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2017 Symposium on Concrete: the key material for future infrastructure and its environmental impact, mitigation strategies for major cities.

May 10, 2017 **Georgetown University School of Continuing Studies**
Room C204, 640 Massachusetts Avenue
Washington DC

CONCRETE is by far the most used man-made substance on earth; the foundation of our global infrastructure. Concrete production and use is responsible for significant amounts of man-made GHG (plus water resource consumption); yet this issue receives little attention in the climate action discussion. The organizers of the Symposium want to start a discussion on concrete production and use -- how to mitigate its environmental impact without losing its crucial role for the built infrastructure.

Big cities are in hyper-growth mode – expanding infrastructure to support a world population projected to surge past 9 billion by mid-century -- of which more than 70% will live in urban areas. The United Nations organization is foreseeing that 5 to 7 cities of the size of New York should be built every year till 2050. City leaders are challenged to focus greater attention and resources on mitigating the negative effects of indispensable products like concrete, while at the same time supporting smart city infrastructure growth. The Symposium is a strong start at doing just that.

Funded by the Georgetown Environmental Impact Initiative (GEI), the Symposium is novel in its mission to unite experts in scientific research, municipal leadership, sustainability experts, and industry to meet the concrete GHG mitigation challenge. The overall meeting goal is to discuss and fast-track shared directions for the world's biggest cities to reduce concrete environmental impact in view of growing population and infrastructure-driven demand for concrete use. We are delighted to announce the partnership with sustainability policy leaders like the C40 Cities, USGBC and the Carbon Neutral Cities Alliance; industry advocates like the National Ready-Mixed Concrete Association, and cities like our Nation's Capital and others that will be in attendance.

ORGANIZERS:

Emanuela Del Gado, Marlene Towns (Georgetown University), Roland Pellenq (CNRS MIT), William Updike (DC DOEE), Jason Turner (Verdant Innovation)

PROGRAM

9:00 Welcome and Registration

9:30 Opening

Emanuela Del Gado (Georgetown University)

Roland Pellenq (CNRS – MIT), William Updike (DC DOEE),

Jason Turner (Verdant Innovation)

9:40 **Muriel Bowser, DC Mayor** – Opening address

10:00 – 12:30

Concrete environmental impact: facts, numbers and perspectives.

10:00 – 10:20 **Franz-J. Ulm (MIT CSHub)**, *Concrete at the core of our built infrastructure: material properties and societal impact*

10:20 – 10:40 **Jeremy Gregory (MIT CSHub)**, *The CSHub and life cycle analysis of concrete and concrete structures*

10:40 – 11:00 **Brendan Shane (C40)**, *Challenges and opportunities for cities*

11:00 – 11:30 Coffee Break

11:30 – 12:30 Panel Discussion lead by Julia Garbini (RMCREF). *Improving sustainability of concrete and concrete infrastructures*. Panelists: Franz-J. Ulm (MIT), Jeremy Gregory (MIT), Laurent Barcelo (Lafarge-Holcim), Brendan Shane (C40), Uwe Brandes (Georgetown University), Greg Kats (Capital E, Blue Planet)

12:30 – 1:30 Lunch

1:30 – 4:30

Cities strategies: quantifying sustainability and bringing in new technologies.

1:30 - 1:45 **Brendan Owens (USGBC)**, *The role of LEED, PEER and rating systems*

1:45 – 2:00 **Karthik Obla (NRMCA)**, *Performance base specification for concrete and its role in improving sustainability*

2:00 - 2:15 **Tommy Wells (DC DOEE)**, *Washington DC strategies for sustainability and the concrete case*

2:15 – 2:30 **Greg Kats (Capital E, Blue Planet)**, *New technologies and alternative solutions*

2:30 – 2:45 **Tony Thompson (VMC, Carbon Cure)**, *The Carbon Cure experience*

2:45 - 3:15 Coffee break

3:15 – 4:30 Panel Discussion lead by Roland Pellenq (CNRS - MIT)
Identify next steps: directions for effective policies, innovation and scientific research. Panelists: Leif Dormsjo (DC DOT), Benoit Baillart (Urban Lab, thecamp), Harrison Newton (DC, 100RC), Gina Bocra (NYC, Chief Sustainability Officer), William Updike (DC DOEE)

4:30 – 5:30 Closing *Wine & Cheese reception*