

Graduation Project Title : **"Home on Move! - An Adaptive Living Machine for contemporary nomads"**

Research Topic : **"How can adaptable (building) envelope be situated in different environments"**

"From adaptation research to adaptable design"

The topic "Adaptation" is the key element throughout both research and Design in order to improve the mobility of architecture. The adaptabilities of living unit (in terms of climate, context, user scenario and transportation) directly influence the level of architectural mobility. " Biomimicry", was selected as the research tools for inspirations on generating the design principle of the adaptable Living Machine. To be more focus and accurate, warm-blooded vertebrate's integumentary system was selected as the research object. By understanding how warm-blooded vertebrates adapt to the changing environment, guidelines was generated for the design of an adaptable building system.

"From research to design guidelines"

According the emphasis of research based design approach of Explore Lab, a research topic has been set up focusing on vertebrate's skin adaptive properties, which including the studies of performance, mechanism, etc. The improvement of technology and bloom of globalization improved the mobility human habitation, a rather scientific approach was applied in the research. The combination of mobile architecture and contemporary technologies (mechanical, materials technology, etc.) are the basic framework of the graduation project. The idea was based on applying building physics concepts to analysis how the integumentary system of warm-blooded vertebrates adapt to changing environment, possible technologies (both industrial & architectural) was applied at the design stage.

"From single unit to community, from individual to everybody"

In general, the ALM (Adaptive Living Machine) is a adaptive portable living unit for individual. The initial end users was first targeted for the group of documentary film crew (e.g. documentary film crew work for Discovery channel), as the routine of the crew member directly reflect the characteristic of the contemporary nomadic living style, which able to demonstrate the possibilities for contemporary nomadic architecture. An extensive design should be focus on a more universal user scenario based on this design result, reference as an design framework. The ultimate user could be everybody who targeted to live in everywhere. By the achievement of high level of adaptability and flexibility arrangement, in terms of Climate, context, user scenario and transportation. The extend of the ALM can be further develop into community scale.