UNIVERSITY PROJECT STUDENTSHIPS 2003/04

"Rethinking body, memory and architecture in the age of digital tectonics"

School of Architecture, The University of Sheffield

Rethinking body, memory and architecture in the age of digital tectonics

The human body plays a pivotal role in our understanding and experiencing of buildings and cities, and our most essential and memorable sense of 3-dimensionalties has its root in the body experience. The once perceived and understood body and building relation is now increasingly unsettled due to wide uses of information technology and digital media both generally and in the design of the built environment. There is presently an urgent need to better understand the current gap in the technology and in practice so that relation of body and building may be (re)discovered in meaningful ways. The proposed research is to investigate the changing relation of human body and architecture resulting from digital design processes and how human body centred sense of spatiality could be better addressed in the future development of digital tectonics. The project has the following objectives:

- To establish an ontological framework for rethinking body, memory and architecture in the age of digital tectonics by studying contemporary theories on body and building including Gender Studies, technology and prosthetics;
- To identify the underlying assumptions in existing digital design media and praxis regarding the representation/interpretation of body and building relation through critical case studies;
- To explore how human body centred sense of spatiality could be better promoted by experimenting with non-conventional digital design media such as agent-based programming and VR immersive interactions;
- To survey public perception of body, memory and architecture through experimental digital designs.

The research is of a cross-disciplinary nature involving a novel synthesis of body-architecture theories and experimental digital design, which will be pursued jointly by the School of Architecture and the University's new Virtual Reality Visualisation Centre due to be launched in Spring 2003. The School of Architecture has been awarded the rating of '5' in the last two RAEs, and is widely recognised as one of the leading schools of architecture in Europe. The successful applicant will join currently 50 plus PhD research students at the School. The expected learning outcomes and benefits to the student include:

- In-depth knowledge of contemporary critical theories of body, memory and architecture in relation to the emerging theory and practice of digital tectonics
- Research skills of computer modelling and experimental digital design applicable to both conventional computer-aided design packages and more novel visualisation/simulation platforms
- The ability to present research results effectively through paper publication and conference presentation
- Becoming an independent researcher capable of defining and developing future research programmes

The *Architecture Section* at the University Main Library hosts extensive resources and services for accessing up-to-date research literature. A workspace equipped with a CAD workstation will be provided at the School for the project, which will be linked up with the project's Web server. The student will also access the state-of-the-art digital visualisation and interaction facilities provided by the new Virtual Reality Visualisation Centre, which will include a *Fakespace RAVE-II* VR projection system, equipped with multi-modal multimedia interaction devices.
A website dedicated to the project will be established and used as one of the primary routes for demonstrating the digital design experiments as well as disseminating research findings.

The supervisory team for the project: Dr. Chengzhi Peng and Mr. Stephen Walker (School of Architecture), Prof. Mike Holcombe (Computer Science). For informal discussion of the project, please contact Chengzhi Peng (Email: c.peng@sheffield.ac.uk Tel: 0114 - 2220318), or Stephen Walker (Email: s.j.walker@sheffield.ac.uk Tel: 0114 - 2220345). For more general information about the University of Sheffield, please visit the website at: http://www.shef.ac.uk/ and School of Architecture at: http://www.shef.ac.uk/uni/academic/A-C/archst/

The studentship pays Home/EU tuition fees only, and provides a maintenance stipend at the basic Research Council rate (expected to be £8,500 in 2003/2004) as well as an annual Research Training Support Grant.

For further information and an application form please contact Mr Simon Beecroft, Scholarships & Awards Officer, Graduate Research Office. (Email: s.beecroft@sheffield.ac.uk Tel: 0114 - 2221417). Closing date: 31 May 2003.