**

- Recycled aggregates : a Swiss perspective (Guillaume Habert, ETH Zurich)
- Recycling of EoL (End-of-life) concrete (Francesco Di Maio, TU Delft)

*Pause*

- Properties of recycled concrete (Jorge de Brito, Technical University of Lisbon)
- Durability of recycled concrete. Concrete recycling in China (Jianzhuang Xiao, Tongji University)
- Life Cycle Assessment of recycled concrete – A state-of-the-art (Adélaïde Feraille, ENPC/Institut Navier)

*Lunch*

**14:30**      **The French national project Recybéton**

- Partners, programme, first results (Horacio Colina, ATILH)
- Standards and regulations - Present status in France vs, Europe and other countries (Rafael Bodet, UNPG)

*Pause*

**15:30**      **Recycling in the Lafarge world**

- Performance Evaluation of Municipal Concrete Sidewalks using Coarse and Fine Recycled Concrete Aggregate (Paul Lum, Lafarge Canada)
- The first Recybéton experimental site at Chaponost - Rhône, France (Emmanuel Garcia, Lafarge France)
- A business perspective (Mark Tomlinson, Lafarge Corporate)

**16:45**      **Conclusion: Lafarge Ambition 2020 and societal needs** (Jean-Jacques Gauthier, Lafarge Corporate)