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NSW Branch

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## Birdsall Dreiss Lecture

Wednesday 11<sup>th</sup> November 2009, 6 to 8 pm

### University of Technology Sydney

Broadway Campus,  
UTS Tower Building (CB02), 15 Broadway Street  
Level 4 (Tower entrance level), Room 411 (CB02.04.11)

*IAH NSW and the Engineers Australia Sydney Division Water Engineering Panel proudly present the **Birdsall Dreiss Lecture**, with a presentation by **Dr. Chunmiao Zheng**, Professor of hydrogeology at University of Alabama.*

### **Understanding Solute Transport in Extremely Heterogeneous Porous Media**

Field studies at well-instrumented sites have played a preeminent role in our efforts to better understand and predict contaminant transport in geologic media. In particular, field tracer tests have provided new insights and extensive data sets essential to development and testing of transport theories and mathematical models. In addition to the investigation at field site at the Columbus Air Force Base in Mississippi, much recent research on contaminant transport in heterogeneous media has been motivated by findings at the MADE site.

In particular, results from field investigations have suggested the existence of small-scale preferential flow paths and relative flow barriers, which together exert a dominating control on contaminant transport and remediation.

This presentation will provide an overview of the field campaigns at the MADE site over the past 25 years and discuss how the findings from these field studies have inspired various theories and models to accommodate the non-ideal transport observed in the field. The MADE site has proven to be a valuable natural observatory where continuing research efforts will lead to a stronger theoretical framework and practical tools for modeling solute transport and evaluating remedial measures in extremely heterogeneous aquifers..

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Treasurer – Ian Grey, Ian Grey Groundwater Consulting

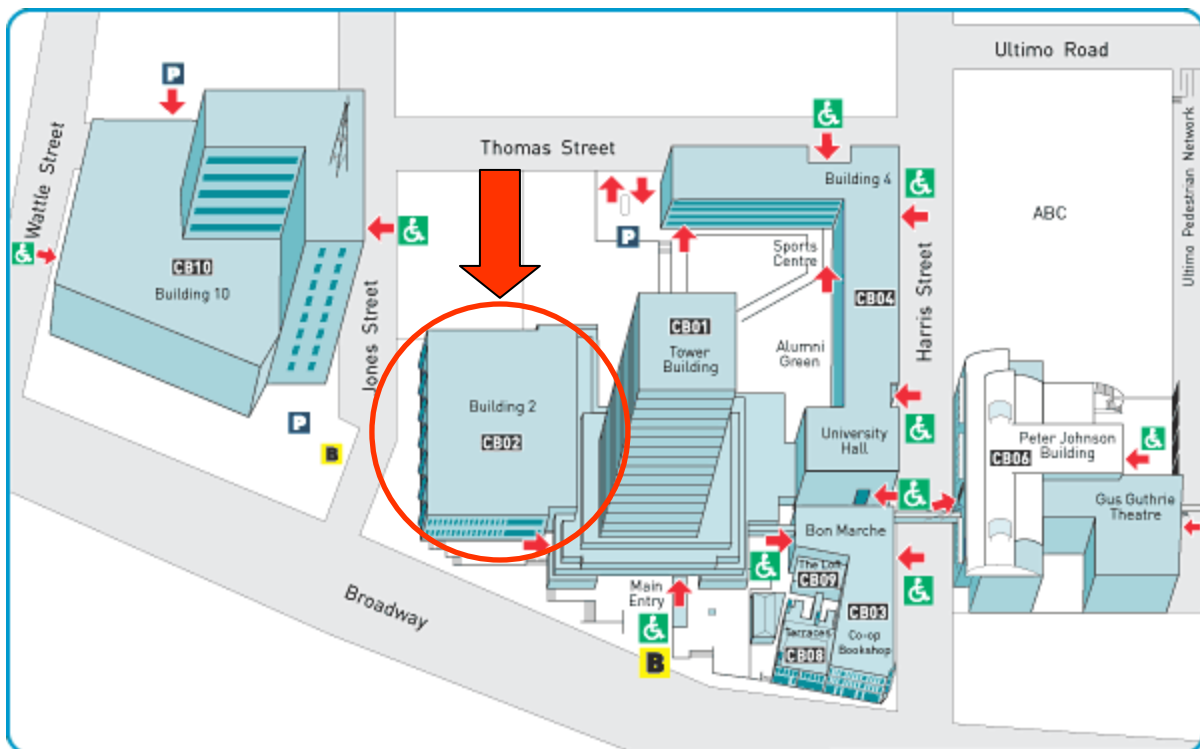
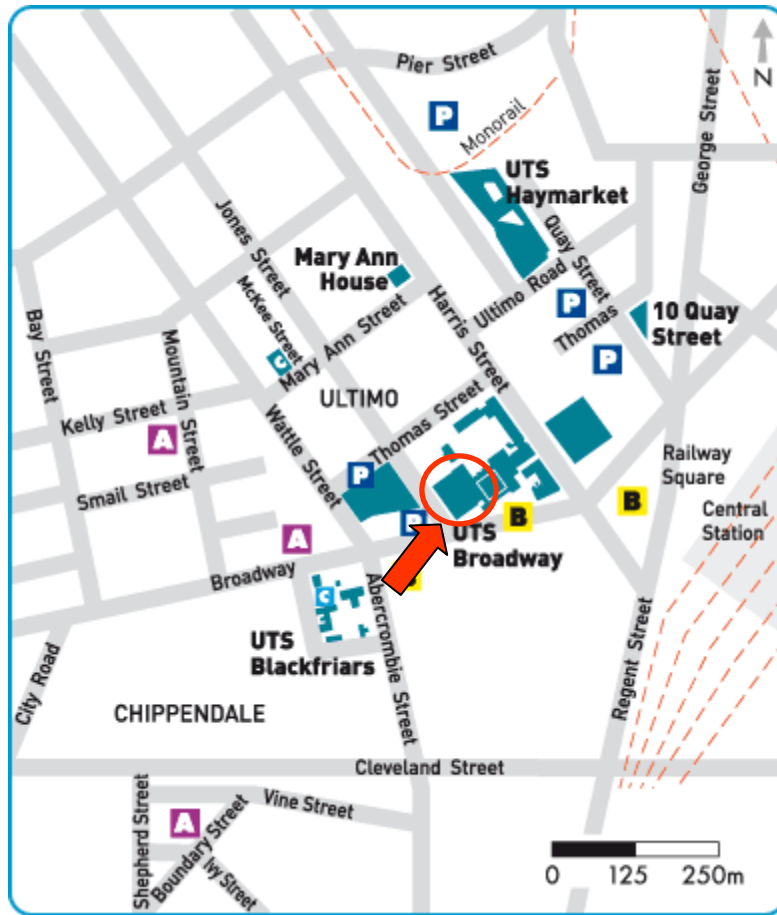
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# UTS Meeting Venue Location



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