

The Human Centred Design Institute (HCDI)

Human Centred Design is an approach that integrates multidisciplinary expertise towards enhancing human well-being and empowering people. It leads to systems, machines, products, services and processes which are physically, perceptually, cognitively and emotionally intuitive to use.

The human centred designer is a relatively transparent figure who does not impose his or her preferences on a project, but, instead, conveys and translates the will of the people in order to empower them through the final design solution. Human centred design involves techniques which communicate, interact, empathise and stimulate the people involved, obtaining an understanding of their needs, desires and experiences which often transcends that which the people themselves actually knew and realised.

The Human Centred Design Institute (HCDI) brings together a group of 19 experts from four Brunel University Schools who develop the knowledge and skills required to design products, services and systems which are physically, perceptually, cognitively and emotionally intuitive.

TM **HCDI**
Human Centred
Design Institute



Current activities

Augmented Cognition

Dr. David Bell <david.bell@brunel.ac.uk>

Dr. Kate Hone <kate.hone@brunel.ac.uk>

Prof. Robert Macredie <robert.macredie@brunel.ac.uk>

The design and evaluation of cognitive technologies which act in partnership with humans, aiding or improving human performance. Current research projects include:

- Affective and emotional computing frameworks
- Embedding of business intelligence into the environment
- Interactive and face-to-face communications in web-based systems
- Human behaviour toward adaptive systems

Branding, Design Strategy and Innovation

Prof. John Boulton <john.boulton@brunel.ac.uk>

Dr. Youngok Choi <Youngok.Choi@brunel.ac.uk>

Mr. Chris Holt <chris.holt@brunel.ac.uk>

Dr. Busayawan Lam <Busayawan.Lam@brunel.ac.uk>

Tools for creating and developing brands through design as a total sensory experience, and management strategies for adding value through design. Current research projects include:

- Brand communication framework for fashion brands targeting Gen Y
- Framework for applying art experience in fashion stores
- Framework for applying Islamic Art to create unique brand experience
- Framework for enhancing brand values in the product design process
- Future forecasting tool for the mobile communication industry
- Service design strategy to meet the emotional needs for female safety in public transport
- Real-time feedback system to mobilise tacit knowledge in the community



An augmented cognition system for bathing support.

Ergonomics and Human Factors

Dr. Steve Love

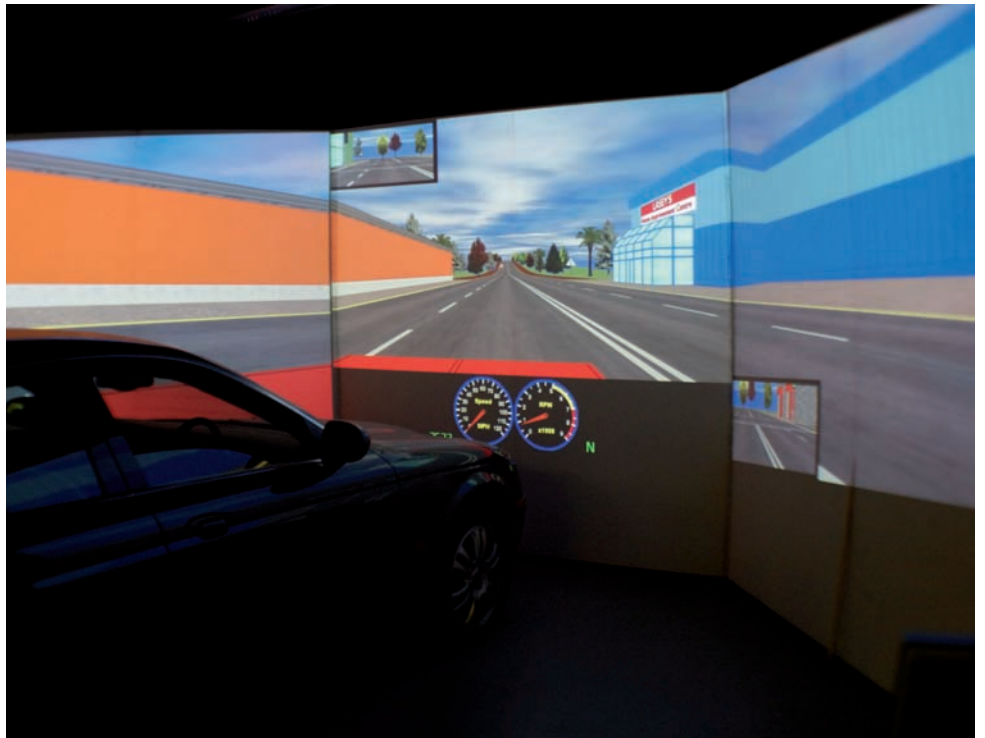
<steve.love@brunel.ac.uk>

Dr Mark Young

<m.young@brunel.ac.uk>

Designing products, systems and services based on human capabilities and limitations. Current research projects include:

- Cognitive systems for reducing driver distraction
- Green driving assistance systems
- Interaction design of mobile communication platforms
- Mobile telephone usage in public spaces: cognitive, emotional and personality effects
- Network model of aviation accident causation



Brunel University Driving Simulator

Human Centred Design Process

Mr Stephen Green

<stephen.green@brunel.ac.uk>

Dr. Daniel Pickford

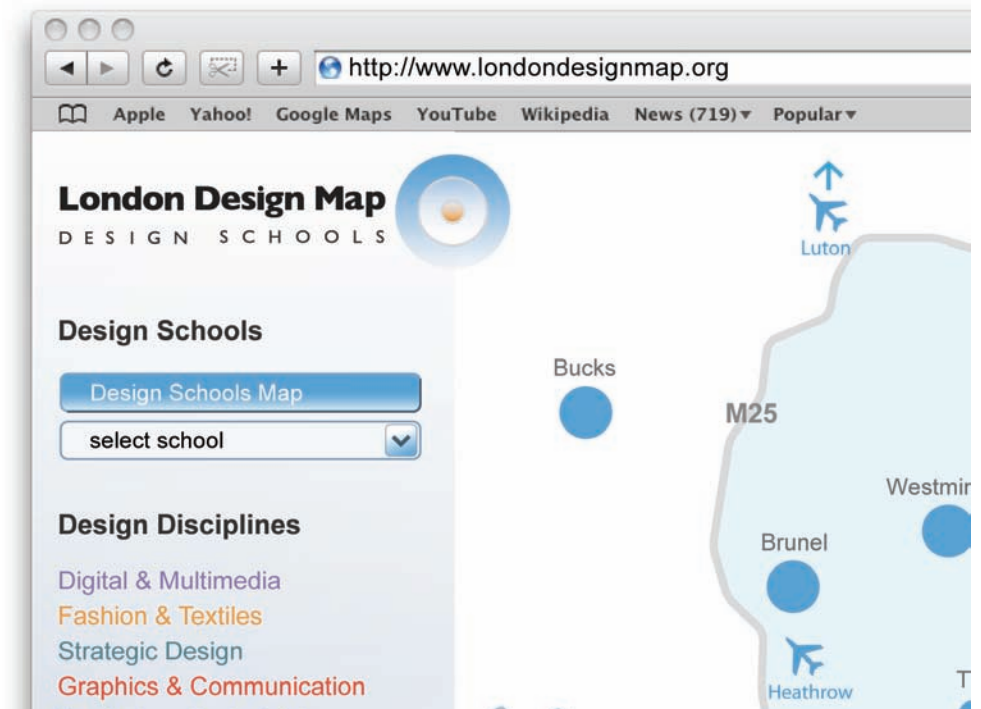
<daniel.pickford@brunel.ac.uk>

Mr. Paul Turnock

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Developing human centred design practice and process through collaboration with a range of businesses and consultancies. Current research projects include:

- Mapping of the specialist design research expertise in the London Region
- Models of design based knowledge transfer



London Design Map

Inclusive Design

Dr Hua Dong <hua.dong@brunel.ac.uk>
Ms. Farnaz Nickpour <farnaz.nickpour@brunel.ac.uk>
Dr. Gabriella Spinelli <gabriella.spinelli@brunel.ac.uk>

Approaches and methods for designing products, systems and services which empower people. Current research projects include:

- Anthropometric data visualisation for inclusive design
- Business innovation through inclusivity
- Design adaptation: professional-to-lay-use
- Development of learning systems that are attuned to individual differences
- Inclusive design in air travel
- Inclusive design standards

Information Architecture

Prof. Mark Lycett <mark.lycett@brunel.ac.uk>
Dr Olinkha Gustafson-Pearce
<olinkha.gustafson-pearce@brunel.ac.uk>



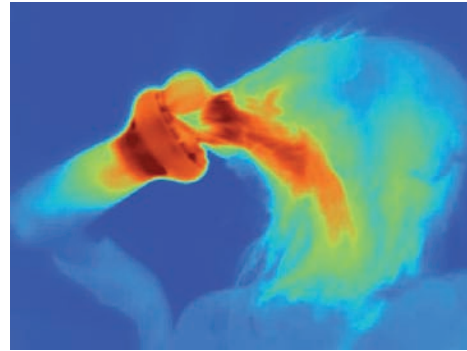
Brunel University Virtual World portal

Methods for designing products, systems and services which help people to understand and interact with complex data. Current research projects include:

- Information architectures for customer experience
- Ontological approach for achieving flexible and interoperable business interactions
- Massive Multiplayer Online Learning Environments (MMOLE)
- Virtual Brunel project
- Virtual collaborative environments

Perception Enhancement

Dr Marco Ajovalasit <marco.ajovalasit@brunel.ac.uk>
Prof Joseph Giacomini <joseph.giacomini@brunel.ac.uk>



Thermal image of hair drying

Methods for designing products, systems and services which aid the perception of key environmental stimuli for purposes of interaction and sensory branding. Current research projects include:

- Human psychophysical response to hand arm vibration and sound in motor vehicles
- Perception enhancement for automotive steering systems
- Perception enhancement for future aircraft
- Energy sixth sense design for behavioural change

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