

# ITMA Complex Design Competition

Mohammad Fakri Zaky bin Ja'afar

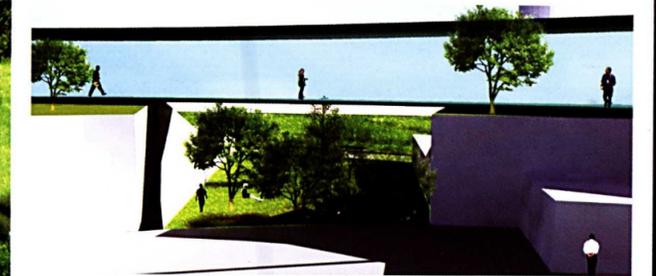
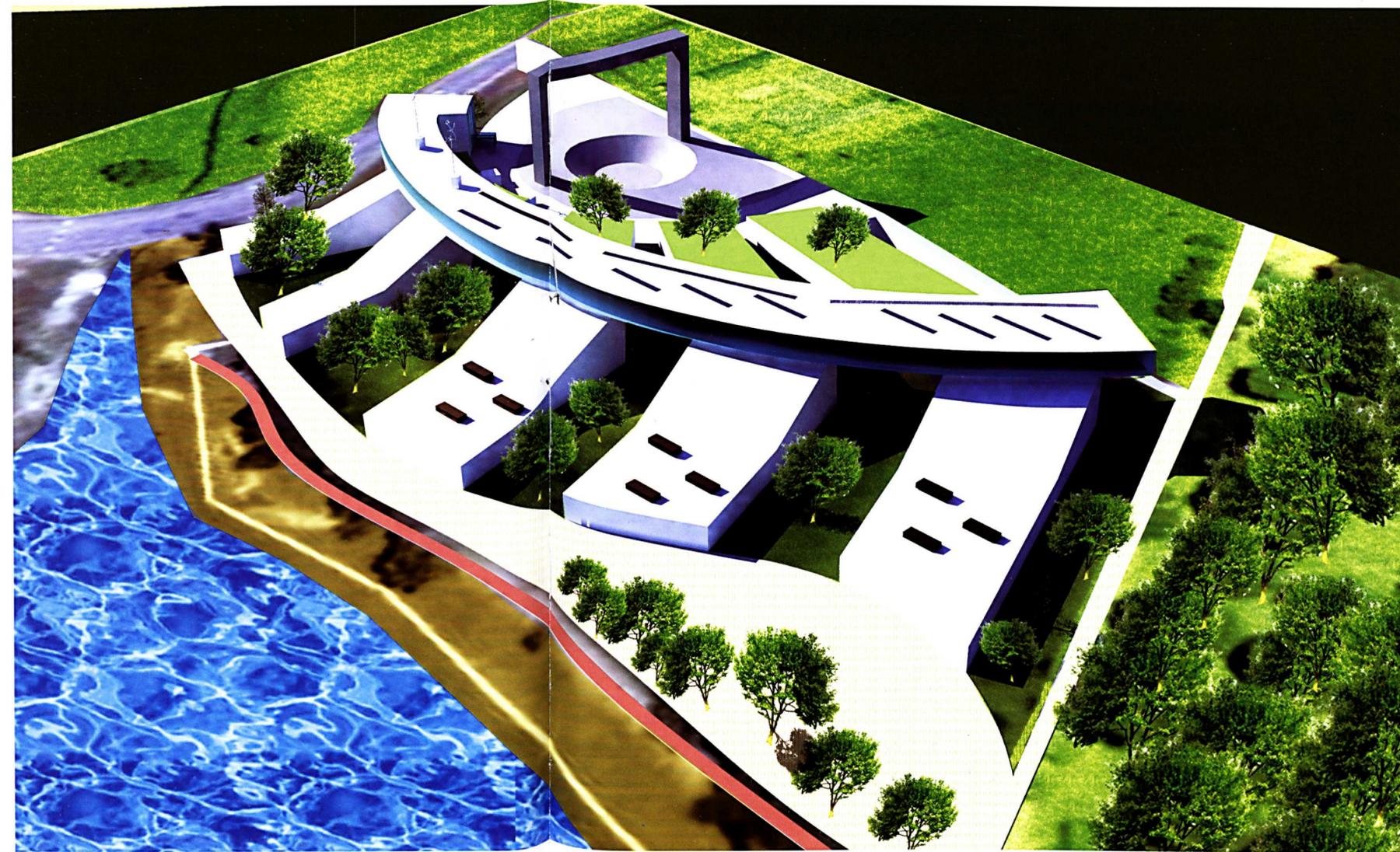
The proposal is a research complex for the Institute of Advanced Technology (ITMA), Universiti Putra Malaysia. About 16,000 square metre of laboratory facilities are needed to house the institution's five research laboratories. The complex is also a showcase of several green technologies, from solar-assisted air-conditioning to mechanical waste management. The site is on a small hill in Bukit Ekspo, UPM surrounded by three lakes. There is an existing 40 feet high gantry tower spanning over a 50 feet diameter solar bowl which offers interesting dynamism to the proposed new development.

Curiously, the proposal takes the name 'green sprawl' which seems to be an antithesis to green site development. However, upon closer inspection of the group's design intention, the sprawl is a result for the need of views, natural ventilation and daylighting which formulated the basis of passive design strategy. The building consists of two main components: administration and laboratories. The administrative spaces are housed in a long curvy spine that straddles the edge to the hill top. Growing out of this spine are five laboratories which radiate from the centre of the solar bowl.

The curvature of the spine on top of the five laboratories enables the occupants to have a commanding lake view. The decision to let the attached laboratories to 'fall' down the hill allows a series of small wind turbine to be ideally placed on top of the spine without any obstruction.

The most important statement made by this building is that the first and foremost duty for a green building is to explore the passive design potential before indulging in sophisticated green technologies which is the focused R&D of the five laboratories. This is evidenced by the shallow planning of all the zones allowing the benefits of natural lighting and ventilation in to all areas. As important relics on the site, the high gantry and the solar bowl, are celebrated.

Acknowledgements:  
Nor Mariah Adam & Elias Salleh



■ Tan Khang Hung, Saiful Azam, Noor Adili Kamaruddin, Nurul Ain Ahmad, Loo Jie Hsin & Haw Yoke Ah

Award: First Place Winner,  
ITMA Complex Design Competition,  
Universiti Putra Malaysia