



**UNIVERSITÉ
DE GENÈVE**

**INSTITUT DES SCIENCES
DE L'ENVIRONNEMENT**

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CYCLE DE FORMATION ÉNERGIE – ENVIRONNEMENT

SÉMINAIRE 2015-2016

« Role of prefabricated systems in massive Low Energy Renovation of Buildings »

Mark ZIMMERMANN

EMPA

Jeudi 22 octobre 2015 à 17h.15

Salle B001 au rez-de-chaussée – Uni Carl Vogt

66, bd Carl Vogt, 1205 Genève

<http://www.unige.ch/energie/fr/contact/plan>

PROGRAMME DES PROCHAINES CONFÉRENCES :

Jeudi 5 novembre 2015 à 17h15

« Effets sanitaires des systèmes d'éclairage utilisant les LED »

Christophe MARTINSONS, CSTB Grenoble

Jeudi 19 novembre 2015 à 17h15

« Ventilation générale des bâtiments : concepts techniques et applications pratiques dans les immeubles de logement »

Martial GÖTZ, Energgestion SA

Jeudi 3 décembre 2015 à 17h15

« Rénovation thermique du parc privé de logement: retour d'expérience du dispositif mur|mur mis en œuvre par Grenoble-Alpes-Métropole »

Philippe BERTRAND, Grenoble-Alpes-Métropole

Jeudi 10 décembre 2015 à 17h15

« Energy Refurbishment of residential buildings of the 50s – Research and Results »

Tanja OSTERHAGE, RWTH Aachen University

The conference speaker

Architect, researcher Mark Zimmermann has worked for more than two decades on the energy research in building sector at Empa, the Swiss National Laboratories for Materials Science and Technology. He was Operating Agent of IEA ECBCS Annex 50 "Prefabricated Systems for low energy renovation of residential buildings", developing new methods, based on prefabrication, for energetic renovation of existing building stock.

Mark Zimmermann and his research team have recently developed SELF, is a self-sufficient space unit for working and living. It is independent from external energy and water supply, and it is demonstrating technologies for buildings of the future.

Mr. Zimmermann is a well-known and respected person in the international research scene on energy efficient buildings and passive houses with numerous positions of trust in various research projects and organizations. He has published articles and held conference presentations among others on following topics: passive cooling of buildings, vacuum insulation solutions in construction, new methods for energetic refurbishments, 2000 Watt Society - the Swiss vision about sustainable society and its demonstration building Forum Chriesbach.

Abstract

A project of the International Energy Agency was investigating technologies that are improving the efficiency and effectiveness of building renovations. The concept is based on large prefabricated renovation modules for façades and roofs. These modules create a new, modern building envelope. It also offers added values such as larger window sizes, façade integrated systems for ventilation and opportunities for room extensions or new roof top apartments. Several demonstration sites with more than 350 renovated apartments have proven that energy savings between 80-90% can be expected. Even zero-energy buildings are possible, if solar cells are installed on the roof. Renovated buildings are again fit for the coming decades.

The publications of this ground-breaking project are published on www.empa-ren.ch/A50.htm, or www.ecbcs.org/annexes/annex50.htm.

Participating Countries: Austria, Czech Republic, France, Netherlands, Portugal, Sweden, Switzerland

Operating Agent: Mark Zimmermann, Swiss Federal Laboratories for Materials Science and Technology (Empa), Switzerland