

BULLETIN

April 2019

Volume 26, Number 3

Presentation on Sustainable Concrete
Annual Reception & AGM
Friday 3rd May 2019

The AFAS Committee is pleased to advise that Dr. Rackel San Nicolas, a member of the AFAS Committee has agreed to talk to AFAS on Sustainable Concrete.

Rackel San Nicolas is a researcher and lecturer at the University of Melbourne specialising on smart and sustainable material for construction. After a double master degree in Material engineering and chemistry, she completed a PhD in Civil engineering in France. She started her academic career in 2012 at the University of Melbourne working to develop reliable test methods for sustainable materials for constructions durability, and to understand the relationship between sustainable concretes microstructure, mechanical, structural properties and durability. She is working in close collaboration with several industries in France and in Australia as Lafarge, Omya, Zeobond, Rio Tinto to name few, which allow her and her group to take the new materials developed from the laboratories to the field.

Her talk will be focused on sustainable concrete and the situation of Australia in the field. Carbon emissions from the manufacture of Ordinary Portland Cement (OPC) is second only to fossil fuels and is responsible for a significant proportion of Australia's total greenhouse gas emissions.

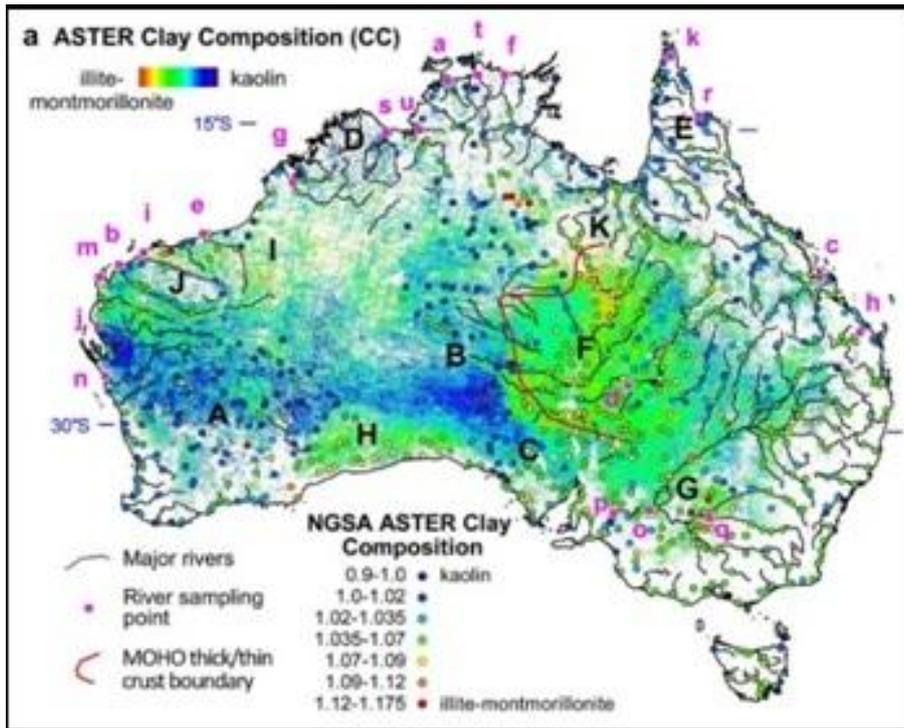
Aiming to reduce the environmental impact of the concrete industry, Supplementary Cementitious Materials (SCMs) such as fly ash and Ground Granulated Blast-Furnace Slag (GGBFS) have been intensely used to partially replace OPC in concrete. Currently, fly ash, a widely available by-product from coal fired power stations, is the most common SCM used in Australia.

However, Australia opted for the transition from fossil fuels to renewables to address the effects of climate change. The shift away from coal burning to renewable energy is expected to lead to a drastic reduction in fly ash production. The importation of millions of tonnes of fly ash every year could put the Australian concrete industry at risk. Indeed, a sustainable performance of the concrete industry in Australia starts with controlling the cost of concrete production and the quality of the materials. There is an urgent need for developing an alternative SCM available locally in suitable quantity to replace fly ash in the future. Calcined clay can be used as a SCM to replace OPC in concrete. Large quantities of suitable clays are available in Australia but no one think about using it yet.

Drinks & nibbles to be provided by AFAS.

<p>WHEN: Friday 3rd May 2019 TIME: Start 6:30pm – 8:00pm WHERE: Melbourne University Arts West - North Wing Building 148A</p>	<p>RSVP before Friday 26th April 2019 to</p> <p>Peter Tolé, Ph 03 9810 5724 (BH) Mobile 0412 435 344 Peter.Tole@advisian.com</p>
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Nature of the clays across Australia



CALENDAR FOR 2019

15th March:
Talk: Renault Sport

20th March:
Talk: Bouygues on Melbourne Metro Project.

3rd May:
AGM and Annual Reception at Melbourne University with Talk: Sustainable Concrete.

June:
Function with Materials Australia

August:
Function with CSIRO

September:
Annual Dinner

October :
Talk: Hydrogen fueled trains.

November:
Function to award AFAS Fellowships

Melbourne French Theatre
AFAS members are now eligible for a Concession when booking for MFT plays. Refer to the web site for details:
<http://www.mftinc.org>

AFAS Website

We have updated our website.
See www.afas.org.au

Arts West - North Wing : Building 148A

Building details

- Within: [Parkville buildings](#)
- Street address: [Professor's Walk](#)
- [Get directions](#)

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