

## Life Cycle Sustainability Assessment

by Prof. Dr. Marzia **Traverso**, on March 5, 2019 at 12:30 p.m.

The next 'Science Talk', organized by the Institute of Systems Sciences, Innovation and Sustainability Research, will be given by Prof. Traverso (University of Technology Aachen, Germany). Her topic is "Life Cycle Sustainability Assessment" and her talk will take place on Tuesday, 5 March 2019 at 12.30 pm in the **meeting room of SIS (Merangasse 18, 1<sup>st</sup> floor)**. Duration: **Approximately one hour** including discussion.

The participation is free of charge and there is no need to register.

SIS offers three to five guest talks each semester, covering its research areas systems sciences, innovation and sustainability research.

### Bio-sketch

Since June 2017, Prof. Marzia Traverso is head of the Institute for Sustainability in Construction Engineering. Before that, she worked as Scientific Officer at the Joint Research Center (JRC) of the European Commission in Sevilla; as project manager for sustainability and life cycle assessment at the BMW Group's Research & Innovation Centre; and as Postdoc at the University of Technology Berlin focussing on (social) sustainability assessment in the Department for Sustainable Engineering.

She was involved in the sustainability assessment of BMW i3 and BMW i8 (at BMW Group) and in the development of Green Public Procurement criteria for street lighting, transport and buildings (at JRC). Her Ph.D. thesis, done at the University of Palermo, covered sustainability aspects in buildings and transport.

She is member of the steering committee of the social life cycle alliance ([www.social-lca.org/](http://www.social-lca.org/)) and subject editor for SLCA for the International Journal of Life Cycle Assessment. Moreover, she is author and reviewer of numerous scientific publications and journals (e.g., International Journal of LCA) and member of the Italian LCA Network. She is co-founder of the non-profit organisation [Information for Sustainable Development \(iSuD\)](#).

### Abstract

A theoretical framework to assess the sustainability performance of a product along its life cycle have been published in 2011 by the UNEP (UNEP, 2011) and it refers to the life cycle sustainability assessment of a product with the following formal equation:  **$LCSA = LCA + LCC + S-LCA$**

Where LCA is the environmental life cycle assessment (according to the [ISO 14040](#)), LCC is the life cycle costing and S-LCA is the assessment of the social impacts along a product life cycle.

The equation [has](#) been implemented several times and one of the first implementations (reported as well in the UNEP publication) is to marble slabs, [one of](#) building products. Further theoretical developments and implementations [have](#) been done until today but still several challenges have to be [faced](#) up. A presentation of a practical implementation of the methodology to the building sector and components together with its benefits and challenges will be presented at this "Science Talk".