

# Your Mind and Brain on Design

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What happens in your mind and brain when you design? Recent advances in cognitive science and non-invasive brain measurements coupled with a dramatic reduction in their cost have made it possible to begin to answer the question: What happens in your mind and brain when you design? This talk will present results of studying the minds and brains of designers from architecture, engineering and industrial design while they design. It presents answers to questions such as:

- are there differences in the design cognition and neurocognition of designers from different disciplines?
- does using design tools change the design neurocognition of the designer using them?
- does teaching design methods change students' design cognition and neurocognition?
- does your creativity affect your brain responses?
- does using VR produce different responses than 2D computer display?

The talk concludes with projections for the future use of the knowledge gained from studies of your mind and brain on design.

## Bio

John Gero is the former Professor Design Science and Director of the Key Centre of Design Computing and Cognition at the University of Sydney. He has been a Visiting Professor of Design and Computation, MIT; Visiting Professor of Architecture, Columbia University; Severance Springer Chair Professor of Mechanical Engineering, UC-Berkeley; Harvey Perloff Chair Professor of Architecture, UCLA; Visiting Professor of Civil Engineering, INSA-Lyon; Visiting Professor of Artificial Intelligence, EPFL; Visiting Professor of Cognitive Psychology, University of Provence; Visiting Professor of Architecture, CMU and Professor of Computational Social Science at GMU. He is the author/editor of 56 books and has published some 800 research papers, with over 27,000 citations. His research has been funded by the US Defense Advanced Research Projects Agency (DARPA), the US National Aeronautics and Space Administration (NASA) and extensively by the US National Science Foundation (NSF). His research projects span the USA, UK, Australia, Austria, Israel, Italy, Korea, Portugal and Singapore.

