
# PhD Research Opportunities

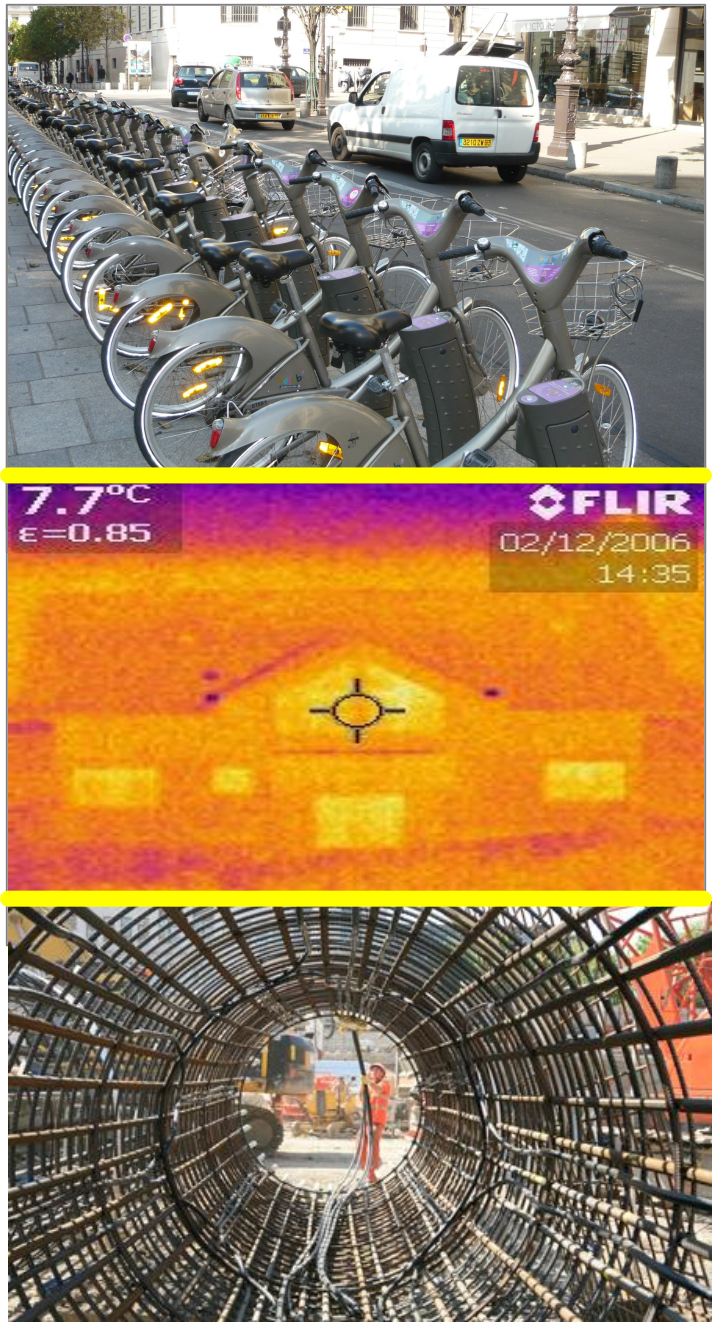
Professor Mark Dyer
Michael McNamara Chair in Construction Innovation

# TrinityHaus

- **Construction Innovation** for the construction process and parts of the supply chain most receptive to innovation.

- **GREENprint** - Dublin as a living laboratory for transformation towards a low carbon society

- **I-School** - collaboration with CEUD, Design 21C and de Bono Foundation to promote creative design and innovation in a studio environment

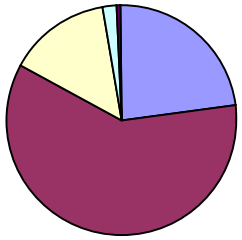


**GREENprint.** Dublin as a living laboratory for a low carbon society

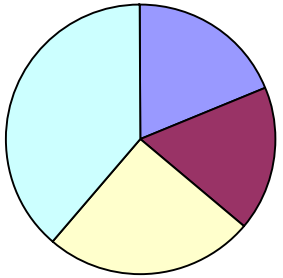
Energy Efficiency

Embodied Energy

**2004 Primary Energy Supply**
**(51% increase post 1990)**




**2004 Energy Consumption**



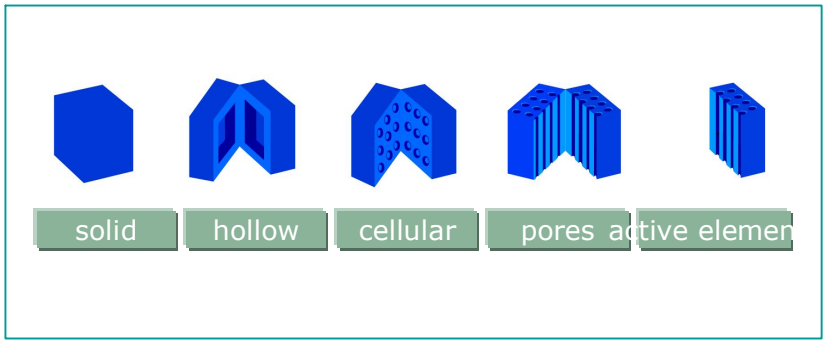

**GREENprint.** Dublin as a living laboratory for a low carbon society

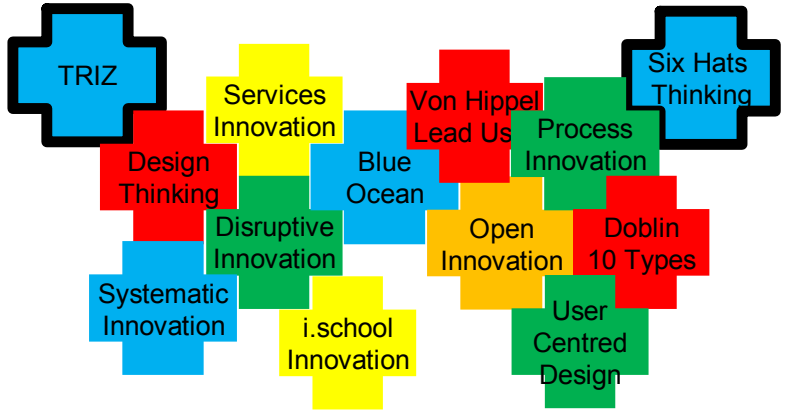
# TrinityHaus

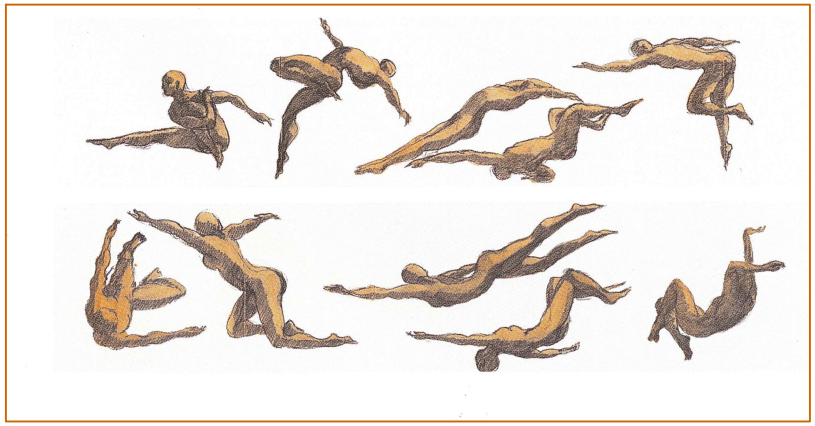
- **McNamara Centre** innovation for the construction process and parts of the supply chain most receptive to innovation.

- **GREENprint** - energy usage, saving and storage for Ireland forward as a living laboratory for sustainable living

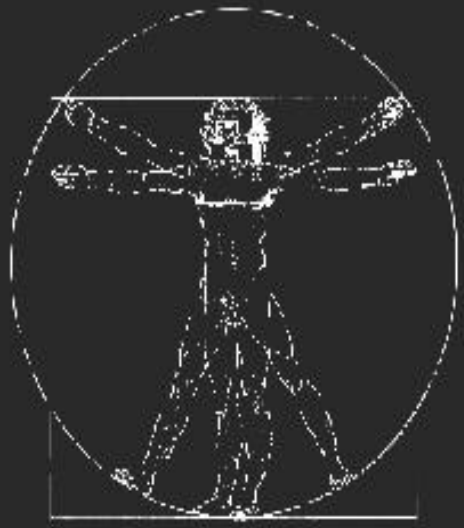
- **I-School** - collaboration with CEUD, Design 21C and de Bono Foundation to promote innovative creative design in a studio environment



# 24 hour universal design challenge



Kyoto 2006

Tokyo 2007

London 2007

**November 2009**
**Trinity College**
**Dublin**
www.TrinityHaus.tcd.ie

Hong Kong 2008

Oslo 2008

Singapore 2007

To express your interest and for further information
please contact the Project Manger Marie Callanan
mcallana@tcd.ie

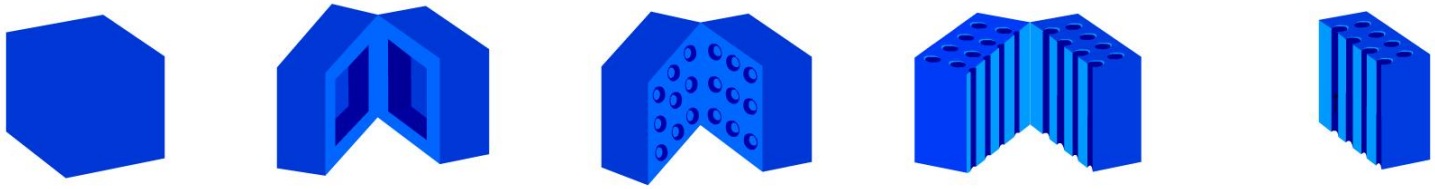
Centre for Excellence in Universal Design

TrinityHaus TrinityHaus

Royal College of Art

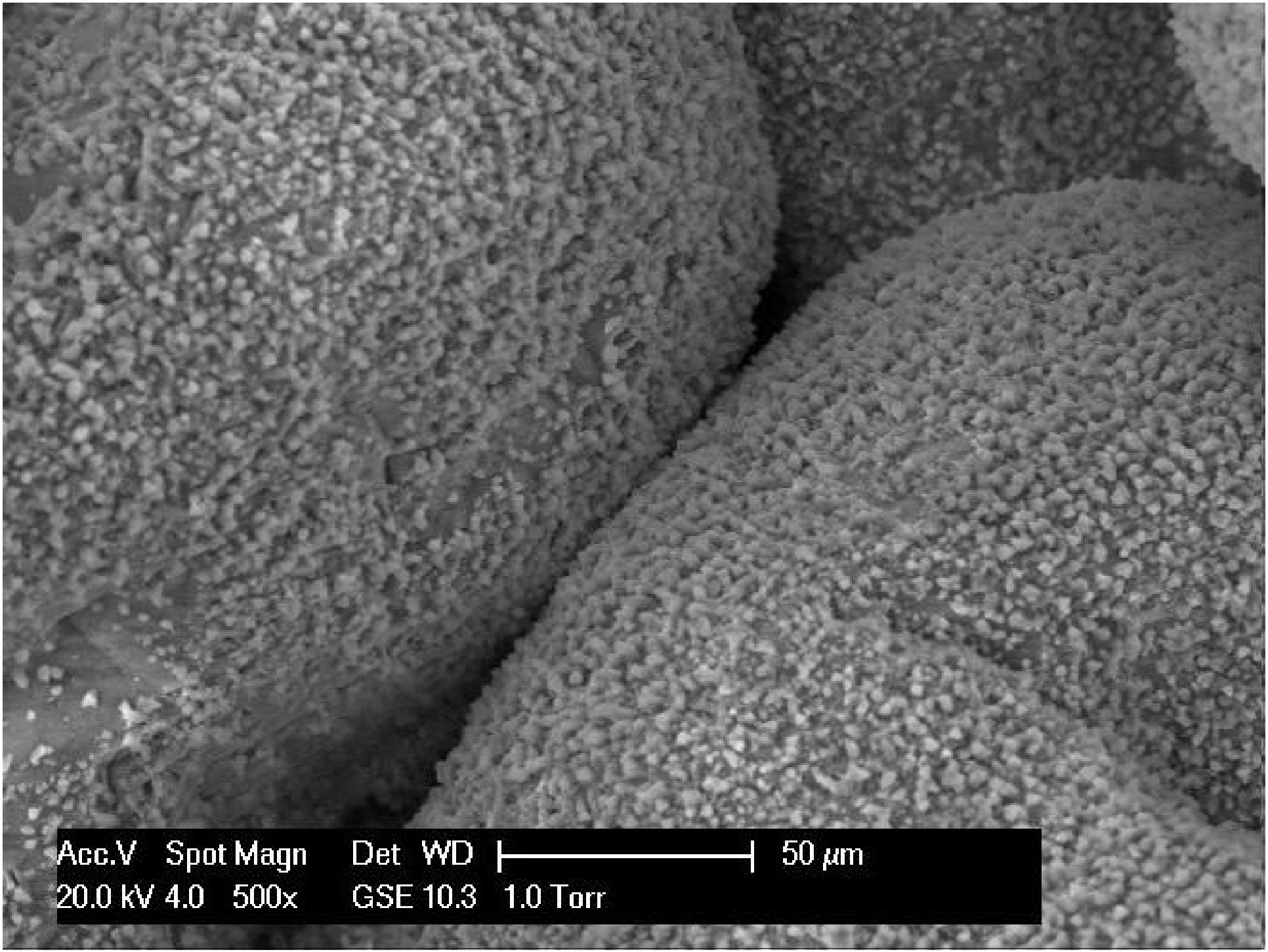
helen hamlyn centre

# TRIZ Evolutionary Trends

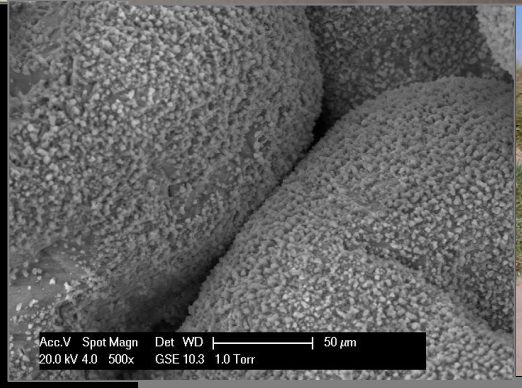


solid | hollow | cellular | pores | active elements

# Bio-Engineering


Acc.V Spot Magn Det WD 50 µm
20.0 kV 4.0 500x GSE 10.3 1.0 Torr

$CO(NH_2)_2 + 2H_2O$

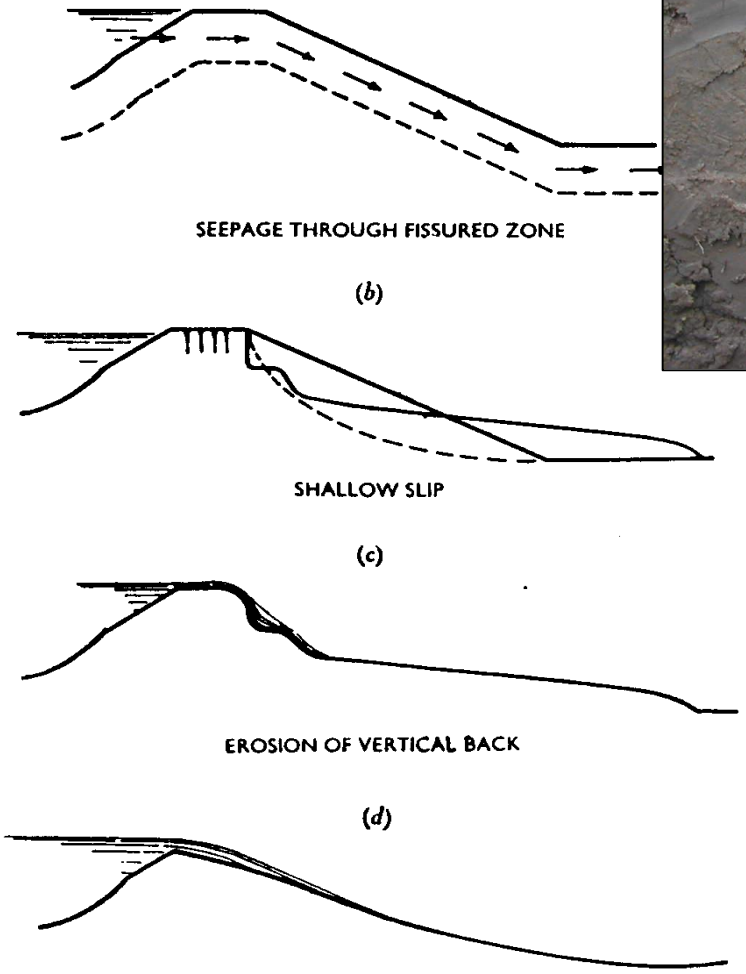




# Aerosol Delivery System for BioCement

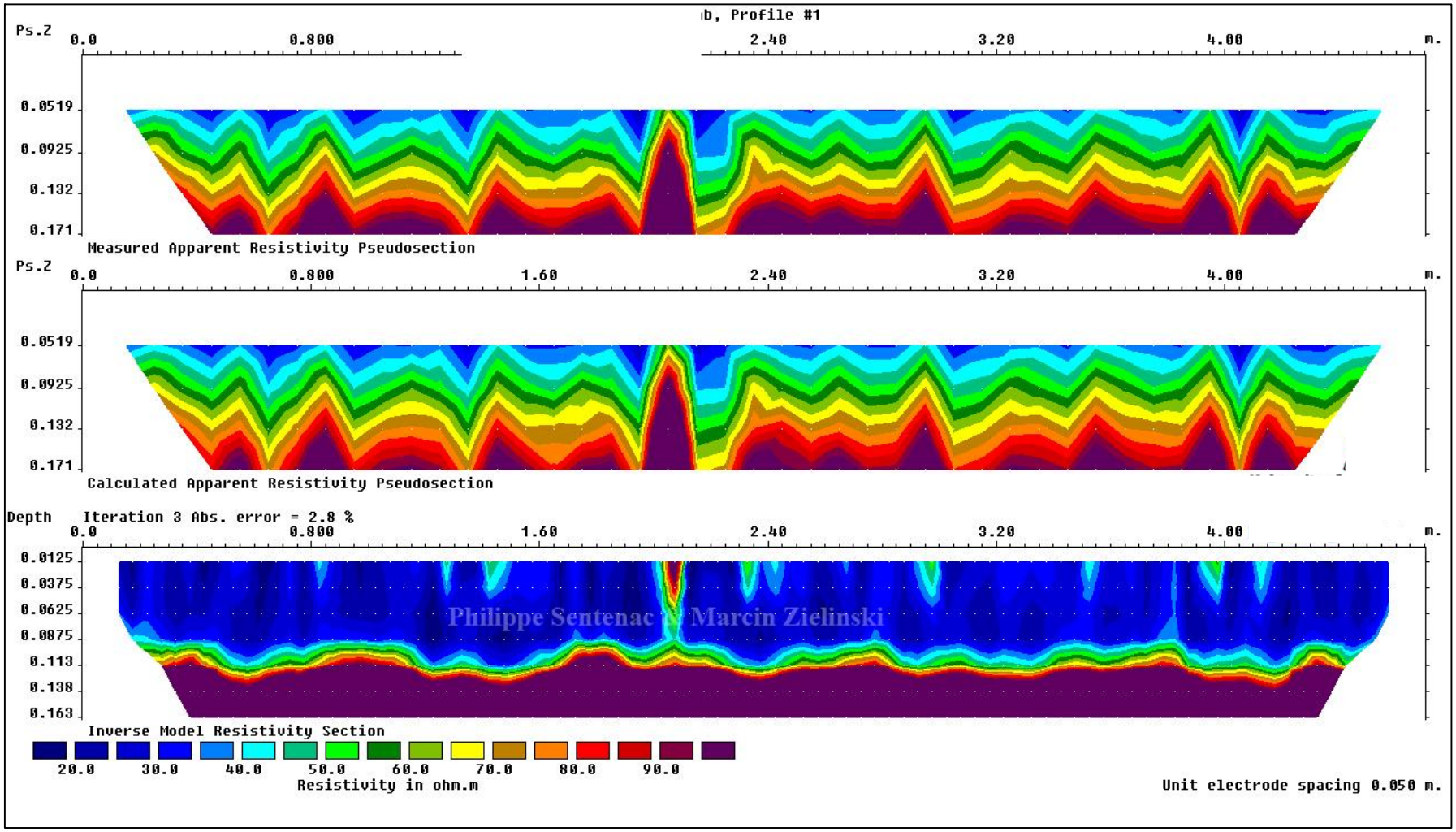
Masonry repair and ground improvement against liquefaction, erosion and settlement (Dyer , Pavia, O'Kelly 2008)

# Flood Defences and Condition Assessment

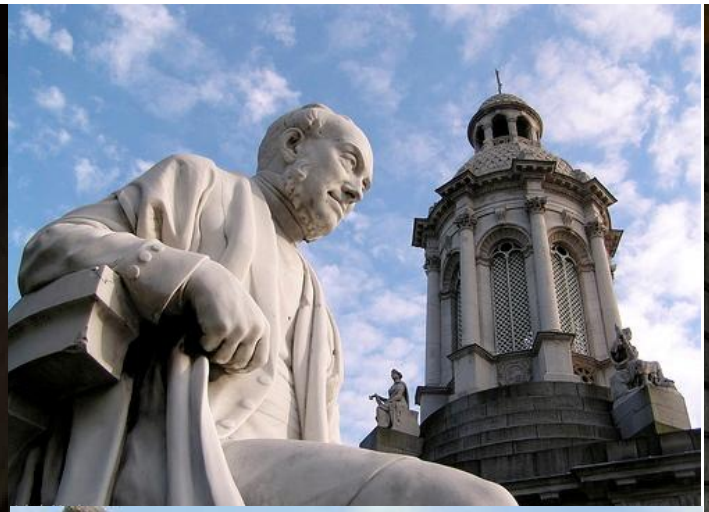


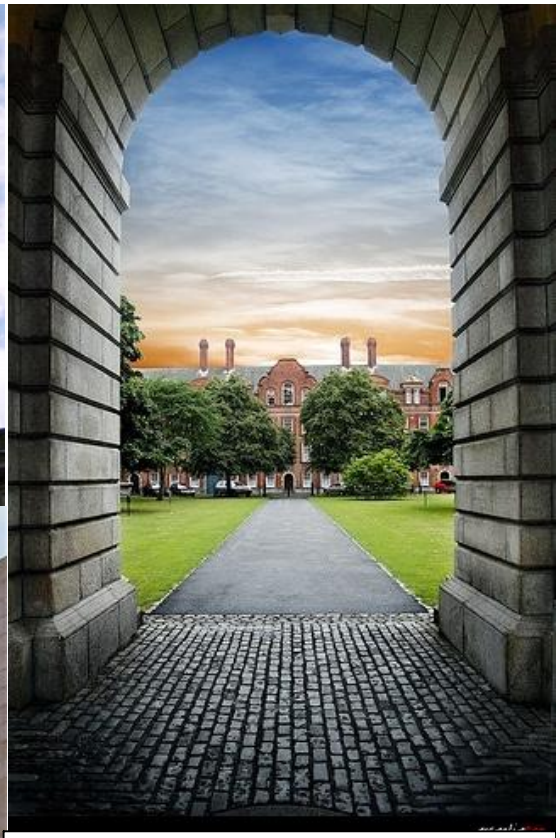

(Cooling and Marsland 1954, Dyer and Gardner 1997, Dyer et al 2007)

# Geophysics: Restivity Results




48 electrodes mini-resistivity array apparatus





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